

# Phase I Investigations at the Former CCC/USDA Grain Storage Facility in Montgomery City, Missouri, in 2010-2011

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Environmental Science Division



United States Department of Agriculture

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

November 2012



United States Department of Agriculture

Work sponsored by Commodity Credit Corporation,  
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## Notation

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
d	day(s)
DF	dilution factor
DO	dissolved oxygen
DNAPL	dense non-aqueous phase liquid
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
ID	inner diameter
in.	inch(es)
$K_h$	horizontal hydraulic conductivity
MCL	maximum contaminant level
µg/kg	microgram(s) per kilogram
µg/L	microgram(s) per liter
µg/m <sup>3</sup>	microgram(s) per cubic meter
µS/cm	microsiemen(s) per centimeter
mg/L	milligram(s) per liter
mi	mile(s)
min	minute(s)
mL	milliliter(s)

MDNR	Missouri Department of Natural Resources
MRBCA	<i>Missouri Risk-Based Corrective Action</i>
MUE	Missouri University Extension
NAD	North American Datum
NAVD	North American Vertical Datum
ng	nanogram(s)
ORP	oxidation-reduction potential
PA/SI	preliminary assessment/site inspection
PID	photoionization detector
ppb	part(s) per billion
PVC	polyvinyl chloride
PWS	public water supply
QA	quality assurance
QC	quality control
RPD	relative percent difference
SDG	sample delivery group
SSI	site screening investigation
TOC	top of casing
USDA	U.S. Department of Agriculture
VOC	volatile organic compound
yr	year(s)

## Phase I Investigations at the Former CCC/USDA Grain Storage Facility in Montgomery City, Missouri, in 2010-2011

### 1 Introduction

From September 1949 until September 1966, the Commodity Credit Corporation of the U.S. Department of Agriculture (CCC/USDA) operated a grain storage facility on property leased from the Montgomery County Fair Society at the southeastern end of Montgomery City, 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 January 2000, carbon tetrachloride was detected in a soil sample (220  $\mu\text{g}/\text{kg}$ ) and two soil gas samples (58  $\mu\text{g}/\text{m}^3$  and 550  $\mu\text{g}/\text{m}^3$ ) collected at the former CCC/USDA facility, as a result of a pre-CERCLIS site screening investigation (SSI) performed by TN & Associates, Inc., on behalf of the U.S. Environmental Protection Agency (EPA), Region VII (MDNR 2001).

In June 2001, the Missouri Department of Natural Resources (MDNR) conducted further sampling of the soils and groundwater at the former CCC/USDA facility as part of a preliminary assessment/site inspection (PA/SI). The MDNR confirmed the presence of carbon tetrachloride (maximum concentration 2,810  $\mu\text{g}/\text{kg}$ ) and chloroform (maximum concentration 82  $\mu\text{g}/\text{kg}$ ) in the soils and also detected carbon tetrachloride and chloroform (42.2  $\mu\text{g}/\text{L}$  and 58.4  $\mu\text{g}/\text{L}$ , respectively) in a groundwater sample collected at the former facility (MDNR 2001). The carbon tetrachloride concentrations identified in the soils and groundwater are above the default target level (DTL) values established by the MDNR for this contaminant in soils of all types (79.6  $\mu\text{g}/\text{kg}$ ) and in groundwater (5.0  $\mu\text{g}/\text{L}$ ), as outlined in *Missouri Risk-Based Corrective Action (MRBCA): Departmental Technical Guidance* (MDNR 2006). The corresponding MRBCA DTL values for chloroform are 76.6  $\mu\text{g}/\text{kg}$  in soils of all types and 80  $\mu\text{g}/\text{L}$  in groundwater.

Because the observed contamination at Montgomery City 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 possible subsurface distribution and movement of carbon tetrachloride at the Montgomery City site and (2) evaluate the health and environmental threats potentially represented 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 MDNR, to address carbon

tetrachloride contamination potentially associated with a number of former CCC/USDA grain storage facilities in Missouri.

The site characterization at Montgomery City is being conducted on behalf of the CCC/USDA by the Environmental Science Division of Argonne National Laboratory. A phased approach is being employed, with the approval of the MDNR, 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 field investigation was initiated on October 18, 2010. The work was conducted in accord with (1) the final site-specific Phase I *Work Plan* for Montgomery City (Argonne 2010; approved by the MDNR [2010]); (2) applicable Missouri regulations; and (3) the standard operating procedures, quality assurance/quality control (QA/QC) measures, and general health and safety policies outlined in the *Master Work Plan* (Argonne 2002) for operations in Kansas, which was reviewed by the MDNR and accepted for current use. A draft master plan specific to work in Missouri and a set of draft standard operating procedures are in review with the MDNR.

The site-specific *Work Plan* for Montgomery City (Argonne 2010) (1) summarizes the pre-existing knowledge base for the Montgomery City investigation site compiled by Argonne and (2) describes the site-specific technical objectives and the intended scope of work developed for the first phase of the investigation. Three primary technical objectives were identified for the Phase I studies, as follows:

- Update the presently identified inventory and status of private and public drinking water wells in the immediate vicinity of the former CCC/USDA grain storage facility, and sample the identified wells for volatile organic compounds (VOCs) and geochemical analyses. In conjunction with this effort, determine the present sources(s) of drinking water for all residents in an approximate 0.5-mi radius of the former CCC/USDA facility.
- Investigate for possible evidence of a soil source of carbon tetrachloride contamination in the unconsolidated sediments beneath the former CCC/USDA facility that might affect the underlying bedrock aquifer units.

- Obtain preliminary information on the site-specific lithologic and hydrologic characteristics of the unconsolidated sediments overlying bedrock at the former CCC/USDA grain storage location.

During the 2010-2011 field studies, the preliminary findings (discussed in Section 4) demonstrated that expansion of the scope of work defined in the MDNR-approved Phase I *Work Plan* (Argonne 2010) was technically warranted. To this end, interim findings of the site investigation were discussed (1) informally with the CCC/USDA and MDNR program managers as the field activities took place; (2) in joint teleconference briefings held with these managers on November 18, 2010 (following the first of four main field sessions), and on March 1, 2011 (following the second main field session); and (3) in an interim update report and recommendations (Appendix A) provided for CCC/USDA and MDNR review on March 29, 2011, and approved by the MDNR (2011a). On the basis of these discussions, and with concurrence of the CCC/USDA and the MDNR program managers, the expanded program of studies described in Section 2.1 of this report was completed during the period October 18, 2010, to September 2, 2011. The site-specific *Work Plan* (Argonne 2010), the update report in Appendix A, the *Master Work Plan* (Argonne 2002), and germane Missouri regulations together form the complete documentation that guided the 2010-2011 investigations at Montgomery City.

Section 2 of this report describes the investigative methods used in the 2010-2011 studies and provides a chronological summary of the field events conducted. Section 3 presents a summary of the resulting field and laboratory data. These data, together with information presented in the site-specific *Work Plan* (Argonne 2010), 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 might be of concern in the evaluation of risks to human health, public welfare, and the environment. The working conclusions drawn from the 2010-2011 studies are presented, along with recommendations, in Section 5.



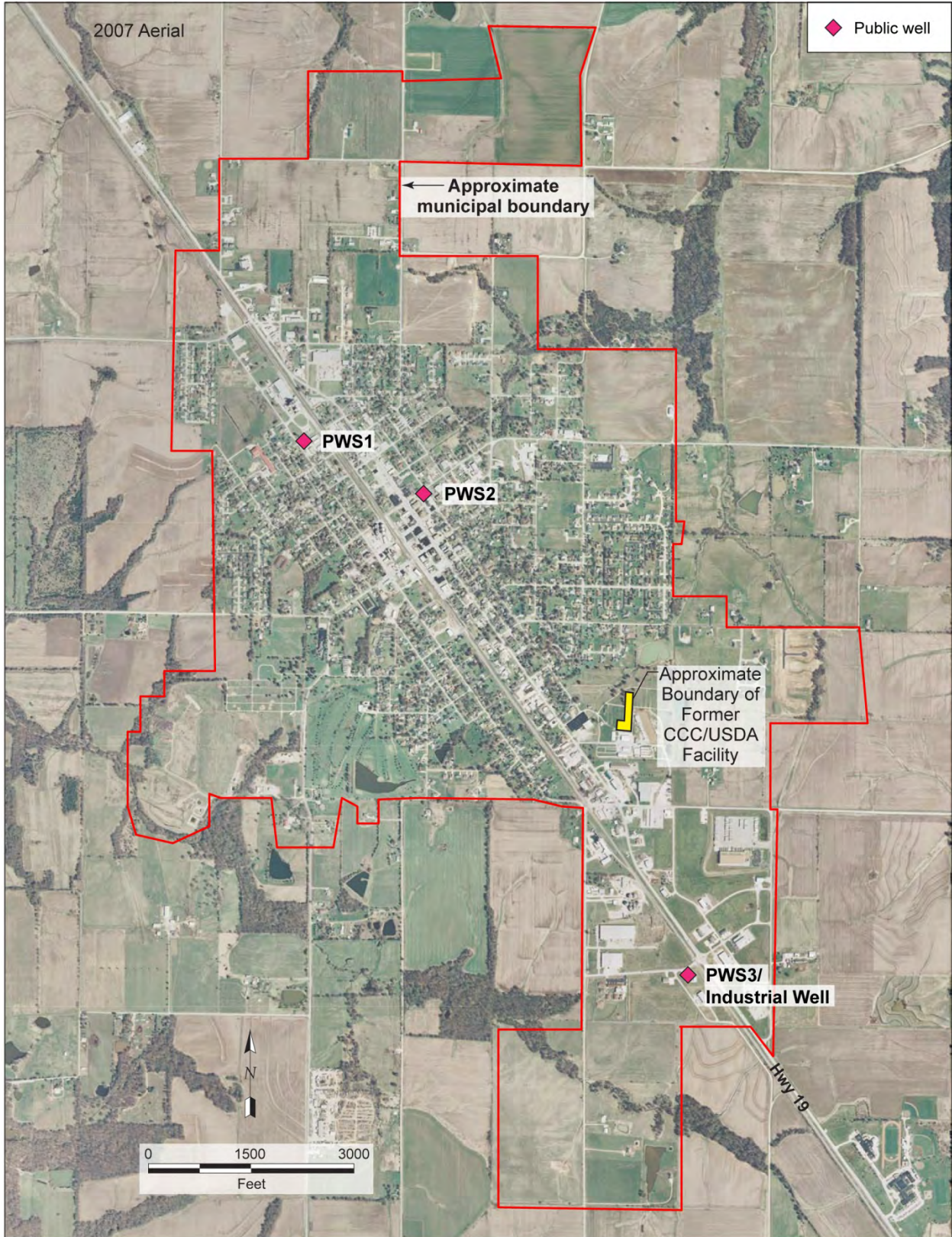


FIGURE 1.1 Locations of State Highway 19, the former CCC/USDA grain storage facility, and active public wells in Montgomery City. Source of photograph: NAIP (2007).

## 2 Investigative Methods

The 2010-2011 investigations at Montgomery City were 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 technical objectives defined in Section 1. The results were reviewed as they were obtained and were discussed with the CCC/USDA and MDNR program managers to obtain their input and approval for decisions affecting the direction of the field efforts. Such discussions resulted in expansion of the activities originally outlined in the approved site-specific *Work Plan* (Argonne 2010), as noted in Section 1.

Throughout the 2010-2011 activities, a comprehensive QA/QC 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 *Master Work Plan* (Argonne 2002) and the site-specific *Work Plan* (Argonne 2010).

The field activities during the 2010-2011 investigation included

1. Location, identification, and sampling of private and public wells (plus the Montgomery City public water distribution system) for VOCs and geochemical analyses;
2. Collection of shallow and deeper soils — through the use of direct-push technologies — for lithologic characterization and VOCs analyses;
3. Installation of temporary and permanent piezometers (monitoring wells) to facilitate groundwater sampling and measurement of groundwater levels; and
4. Establishment of a groundwater level monitoring network employing automatic water level recording devices.

All locations investigated in the immediate vicinity of the former CCC/USDA grain storage facility (within the Montgomery County Fairgrounds) are shown in Figure 2.1. Locations of the investigated private wells and public water supply wells outside the fairgrounds are shown in Figure 2.2.



## 2.1 Overview of the 2010-2011 Field Program

Before the initial mobilization in October 2010, 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 study area. In conjunction with this work, 13 private (domestic, heat pump, or other use) well locations and 4 public water supply (PWS) well locations previously identified on the basis of MDNR records were investigated, in keeping with the approved site-specific *Work Plan* (Argonne 2010). Three private wells, the Montgomery City public water supply wells, and the (treated) water from the public distribution system were sampled.

The studies at Montgomery City were implemented in 2010-2011 during four main field sessions and several additional, more limited visits by Argonne staff to the site. The investigations were conducted primarily by using the direct-push capabilities of the Argonne 22-ton, track-mounted crawler cone penetrometer (CPT) unit. All subsurface boring and sampling activities performed with the CPT took place within the Montgomery County Fairgrounds, with the consent of the property owner (the Montgomery County Fair Society).

The 2010-2011 field activities are summarized in Table 2.1. Details of well installations, sampling, and current status are in Table 2.2. A total of 77 wells were installed. Of these, 25 were abandoned before the investigations ended, and 52 were completed as permanent monitoring wells.

Wells were selected for abandonment, with the approval of the CCC/USDA and MDNR project managers, for various reasons. The earliest borings at location SB01, which were installed with no prior knowledge of contaminant levels, were plugged to ensure protection of potential lower groundwater zones from the high concentrations found. Temporary wells at locations SB33, SB34, SB41, and SB42 were abandoned to avoid interference with fairgrounds activities in the mud pit and in the centers of the remaining rectangular foundations. Well SB19 was abandoned because it became plugged with silt and could not be sampled. Other wells were selected for abandonment because they were determined to be unnecessary for long-term monitoring, after having been sampled and used for the measurement of groundwater levels in the early stages of the field program.

Field activities during the 2010-2011 investigations were as follows:

- *October 18-29, 2010 — Main Field Session I*

The first main field session began on October 18, 2010, and ended on October 29, 2010, with CCC/USDA and MDNR approval. The investigation activities defined in the approved site-specific *Work Plan* (Argonne 2010) were effectively completed during this session. These activities included the following:

- Direct-push techniques were used to (1) sample shallow soils at 36 locations on and near the property formerly occupied by the CCC/USDA grain storage facility and (2) obtain subsurface electronic-geomechanical logs at 8 locations and sample deeper soils at 6 locations
- At 13 of the 36 boring locations, 22 temporary monitoring wells (piezometers) were installed, singly or in clusters at multiple depths, to facilitate the collection of groundwater samples and the measurement of groundwater levels. These installations were necessitated by very slow accumulation of groundwater at most of the locations investigated in this session. In accord with MDNR requirements, 4 of the temporary monitoring wells (the SB01 early borings and SB19) were plugged and abandoned at the end of the field session; 18 were retained for further monitoring.
- Groundwater samples for VOCs analyses and (with one exception) inorganic geochemical analyses were collected from 3 private wells, the 3 public supply wells currently serving the Montgomery City municipal water system, and the (treated) water delivered to the public system. Groundwater samples for VOCs analyses were also obtained at 9 temporary monitoring well locations (three depths at the SB01 location), where sufficient groundwater had accumulated.

- *November 15, 2010 — Minor Field Visit 1a*

On November 15, 2010, groundwater levels were determined in the network of temporary monitoring wells installed in October 2010. Samples for VOCs

analyses were collected at 6 temporary wells where sufficient groundwater for sampling had accumulated for the first time, as well as at 1 previously sampled well.

- *November 29-December 10, 2010 — Main Field Session 2*

The second main field session was conducted from November 29, 2010, to December 10, 2010. The CPT was used to investigate 15 locations by penetrating the unconsolidated sediments overlying bedrock, to further delineate the distribution of carbon tetrachloride in soils and groundwater. Of the 15 locations, 14 had been selected in advance through interpretation of the data already available, with the approval of the CCC/USDA and MDNR program managers in a teleconference on November 18, 2010, and 1 location was selected on the basis of data acquired earlier in the same field session. The specific tasks included the following:

- Direct-push techniques were used to obtain electronic-geomechanical logs at 8 locations and to collect shallow and deeper soils at 10 locations.
- At 14 boring locations, 35 temporary monitoring wells (piezometers) were installed, in clusters at multiple depths, to permit the collection of groundwater samples and the measurement of groundwater levels.
- All 53 of the temporary monitoring wells retained in October-December 2010 were fitted with temporary protective “stick-up” completions, to facilitate their continued use (with the consent of the CCC/USDA and MDNR program managers) for the measurement of groundwater levels and for groundwater sampling.
- Groundwater samples for VOCs analyses were collected from 17 temporary monitoring wells where sufficient groundwater for sampling had accumulated for the first time.

- A preliminary coordinates survey was performed by a professional, state-licensed surveyor to determine the surface location and ground level elevation of each temporary monitoring well or well cluster.

- *January 13-15, 2011 — Minor Field Visit 2a*

On January 13-15, 2011, groundwater levels were determined in the network of 53 temporary wells installed in October-December 2010. Samples for VOCs analyses were collected from 15 wells where sufficient groundwater for sampling had accumulated for the first time, as well as 1 previously sampled well.

- *February 26, 2011 — Minor Field Visit 2b*

On February 26, 2011, groundwater levels were measured in the network of 53 temporary wells, and groundwater samples were collected for VOCs analyses at 3 locations where sufficient groundwater for sampling had accumulated for the first time.

- *March 23, 2011 — Minor Field Visit 2c*

Groundwater levels were measured on March 23, 2011, in the network of 53 temporary wells, and groundwater samples were obtained for VOCs analyses at 4 locations where sufficient groundwater for sampling had accumulated for the first time.

- *April 4-13, 2011 — Main Field Session 3*

With the approval of the CCC/USDA and MDNR program managers (MDNR 2011a), the third main field session took place on April 4-13, 2011. The investigation activities conducted at this time included the following:

- Groundwater samples for the determination of VOCs were collected from all 53 of the temporary monitoring wells (piezometers) installed in

October-December 2010, to provide a complete, contemporaneous set of VOCs analyses.

- Upon completion of the groundwater sampling event, 32 of the existing temporary wells were completed as permanent, flush-mount monitoring wells in accord with a well construction variance granted by the MDNR (MDNR 2011b; included in Appendix B).
- Per agreement with the MDNR program manager, the remaining 21 temporary wells were identified for abandonment during the fourth main field session (in May 2011; see below).
- *May 9-18, 2011 — Main Field Session 4*

The final (fourth) main field session occurred on May 9-18, 2011. The CPT was used to investigate 6 additional locations by penetrating the unconsolidated sediments overlying bedrock, to further delineate the distribution of carbon tetrachloride in soils and groundwater. Of the 6 locations, 5 had been selected in advance through interpretation of the data already available, with the approval of the CCC/USDA and MDNR program managers (MDNR 2011a), and 1 location was selected on the basis of data acquired as the field session progressed. The specific tasks included the following:

- Direct-push techniques were used to collect shallow and deeper soils for lithologic and VOCs analyses at 3 locations.
- At 7 boring locations, 20 permanent monitoring wells were installed (in clusters at multiple depths) to permit the collection of groundwater samples and the measurement of groundwater levels. Of these 7 boring locations, 6 were new (as noted above), and 1 (SB01) had been investigated in October 2010.

- Groundwater samples for VOCs analyses were collected from 12 of the newly installed monitoring points. The remaining 8 new wells did not accumulate sufficient groundwater for sampling during the field session.
  - Downhole pressure sensors equipped with data loggers were installed in 14 of the permanent monitoring wells to initiate automated water level monitoring in shallow and middle-depth wells. These wells were constructed with 1-in. casing. The deep wells had to be constructed (with the verbal approval of the MDNR project manager) with 0.5-in.-ID casing in order to reach the desired depths with the CPT. The deep wells are too small in diameter to accommodate recorders.
  - The 21 remaining temporary monitoring wells approved for abandonment by the CCC/USDA and MDNR program managers (MDNR 2011b) were plugged and abandoned in accord with MDNR policy (Appendix B).
- *June 8-9, 2011 — Minor Field Visit 4a*

On June 8-9, 2011, the following activities were carried out:

- Groundwater levels were measured manually in the established network of 52 permanent monitoring points, and water level data were retrieved from the 14 automatic recorders.
- Groundwater samples for VOCs analyses were obtained from 6 monitoring wells installed in May 2011 that had not accumulated sufficient water for sampling previously.
- A final coordinates survey of all permanent monitoring wells was conducted by a professional surveyor licensed in Missouri, to establish the wells' exact surface locations and elevations. The survey data are critical for determination of the groundwater flow direction.

- *September 1-2, 2011 — Minor Field Visit 4b*

On September 1-2, 2011, groundwater levels were measured in the network of 52 permanent monitoring wells, and water level records were retrieved from the 14 automatic data loggers. Groundwater samples for VOCs analyses were collected in the only 2 monitoring wells (SB50S and SB53S) that had not been sampled to this point because of insufficient water accumulation since their installation in May 2011.

A chronological summary of the sampling activities during the 2010-2011 investigations is in Appendix C, Table C.1.

## **2.2 Methods to Determine the Status of Private and Public Wells and Sources of Drinking Water Supply in the Vicinity of the Former CCC/USDA Facility**

During preparation of the site-specific *Work Plan* (Argonne 2010), information obtained by Argonne from the MDNR<sup>1</sup> identified 4 public wells, 10 private wells for domestic or other use, and several heat pump wells within the nine-section area surrounding the former CCC/USDA facility (T48N, R5W, Sections 4-6 and T49N, R5W, Sections 28-33). The MDNR records identified no private domestic or public wells within 0.5 mi of the former facility; however, one private domestic well (Hemeyer) and two active public wells (PWS2 and PWS3/Industrial Well) were indicated within 1 mi of the former facility (Figure 3.1 in Argonne 2010).

In September 2010, prior to the first field session, the locations, present status, and current ownership of the previously identified private and public wells shown in Figure 2.2 were investigated. At two locations thought to have wells (Vajzovic and the Algermissen Ice Plant), no wells could be found. However, two previously unidentified private wells (Subway and K. Cobb) were identified within 0.5 mi of the former CCC/USDA facility. The locations, status, and ownership of the additional wells were determined and documented (Section 3.1), and the present source(s) of drinking water used by all residents in the target area were identified.

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<sup>1</sup> The information was obtained from the MDNR Missouri Water Resources Center (for wells drilled prior to 1987) and the MDNR Water Protection Program, Public Drinking Water Branch, Wellhead Protection Section.

To determine the status of wells and the sources of drinking water supply in the 0.5-mi target area, current ownership information for all properties in the area was obtained from the Montgomery County Assessor's office. Contact and water use information for all occupied properties was obtained by cross-checking the ownership data against publicly available telephone service records and billing records for the Montgomery City public water supply system. Discussions with representatives for the city confirmed that the Montgomery City municipal water supply system provides the only source of public water for residents in the study area. When possible discrepancies or questions arose regarding ownership, occupancy, or potential water supply use for a property, a door-to-door survey was performed.

The private and public wells in the study area were located on the basis of information from the following sources:

- Data on record with the MDNR, as noted above.
- Interviews conducted with representatives of the Montgomery City Public Utilities office.
- Visual reconnaissance and door-to-door and telephone surveys conducted by Argonne staff.
- Information volunteered by local residents.

In all, 3 public wells, 10 private domestic or lawn and garden wells, and several heat pump wells were located, as illustrated in Figure 2.2. In accord with the approved site-specific *Work Plan* (Argonne 2010), 2 newly located private wells within 0.5 mi of the former CCC/USDA facility (the K. Cobb lawn and garden well and the inactive Subway well) and the Hemeyer private well (Figure 2.2) were sampled for VOCs analyses. The Hemeyer and K. Cobb wells were also sampled for inorganic geochemical analyses. Public water supply wells PWS1, PWS2, and PWS3/Industrial Well were sampled for VOCs and inorganic geochemical analyses, as was the treated water from the Montgomery City municipal delivery system. The sampling methods used are described in Section 2.4.

Information gathered in the survey of private wells in the study area is summarized in Appendix C, Table C.2.



## **2.3 Methods to Investigate for Possible Carbon Tetrachloride Contamination in the Unconsolidated Soils beneath 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 and the immediately surrounding area. These activities were (1) initial sampling for VOCs analyses of the shallow soils (to a depth of 16-20 ft below ground level [BGL]) and (2) sampling for VOCs analyses of deeper soils collected at locations selected in consultation with the CCC/USDA and MDNR program managers, on the basis of the investigation findings as the field studies progressed.

### **2.3.1 Sampling of Shallow Soils**

Samples of shallow soils were collected at a total of 36 locations in October 2010. Initially, samples were collected at 35 locations distributed across the property formerly occupied by the CCC/USDA grain storage facility, at target depths of 4 ft, 8 ft, 12 ft, and 16 ft BGL (SB01-SB35; Figure 2.3). At 6 locations (SB11, SB24, SB29, SB33, SB34, SB35), sampling continued to 20 ft BGL.

The 35 initial locations were selected to test for possible contamination associated with former grain storage structures (including the remaining rectangular foundations), as well as previously unoccupied areas that might have been used for the movement, storage, or handling of fumigant containers or related equipment. The analytical results (described in Sections 3.2.1 and 3.2.2) were used to determine the areal distribution of residual carbon tetrachloride contamination in the near-surface soils beneath the former CCC/USDA facility, as well as to prioritize locations for initial sampling (also in October 2010) of deeper soils for VOCs analyses.

After the initial shallow soil sampling at locations SB01-SB35 in mid October 2010, the focus of the investigation shifted toward deeper soils. In conjunction with the deeper sampling beginning in late October 2010, shallow soil samples (to 20 ft BGL) were collected for VOCs analyses at the following additional locations:

- One additional location (SB36; Figure 2.3) sampled in late October 2010.

- Nine additional locations (SB40, SB41, SB42, SB44, SB46, SB47, SB49, SB50, SB54; Figure 2.4) sampled in December 2010 and May 2011.

The soil samples were obtained primarily by using the CPT unit to advance a 4-ft-long coring barrel equipped with a 1.125-in.-ID disposable liner (Geoprobe™ Dual Tube coring system). At each location, coring was conducted over depth intervals of 2-6 ft, 6-10 ft, 10-14 ft, 14-18 ft, and (at 15 locations) 18-22 ft BGL, so that each depth horizon targeted for sampling (4 ft, 8 ft, 12 ft, 16 ft, or 20 ft BGL) fell near the middle of an individual core.

At three locations (SB33, SB34, and SB35), shallow subsurface soil samples were collected for VOCs analyses within the footprints of the three remaining rectangular foundations 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 a trailer-mounted Model 540M Geoprobe™ unit equipped with a 3.25-in.-diameter rotary-percussion drilling bit, as described in Appendix D of the site-specific *Work Plan* (Argonne 2010). Measurements of possible contaminant vapor concentrations were made at the surface of the sub-slab soils immediately upon breaching of each foundation, by using a calibrated RAE Systems, Inc., ppbRAE 2000™ hand-held photoionization detector (PID). The Geoprobe™ unit and Dual Tube coring device were then used as described above to retrieve soil cores from beneath the foundations.

### **2.3.2 Sampling of Deeper Soils**

The analytical results for the shallow soils collected in mid October at SB01-SB35 (Figure 2.3) were used as a basis for the selection, with the verbal approval of the CCC/USDA and MDNR program managers, of 6 locations (SB01, SB09, SB17, SB22, SB25, and SB36) for deeper soil sampling in late October 2010 for VOCs analyses.

In consultation with the program managers, deeper soil coring and sampling were subsequently conducted at 10 additional locations (SB08, SB16, SB27, SB40-SB42, SB44, and SB46-SB48) in November-December 2010 and at 3 further locations (SB49, SB50, and SB54) in May 2011 (Figure 2.5). The deeper sampling was performed as described in Section 2.3.1 by using the CPT unit and the Dual Tube coring device. At each location, the deeper sampling took place (or continued) at approximately the same location (within 1-2 ft at the surface) as the shallower sampling.

In accord with the site-specific *Work Plan* (Argonne 2010), the deeper sampling at each location was targeted to investigate the unconsolidated sediments to the top of bedrock. 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 depths that ranged from approximately 47 ft BGL at SB27 to 64 ft BGL at SB50. Definitive contact with the bedrock surface could not be confirmed, however, at any location during coring. Slightly greater refusal depths, reaching a maximum of 68.2 ft BGL at SB09, were achieved during corresponding electronic-geomechanical logging runs conducted with the CPT unit at selected locations, as discussed further in Section 2.5. The logging runs employed slightly smaller-diameter probe rods than those required for coring.

### **2.3.3 Handling and Analysis of Soil Samples**

Soil samples collected for VOCs analyses were taken from the soil cores immediately, while the cores were being removed from the core barrels. At the request of the MDNR, each 4-ft core segment was quickly screened, in October 2010 and November-December 2010, by using a calibrated, portable PID instrument (ppbRAE 2000<sup>TM</sup>) as a possible aid in the prioritization of intervals to be sampled for analysis. The use of the PID proved ineffective for this purpose, however, and the screening of cores by this method was discontinued in the May 2011 field session.

The samples 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 target depth. The core segments were immediately placed in laboratory-approved 125-mL glass sample jars, sealed, labeled, and preserved by placement in a cooler on dry ice.

The samples were shipped, at the required holding temperature, by overnight service to the Applied Geosciences and Environmental Management (AGEM) Laboratory at Argonne for rapid-turnaround analysis (generally within 24 hr for headspace analyses), so that interim results could be evaluated in the field as the sampling progressed during each field session. Selected soil samples were analyzed by a headspace method with a gas chromatograph and electron capture detector (modified EPA Method 5021). All soil samples were analyzed by a purge-and-trap sample preparation method with analysis on a gas chromatograph-mass spectrometer (GC-MS) system (EPA Methods 5030B and 8260B; *Master Work Plan* [Argonne 2002], Sections 6.1.1, 6.2, and 6.3.1).

## **2.4 Methods to Investigate for the Presence of Carbon Tetrachloride Contamination in Groundwater and Surface Water and to Establish Groundwater Monitoring Points**

### **2.4.1 Private Wells**

Groundwater samples for VOCs and selected inorganic geochemical analyses were collected from three private wells, in accord with the approved site-specific *Work Plan* (Argonne 2010). The wells sampled were the Hemeyer private well and two additional, previously unidentified private wells located in October 2010 (Subway and K. Cobb) within the approximate 0.5-mi area surrounding the former CCC/USDA facility that was targeted for the Phase I study (Figure 2.6).

The Hemeyer private well, located approximately 0.8 mi northeast of the former CCC/USDA facility, is in regular use for all domestic purposes, including drinking water supply. The well was previously sampled by the MDNR in 2001 and was found to be free of VOCs contamination (MDNR 2001). At the request of the owner, a groundwater sample was obtained from a yard hydrant approximately 27 ft from the well, after purging for 11 min (approximately 22 gal) by using the existing downhole pump.

The K. Cobb well is located approximately 0.4 mi south-southeast of the former CCC/USDA facility. This well is used exclusively for lawn and garden purposes; however, the owner indicated that the well had not been operated for about six weeks prior to the October 2010 field session. With the approval of the owner, the well was sampled from a yard hydrant after purging for 23 min (approximately 230 gal).

The third private well is located at a Subway restaurant approximately 0.35 mi south-southeast of the former CCC/USDA facility. The well's owner (M. Sevier) indicated that, in the past, the well was used for all business purposes at the restaurant, including drinking water supply. Use of the well was discontinued in approximately 1997, however, when water service from the Montgomery City public system was extended to the restaurant, and the wiring and piping to the well were disconnected. Because access with suitable equipment for purging of the well could not be obtained, a "grab" sample (for VOCs analyses only) was collected with a bailer.

#### **2.4.2 Public Water Supply**

Montgomery City obtains its public water supply from three municipal wells. Wells PWS1 and PWS2 are located approximately 1.2 mi and 0.87 mi, respectively, northwest of the former CCC/USDA facility, and the PWS3/Industrial well is located approximately 0.7 mi to the south-southeast (Figure 2.6). All three wells supply a common water delivery system. Each public supply well was sampled in October 2010 from a tap at the wellhead. Well PWS1 was already in operation (under automatic control) at the time of sampling, and the sample was collected without additional purging. Wells PWS2 and PWS3 were sampled after purging in excess of 3,000 gal from each well, by using the existing pumps. A sample of the treated groundwater supplied to the municipal distribution system (softened, chlorinated, and aerated to remove hydrogen sulfide) was also collected from a kitchen tap in the Montgomery City Hall building, after the water was allowed to run for approximately 9 min.

#### **2.4.3 Surface Water**

A sample of surface water was collected in October 2010 from a small drainageway that runs along the western edge of the fairgrounds property and exits the property at its northern margin (Figure 2.1). The drainage was initially dry, but a small flow developed after several rains during the field session.

#### **2.4.4 Investigative Borings and Monitoring Wells**

No distinct coarser-grained zones could be identified within the generally poorly sorted, silt-clay-sand (till) sediments recovered at the continuously cored, deep boring locations investigated in 2010-2011 (see Section 4.2). Shows of subsurface moisture were sporadically identified, however, either as small quantities of water present in the core liners or as wetness on the outside of the coring barrels and push rods, suggesting possible saturation in association with occasional small, discontinuous sandy lenses or the enclosing finer-grained sediments. Sufficient groundwater to permit immediate sampling for VOCs analyses during coring was encountered at one location only (SB24; Figure 2.7).

To investigate for the possible occurrence of groundwater, 0.5.-in or 1.0-in.-I.D. Schedule 40, mill-slotted (0.010-in.) polyvinyl chloride (PVC) screen and PVC riser were

installed, at selected depth intervals, at a number of the locations investigated in October 2010 by using the direct-push capability of the CPT to advance the screen and riser through the push rods, connected to a suitable disposable tip. A filter sand pack was then placed around each screened interval as the rods were withdrawn, the remaining annulus was grouted to the ground surface, and each installation was fitted with a temporary, aboveground protective housing and cap. In this manner, 22 temporary wells (piezometers) were constructed in October 2010. Although groundwater was ultimately detected in all of these initial wells, the observed rates of water accumulation in many were extremely slow, requiring from overnight to 30 d or more to obtain sufficient groundwater for VOCs analysis. In light of this finding, and in consultation with the MDNR program manager, 4 of the temporary wells were plugged and abandoned at the end of the first field session in October 2010 (Section 2.1 and Table 2.2), and 18 were retained to facilitate further sampling and the monitoring of groundwater levels.

Subsequently, during the November-December 2010 field session, additional temporary wells were installed, as outlined above, bringing the number of temporary wells to 53 (Figure 2.7). These 53 temporary wells were used for sampling and groundwater level measurements in January-April 2011 (Table 2.1).

In April 2011 (during the third main field session), groundwater samples for the determination of VOCs were collected from all 53 of the temporary piezometers that had been retained from October-December 2010 (Figure 2.7). The purpose was to provide a coincident set of VOCs analyses for these 53 points prior to the abandonment of 21 of the temporary piezometers, as recommended in the document in Appendix A and as approved by the MDNR (2011a). Because of the slow groundwater accumulation rates and for consistency with the majority of the samples collected earlier, all of the samples in the April 2011 sampling event were collected without purging.

In May 2011, with the approval of the CCC/USDA and MDNR program managers (MDNR 2011a), 21 of the 53 temporary wells (Table 2.2) were plugged and abandoned. The remaining 32 temporary wells, together with 20 additional piezometers installed with the CPT during the fourth field session in May 2011 (Figure 2.8), were completed as permanent monitoring wells in accord with Variance No. 4952 issued by the MDNR (included with the state well certification forms in Appendix B), which permitted use of the direct-push construction technique outlined above. These completions in May 2011 established 52 permanent wells at the

site. The construction and status of all temporary and permanent groundwater monitoring points installed during the 2010-2011 investigations at Montgomery City are summarized in Table 2.2.

Because of the very slow water level recovery rates observed at many of the monitoring points, a majority of the groundwater samples obtained during the 2010-2011 investigations were collected without purging. At each location, an initial groundwater sample for VOCs analyses was collected as soon as sufficient groundwater was observed to have accumulated in the well casing, in the context of the field schedule presented in Section 2.1. The collection dates for these “initial” water samples therefore range from October 2010 to September 2011 (Table 2.2).

A complete chronological listing of the groundwater and surface water sampling events in the 2010-2011 investigations and the conditions under which each sample was collected is in Appendix C, Table C.1.

Water samples collected at all of the groundwater and surface water locations investigated in 2010-2011 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; Argonne 2002, Section 6.3.2). To ensure reproducibility, aliquots from 11 locations (representing approximately 10% of the total samples collected) were selected in the field for verification analyses by a second laboratory (TestAmerica Laboratories, Inc., South Burlington, Vermont) 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 three Montgomery City public water supply wells, the treated municipal supply, and the Hemeyer and K. Cobb private wells were collected for analyses of selected additional parameters to help characterize the inorganic geochemistry of the water sources tapped for identified private and public use at Montgomery City. Samples for inorganic analyses were not collected from the investigative borings because of the generally limited availability of groundwater at these locations. The samples collected were preserved and shipped (on ice at 4°C) by overnight service to TestAmerica for determination of the concentrations of common anions and metals.

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

At 16 locations across the investigation site (SB01, SB09, SB11, SB17, SB22, SB25, SB27, SB36-SB43, and SB45; Figure 2.9), the electronic-geomechanical logging capabilities of the CPT unit were used to obtain logs of tip pressure, sleeve friction, and (except at SB22) conductance. The electronically recorded logs were acquired for possible use as tools in identifying or correlating the lithologic intervals and the hydrostratigraphy in the vicinity of the former CCC/USDA facility. At each location, the CPT push rods were advanced until refusal was encountered by the instrumented tip; this occurred at depths ranging from 45.7 ft BGL at SB37 to 68.2 ft BGL at SB09 (Figure 2.9).

As noted in Section 2.3.2, the refusal depths achieved with the CPT during the 2010-2011 coring and electronic probing might not reflect depths to the top of the underlying bedrock units. The preliminary interpretation of the stratigraphy in the vicinity of the former CCC/USDA facility discussed in the site-specific *Work Plan* (Argonne 2010) was generated on the basis of logs for wells to the southeast and northwest of the former CCC/USDA facility (illustrated here in Figures 2.10 and 2.11). This interpretation suggests a potential depth of approximately 100-120 ft BGL to the top of the Mississippian Burlington-Keokuk cherty limestone beneath the former CCC/USDA facility. This interval represents the shallowest regionally developed aquifer recognized in the Montgomery City area (Argonne 2010).

Limited data are presented in the logs included in the site-specific *Work Plan* (Appendix C in Argonne 2010) for the Cobb, Block, and Porter heat pump wells, located approximately 0.4 mi northeast of the former CCC/USDA facility (Figure 2.2). These logs indicate that “chert rock” was encountered at depths of 52-55 ft BGL, while “limestone” is reported at 65-84 ft BGL. Extrapolation of the information for these heat pump wells suggests that the Mississippian bedrock might shallow toward the northeast from the line of section depicted in Figures 2.10 and 2.11. Alternatively, the reported sediments at the locations of the heat pump wells might be associated with the Pennsylvanian Graydon Conglomerate (Section 2.2.3 of the *Work Plan* [Argonne 2010], which is believed to overlie the Mississippian Burlington-Keokuk interval in this area and predominantly contains residual chert and limestone derived from the these older units.

Preliminary data on the lithologic and hydrostratigraphic characteristics of the unconsolidated deposits in the vicinity of the former CCC/USDA facility were obtained through



examination of the continuous soil cores recovered at 19 deep boring locations (SB01, SB08, SB09, SB16, SB17, SB22, SB25, SB27, SB36, SB40, SB41, SB42, SB44, SB46, SB47, SB48, SB49, SB50, SB54; Figure 2.5). All cores were described in accord with procedures in the *Master Work Plan* (Argonne 2002, Sections 4.3.1.3 and 6.4.1.5) and archived at the Argonne equipment storage facility in Lincoln, Nebraska. Selected core intervals from borings SB01, SB17, SB22, SB25, SB49, and SB50 that reflected the range of sediments penetrated at the site were also shipped to Alfred Benesch and Company (Lincoln, Nebraska) for laboratory analyses of soil physical parameters including particle size, moisture content, porosity, bulk density, total organic carbon, and vertical permeability (Argonne 2002, Sections 6.1.2 and 6.3.1).

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 periodically by hand (as outlined in Section 2.1) in all of the monitoring points available at each stage of the investigations. Groundwater levels were determined manually by using an electronic water level meter to measure the depth to water from a designated point at the top of the well casing. Upon completion of the fourth main field session in May 2011, self-contained, downhole pressure-sensing and data-logging units (Instrumentation Northwest, Inc. Model PT2X™ sensor/loggers) were installed in 14 permanent monitoring wells at 7 locations (Figure 2.12). The units are programmed to measure and record the static water level in each well once every 4 hr. Data were retrieved from the loggers on June 8 and September 2, 2011. Automated monitoring is recommended at Montgomery City for a minimum of 1 yr, to document possible seasonal or other factors that might influence the groundwater levels.

To assist in the evaluation of possible variations or trends in the groundwater levels at Montgomery City, daily rainfall data for the weather monitoring station in Auxvasse, Missouri (approximately 20 mi west of Montgomery City), were obtained from the Missouri Historical Agricultural Weather Database maintained by the Missouri University Extension (MUE) office. These data are available online (MUE 2011).

TABLE 2.1 Summary of activities during the 2010-2011 investigations at Montgomery City.<sup>a</sup>

Main Field Session	Minor Field Visit	Dates	CPT Logging Locations	Soil Sampling Locations <sup>b</sup>	Manual Groundwater Level Measurement	Groundwater Sampling Locations <sup>c</sup>	Existing Temp Wells Installed Previously	Temp Wells Installed This Session	Temp Wells Completed This Session	Temp Wells Plugged This Session	Existing Perm Wells Installed Previously	Perm Wells Installed or Completed This Session	Total Perm Wells	Water Level Recorders Installed This Session	Recorder Download Locations
1		10/18/10-10/29/10	8	36 SS 6 DS	–	3 private wells 3 public wells 11 mon points	–	22 at 13 locations	–	4	–	–	–	–	–
	1a	11/15/10	–	–	x	7 mon points	18	–	–	–	–	–	–	–	–
2		11/29/10-12/10/10	8	6 SS 10 DS	x	17 mon points	18	35 at 14 locations	53	–	–	–	–	–	–
	2a	1/13/10-1/15/10	–	–	x	16 mon points	53	–	–	–	–	–	–	–	–
	2b	2/26/11	–	–	x	3 mon points	53	–	–	–	–	–	–	–	–
	2c	3/23/11	–	–	x	4 mon points	53	–	–	–	–	–	–	–	–
3		4/4/11-4/13/11	–	–	x	53 mon points <sup>d</sup>	53	–	–	–	–	32	32	–	–
4		5/9/11-5/18/11	–	3 SS 3 DS	x	12 mon points	21	–	–	21	32	20	52	14	–
	4a	6/8/11-6/9/11	–	–	x	6 mon points	–	–	–	–	52	–	52	–	14
	4b	9/1/11-9/2/11	–	–	x	2 mon points	–	–	–	–	52	–	52	–	14

<sup>a</sup> Detailed information for individual wells is in Table 2.2.

<sup>b</sup> SS, shallow subsurface; DS, deeper subsurface.

<sup>c</sup> Monitoring points installed during the investigations were sampled when sufficient water had accumulated for the first time.

<sup>d</sup> Complete coincident sampling of all monitoring points installed during the investigations.

TABLE 2.2 Summary of groundwater monitoring points installed during the 2010-2011 investigations.

Well Designation	Installed		Casing Diameter (in.)	Screened Interval (ft BGL)	Sampling Interval <sup>b</sup>	Date First Sampled	Maximum Carbon Tetrachloride (µg/L)	Current Condition		
	Date	Field Session <sup>a</sup>						Status <sup>c</sup>	Date	Field Session <sup>a</sup>
SB01	10/18/10	1	1.0	8-18	U	10/28/10	535	P&A	10/29/10	1
SB01S	10/23/10	1	0.5	20-30	I	10/23/10	–	P&A	10/29/10	1
SB01D	10/23/10	1	0.5	52.5-57.5	L	10/23/10	–	P&A	10/29/10	1
SB01S	5/12/11	4	1.0	8-18	U	5/13/11	2,796	MW	5/11	4
SB01M	10/27/10	1	1.0	20-30	I	10/28/10	10,616	MW	4/11	3
SB01D	5/12/11	4	0.5	47-57	L	5/14/11	22	MW	5/11	4
SB08S	12/4/10	2	0.5	20-30	I	2/26/11	1,485	MW	4/11	3
SB08D	12/4/10	2	0.5	47-57	L	12/6/10	1,422	MW	4/11	3
SB09S	10/26/10	1	0.5	18-28	I	11/30/10	403	P&A	5/11	4
SB09D	10/24/10	1	0.5	58-63	L	11/15/10	8.7	P&A	5/11	4
SB10	10/19/10	1	1.0	8-18	U	10/27/10	ND	P&A	5/11	4
SB11	10/23/10	1	0.5	15-25	I	10/25/10	79	P&A	5/11	4
SB16S	12/6/10	2	0.5	8-18	U	3/23/11	165	MW	4/11	3
SB16M	12/6/10	2	0.5	20-30	I	2/26/11	600	P&A	5/11	4
SB16D	12/6/10	2	0.5	48-58	L	1/14/11	2.5	P&A	5/11	4
SB17S	10/25/10	1	0.5	18-28	I	11/30/10	166	MW	4/11	3
SB17D	10/25/10	1	0.5	51.3-61.3	L	11/15/10	1,310	MW	4/11	3
SB19	10/20/10	1	1.0	13-18	U	None	–	P&A	10/29/10	1
SB22S	10/19/10	1	1.0	8-18	U	1/13/11	ND	MW	4/11	3
SB22M	10/26/10	1	0.5	18-28	I	11/15/10	0.5J	P&A	5/11	4
SB22D	10/26/10	1	0.5	57.2-67.2	L	10/28/10	11	P&A	5/11	4
SB24	10/20/10	1	1.0	8-18	U	10/21/10	ND	MW	4/11	3
SB27S	10/24/10	1	0.5	20-30	I	11/15/10	82	MW	4/11	3
SB27D	10/24/10	1	0.5	41-51	L	10/27/10	4.2	MW	4/11	3

TABLE 2.2 (Cont.)

Well Designation	Installed		Casing Diameter (in.)	Screened Interval (ft BGL)	Sampling Interval <sup>b</sup>	Date First Sampled	Maximum Carbon Tetrachloride (µg/L)	Current Condition		
	Date	Field Session <sup>a</sup>						Status <sup>c</sup>	Date	Field Session <sup>a</sup>
SB29	10/20/10	1	1.0	12-22	U	10/21/10	33	MW	4/11	3
SB33	10/21/10	1	1.0	12-22	U	10/25/10	243	P&A	5/11	4
SB34	10/21/10	1	0.5	17-22	U	10/25/10	6.5	P&A	5/11	4
SB36S	10/25/10	1	0.5	15-25	I	11/15/10	2.0	MW	4/11	3
SB36D	10/25/10	1	0.5	42.2-52.2	L	11/15/10	1.8	MW	4/11	3
SB37S	11/30/10	2	0.5	15-25	I	11/30/10	ND	MW	4/11	3
SB37D	11/30/10	2	0.5	35.8-45.8	L	12/1/10	ND	MW	4/11	3
SB38S	11/30/10	2	0.5	10-15	U	3/23/11	ND	MW	4/11	3
SB38M	11/30/10	2	0.5	15-25	I	1/14/11	ND	MW	4/11	3
SB38D	11/30/10	2	0.5	41.2-51.2	L	12/6/10	ND	MW	4/11	3
SB39S	11/30/10	2	0.5	23-33	I	1/14/11	90	MW	4/11	3
SB39D	11/30/10	2	0.5	45.8-55.8	L	12/1/10	123	MW	4/11	3
SB40S	12/1/10	2	0.5	8-18	U	1/14/11	1.6	MW	4/11	3
SB40M	12/1/10	2	0.5	20-30	I	1/14/11	ND	MW	4/11	3
SB40D	12/1/10	2	0.5	43.3-53.3	L	12/7/10	0.4J	MW	4/11	3
SB41S	12/2/10	2	0.5	8-18	U	1/15/11	85	P&A	5/11	4
SB41M	12/2/10	2	0.5	20-30	I	12/2/10	6,226	P&A	5/11	4
SB41D	12/2/10	2	0.5	48-58	L	12/5/10	14	P&A	5/11	4
SB42S	12/2/10	2	0.5	17-27	I	1/14/11	1,065	P&A	5/11	4
SB42D	12/2/10	2	0.5	47-57	L	12/5/10	7.9	P&A	5/11	4
SB43S	12/3/10	2	0.5	8-18	U	3/23/11	ND	MW	4/11	3
SB43M	12/3/10	2	0.5	20-30	I	1/14/11	ND	MW	4/11	3
SB43D	12/3/10	2	0.5	37.4-47.4	L	12/5/10	ND	MW	4/11	3

TABLE 2.2 (Cont.)

Well Designation	Installed		Casing Diameter (in.)	Screened Interval (ft BGL)	Sampling Interval <sup>b</sup>	Date First Sampled	Maximum Carbon Tetrachloride (µg/L)	Current Condition		
	Date	Field Session <sup>a</sup>						Status <sup>c</sup>	Date	Field Session <sup>a</sup>
SB44S	12/4/10	2	0.5	8-18	U	1/15/11	0.2J	P&A	5/11	4
SB44M	12/3/10	2	0.5	20-30	I	1/14/11	ND	MW	4/11	3
SB44D	12/3/10	2	0.5	50-60	L	12/5/10	10	MW	4/11	3
SB45S	12/3/10	2	0.5	18-28	I	2/26/11	ND	MW	4/11	3
SB45D	12/3/10	2	0.5	56-66	L	12/6/10	2.8	MW	4/11	3
SB46S	12/5/10	2	0.5	8-18	U	3/23/11	8.9	MW	4/11	3
SB46M	12/5/10	2	0.5	20-30	I	12/5/10	186	P&A	5/11	4
SB46D	12/4/10	2	0.5	44.5-54.5	L	12/7/10	1,508	MW	4/11	3
SB47S	12/5/10	2	0.5	20-30	I	1/14/11	2,306	P&A	5/11	4
SB47D	12/5/10	2	0.5	47-57	L	1/14/11	135	P&A	5/11	4
SB48S	12/6/10	2	0.5	20-30	I	1/15/11	1,136	P&A	5/11	4
SB48D	12/5/10	2	0.5	44-54	L	12/6/10	586	P&A	5/11	4
SB49S	5/12/11	4	1.0	8-18	U	5/16/11	ND	MW	5/11	4
SB49M	5/12/11	4	1.0	20-30	I	6/9/11	ND	MW	5/11	4
SB49D	5/12/11	4	0.5	49.5-59.5	L	5/13/11	ND	MW	5/11	4
SB50S	5/11/11	4	1.0	8-18	U	9/1/11	1.9	MW <sup>d</sup>	5/11 <sup>d</sup>	4
SB50M	5/11/11	4	1.0	20-30	I	5/17/11	4.5	MW <sup>d</sup>	5/11 <sup>d</sup>	4
SB50D	5/11/11	4	0.5	47-57	L	5/16/11	144	MW <sup>d</sup>	5/11 <sup>d</sup>	4
SB51S	5/15/11	4	1.0	8-18	U	6/9/11	ND	MW	5/11	4
SB51M	5/15/11	4	1.0	20-30	I	6/9/11	ND	MW	5/11	4
SB51D	5/15/11	4	0.5	41-51	L	5/16/11	ND	MW	5/11	4
SB52S	5/16/11	4	1.0	8-18	U	5/17/11	ND	MW	5/11	4
SB52M	5/16/11	4	1.0	20-30	I	5/17/11	ND	MW	5/11	4
SB52D	5/16/11	4	0.5	40-50	L	5/17/11	0.8J	MW	5/11	4

TABLE 2.2 (Cont.)

Well Designation	Installed		Casing Diameter (in.)	Screened Interval (ft BGL)	Sampling Interval <sup>b</sup>	Date First Sampled	Maximum Carbon Tetrachloride (µg/L)	Current Condition		
	Date	Field Session <sup>a</sup>						Status <sup>c</sup>	Date	Field Session <sup>a</sup>
SB53S	5/16/11	4	1.0	8-18	U	9/1/11	ND	MW	5/11	4
SB53M	5/16/11	4	1.0	20-30	I	6/9/11	ND	MW	5/11	4
SB53D	5/16/11	4	0.5	43-53	L	5/17/11	ND	MW	5/11	4
SB54S	5/15/11	4	1.0	8-18	U	6/9/11	ND	MW	5/11	4
SB54M	5/15/11	4	1.0	20-30	I	6/9/11	ND	MW	5/11	4
SB54D	5/13/11	4	0.5	42-52	L	5/14/11	ND	MW	5/11	4

<sup>a</sup> Field session dates: Session 1, October 18-29, 2010; Session 2, November 29-December 10, 2010; Session 3, April 4-13, 2011; Session 4, May 9-18, 2011.

<sup>b</sup> Sampling intervals: U, upper (< 20 ft BGL); I, intermediate (20-30 ft BGL); L, lower (> 40 ft BGL).

<sup>c</sup> Status: MW, finished as a permanent monitoring well; P&A, plugged and abandoned.

<sup>d</sup> Completed as a permanent stick-up installation. All other monitoring wells have flush-mount completions.

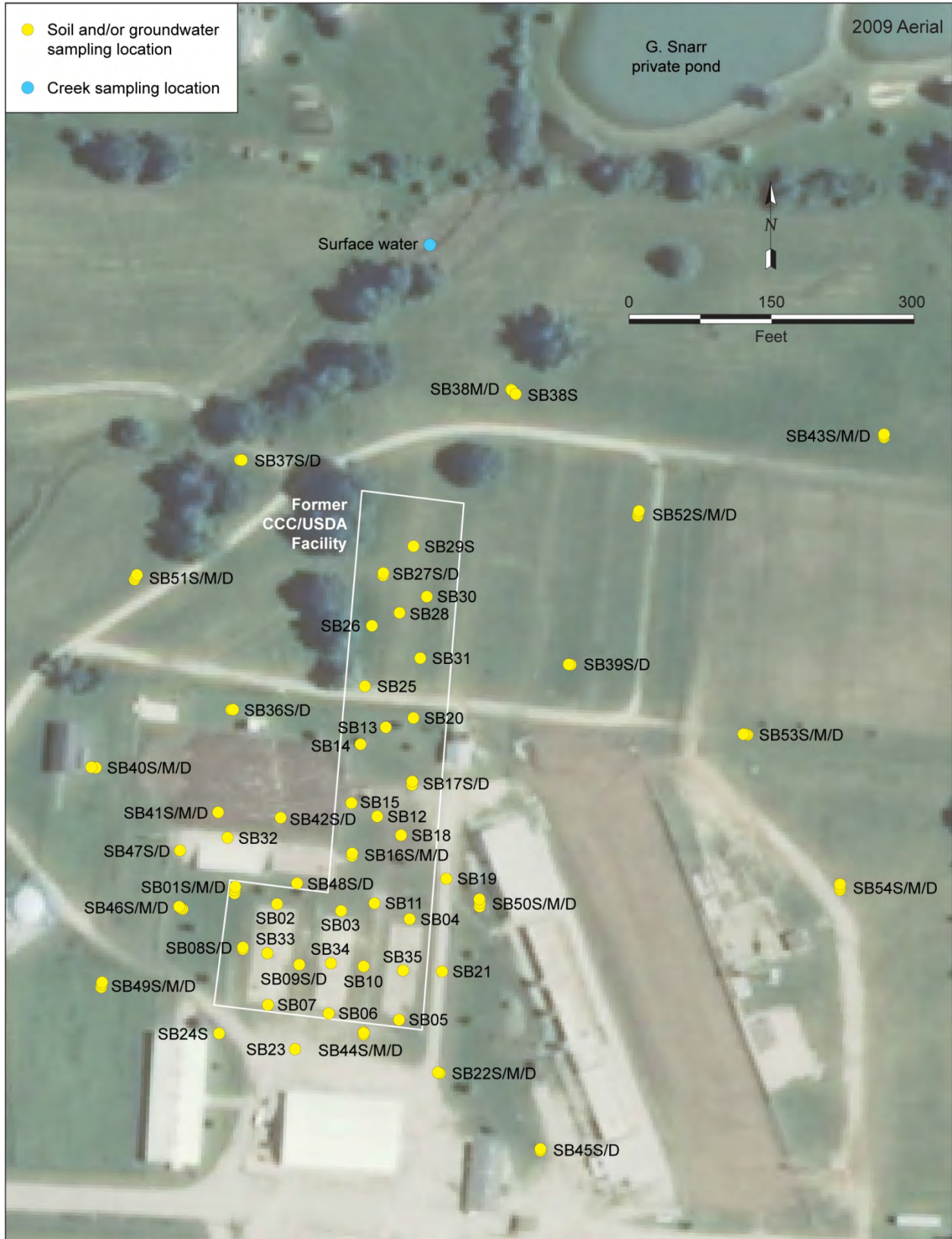


FIGURE 2.1 Investigation locations in the immediate vicinity of the former CCC/USDA grain storage facility, within the Montgomery County Fairgrounds. Source of photograph: NAIP (2009).



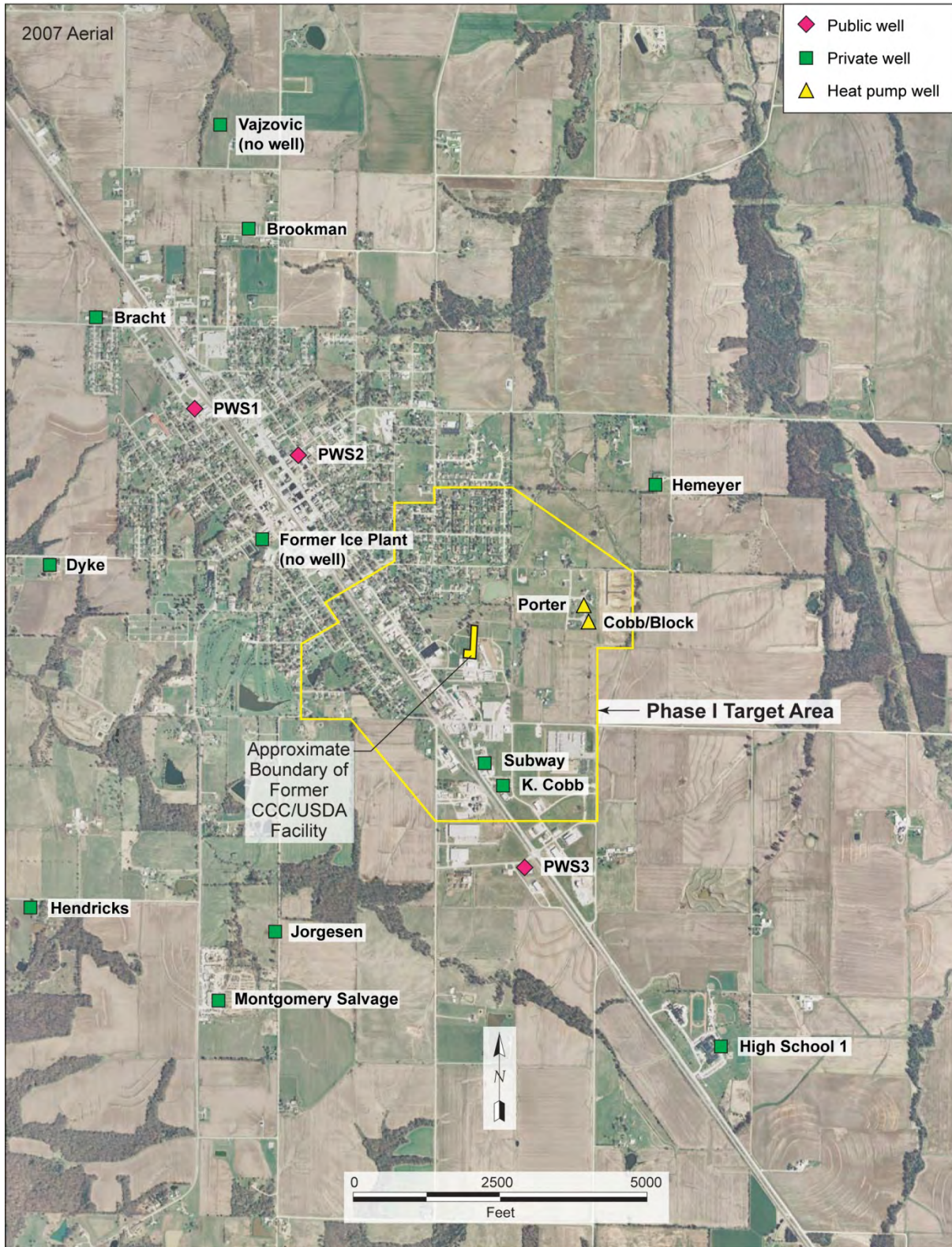


FIGURE 2.2 Locations of investigated public water supply and private wells outside the Montgomery County Fairgrounds. The K. Cobb and Subway wells were identified during the field investigation in October 2010. The Phase I target area includes the properties within approximately 0.5 mi of the former CCC/USDA facility. Source of photograph: NAIP (2007).



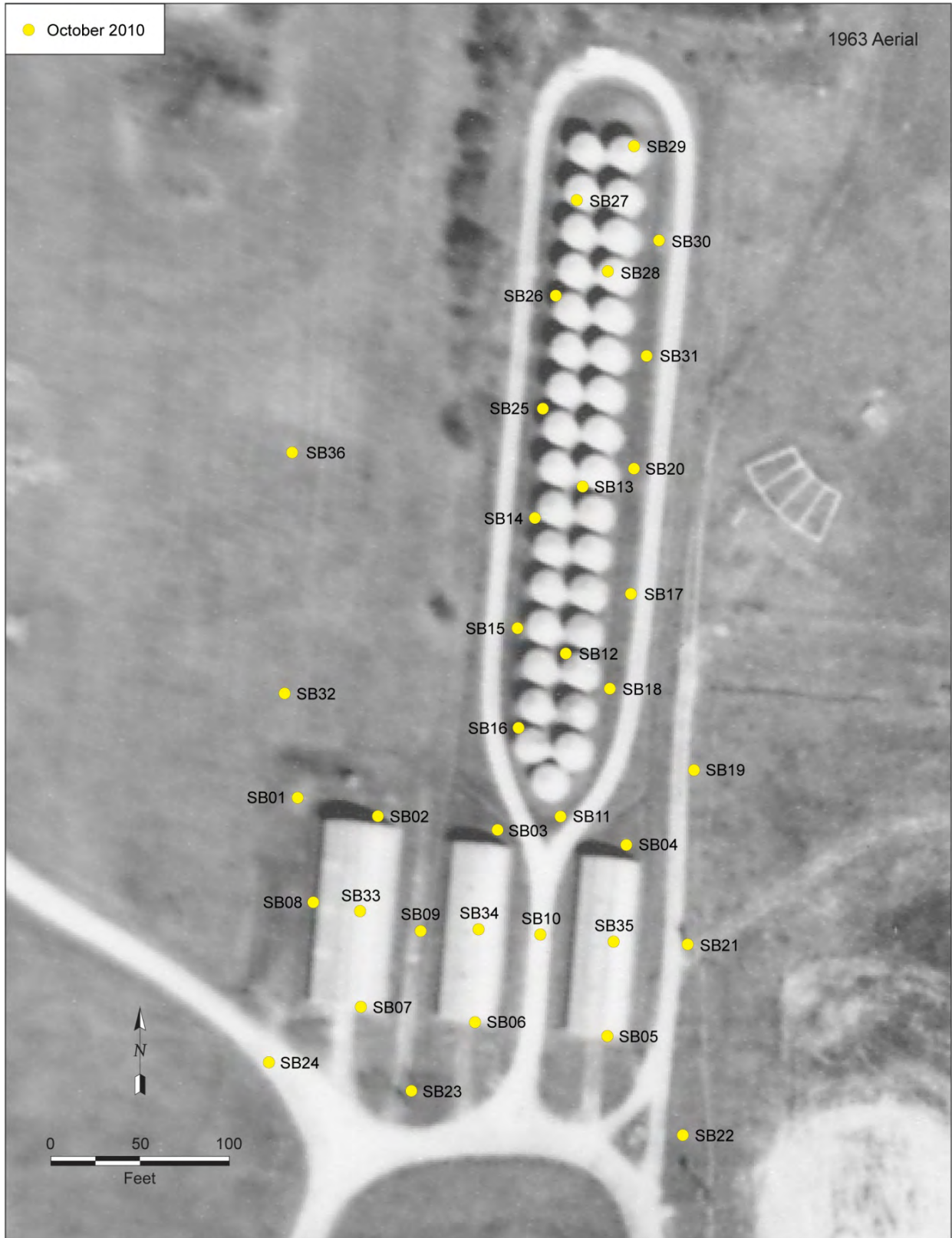


FIGURE 2.3 Initial shallow coring locations SB01-SB36 in October 2010. Coring at locations SB11, SB24, SB32, SB33, SB34, and SB35 extended to 20 ft BGL in the initial work in mid October; coring at the other locations extended to 16 ft BGL at that time. Source of photo: USDA (1963).



FIGURE 2.4 Additional shallow coring locations in November-December 2010 and May 2011. Source of photograph: NAIP (2009).





FIGURE 2.5 Locations of deeper soil sampling in October 2010, November-December 2010, and May 2011. Source of photograph: NAIP (2009).



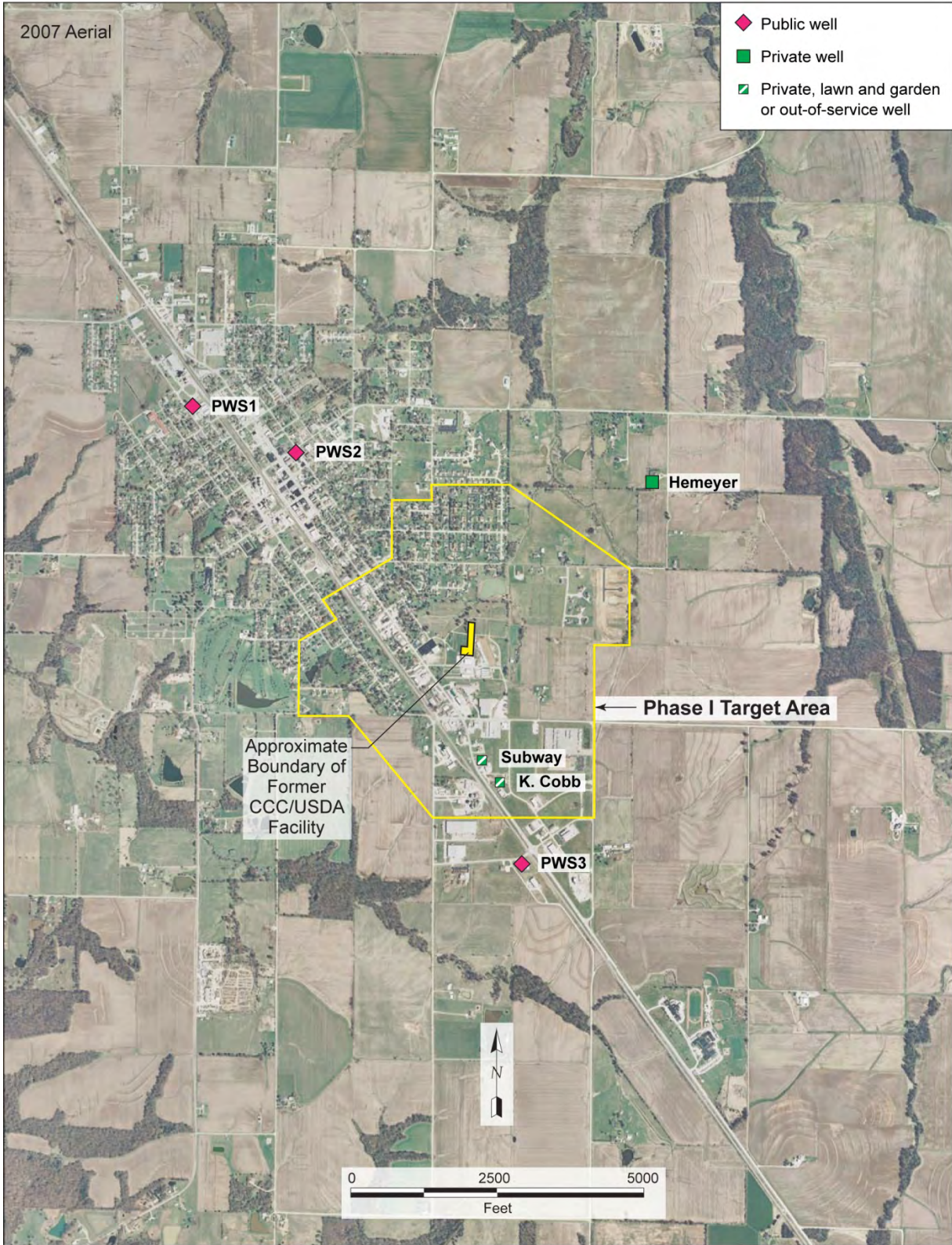


FIGURE 2.6 Locations of the public and private wells sampled in October 2010. The Phase I target area includes the properties within approximately 0.5 mi of the former CCC/USDA facility. Source of photograph: NAIP (2007).





FIGURE 2.7 Locations of the 53 temporary groundwater monitoring points (piezometers) used for sampling and water level measurement in January-April 2011. Source of photograph: NAIP (2009).



FIGURE 2.8 Locations of the 52 permanent groundwater monitoring wells completed in April-May 2011. Source of photograph: NAIP (2009).





FIGURE 2.9 Locations of geomechanical logging performed with the CPT unit in 2010-2011. Source of photograph: NAIP (2009).



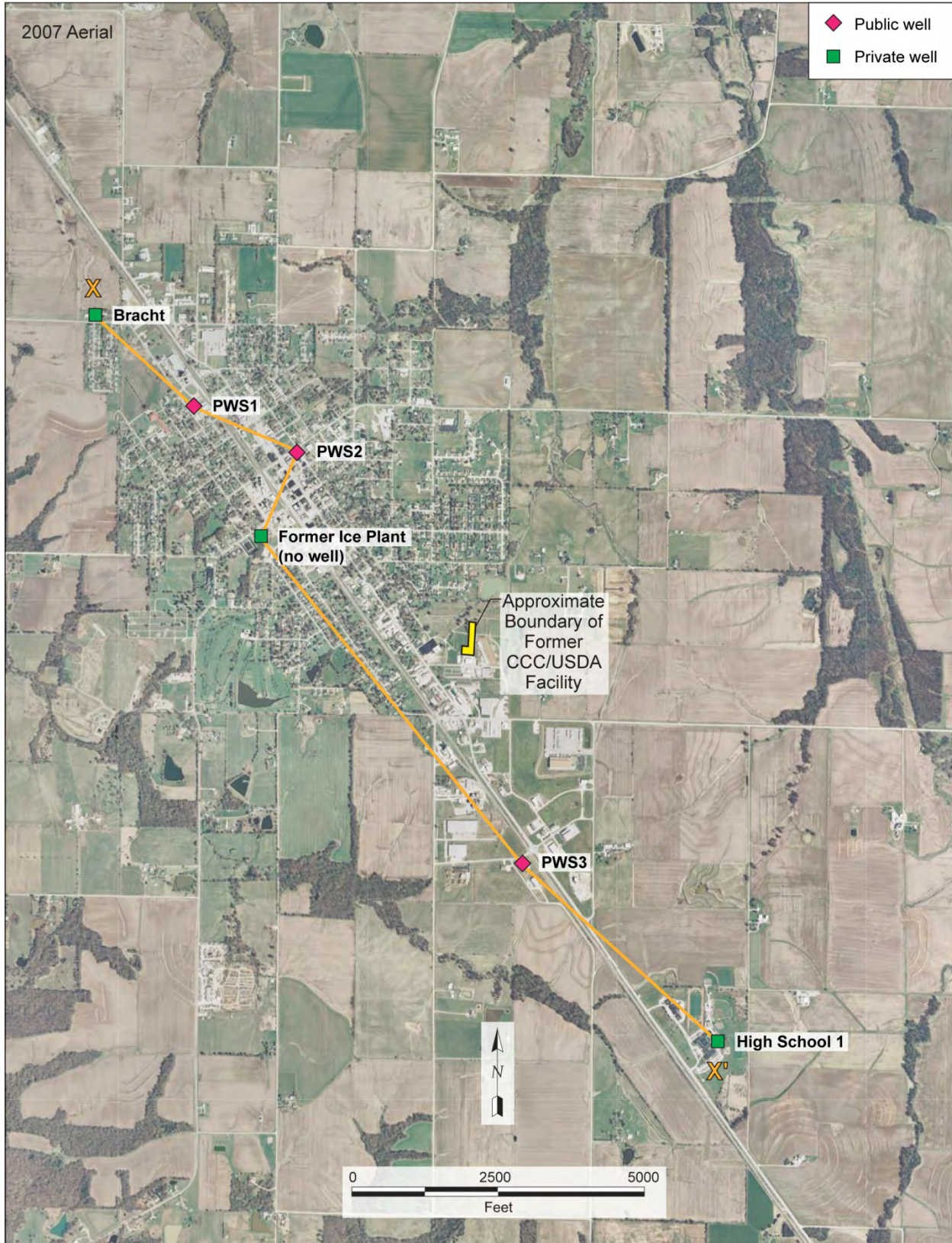


FIGURE 2.10 Location of northwest-to-southeast geologic cross section X-X'. Source of photograph: NAIP (2007).



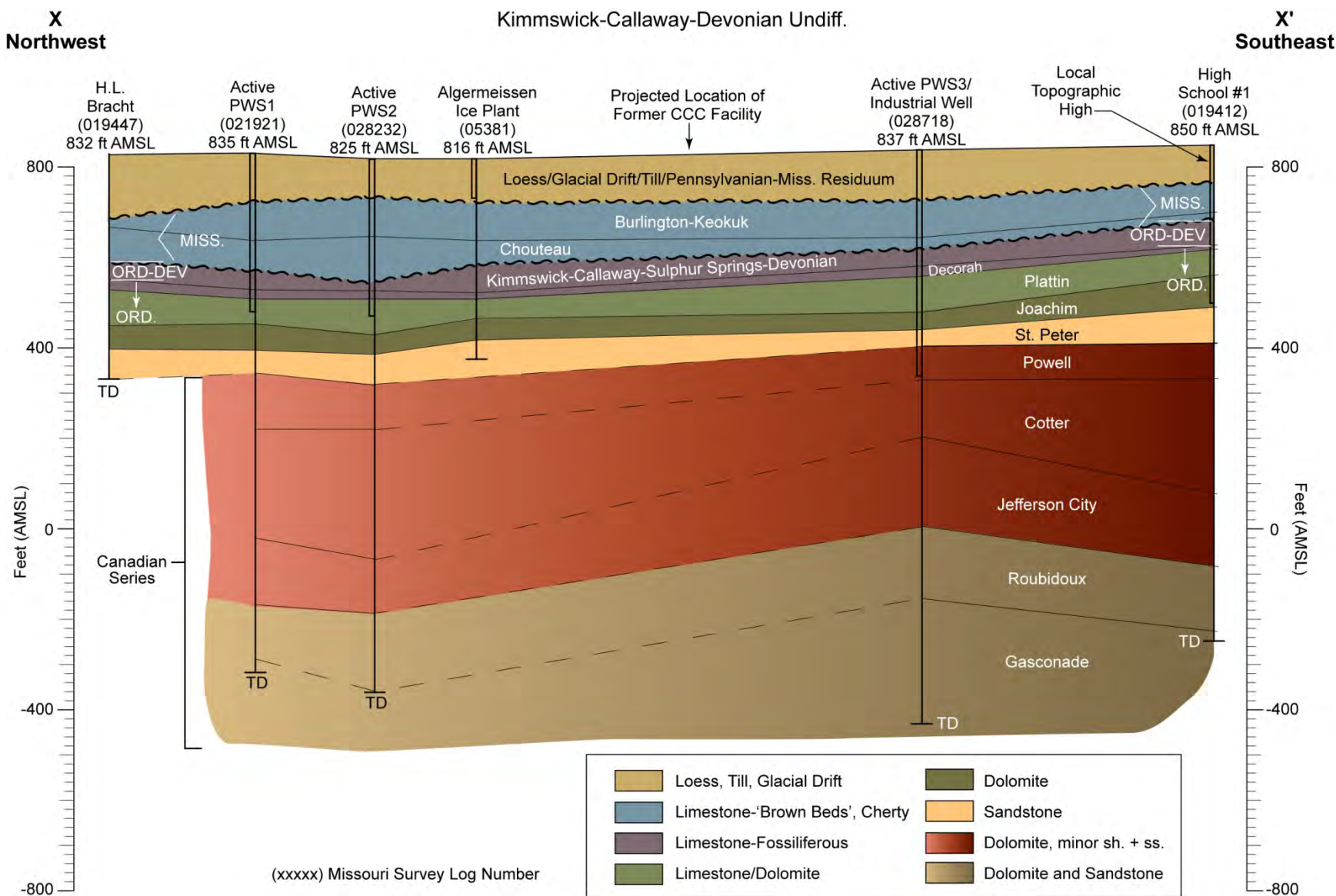


FIGURE 2.11 Northwest-to-southeast geologic cross section X-X' (vertically exaggerated), illustrating the stratigraphic relationships near the former CCC/USDA facility.



FIGURE 2.12 Locations of permanent monitoring wells equipped with automatic groundwater level recorders in May 2011. Source of photograph: NAIP (2009).

### 3 Field and Laboratory Data

This section presents the field and laboratory data generated during the 2010-2011 investigations at Montgomery City. A chronological summary of the field activities is in Appendix C, Table C.1. The methods and procedures employed in collecting the data are described in Section 2, in the *Master Work Plan* (Argonne 2002), and in the site-specific *Work Plan* (Argonne 2010).

#### 3.1 Domestic Water Supply Data and Identification of Private Wells

Table 3.1 summarizes the data acquired in September 2010 for land parcels within approximately 0.5 mi of the former CCC/USDA facility — the area targeted for investigation of domestic water use (Figure 2.2). Montgomery County tax records indicate that 381 land parcels fall completely or partially within the study area. The identified parcels include private residential lots, numerous small businesses, several large commercial properties, municipally owned properties, several tracts of undeveloped residential or agricultural land, and the Montgomery County Fairgrounds. Only one property (identified as owned by Daniel Hunzel; Table 3.1) that was believed to lie within the target area on the basis of the county records could not be located definitively; the legal description on file for this property is incomplete, and no other information could be obtained for either the property or the owner.

On-site reconnaissance and review of public utility billing records confirmed that all of the identified occupied properties in the target area receive domestic water from the Montgomery City municipal water system. Discussions between Argonne staff and R. Burton, head of Public Utilities for Montgomery City, further determined that the municipal water delivery system extends to all of the presently unoccupied residential and commercial properties available for development in the target area.

The grain storage area formerly leased by the CCC/USDA lies within the Montgomery County Fairgrounds. All water used for drinking and other purposes at the fairgrounds is obtained from the Montgomery City public system.

Ten private wells (Brookman, Bracht, K. Cobb, Dyke, Hemeyer, Hendricks, High School 1, Jorgesen, Montgomery Salvage, and Subway) and three heat pump wells (Cobb, Block, and Porter) were identified during the October 2010 study (Figure 2.2), in accord with the

approved *Work Plan* (Argonne 2010). Information on the status and usage of each well was obtained through interviews by Argonne staff with the well owners or their representatives.

The Dyke, Hendricks, Hemeyer, and Montgomery Salvage private wells are presently used for all domestic and other purposes, including drinking water supply, at these locations. The wells are located, respectively, at distances of approximately 1.4 mi, 1.6 mi, 0.8 mi, and 1.4 mi from the former CCC/USDA facility (Figure 2.2). Although these wells were not accessible for measurement of depths to groundwater, records on file with the MDNR indicate casing (or liner) and total depths for the wells of 147 ft and 455 ft, 480 ft and 507 ft, 320 ft and 680 ft, and 300 ft and 500 ft BGL, respectively.

The Brookman (Whyte) well is behind a small apartment complex, approximately 1.6 mi northwest of the former CCC/USDA facility (Figure 2.2). J. Whyte (a relative of the registered well owners, D. and S. Brookman), indicated that the well is presently connected to three yard hydrants (two at the apartment complex and one on the nearby Whyte property) and is used for non-drinking purposes only (lawn and garden watering and car washing). Records obtained from the Montgomery City Public Utilities office confirmed that the apartment complex and the Whyte property are served by the municipal water system. Records on file with the MDNR indicate that the Brookman well is 610 ft deep, with casing extending to 213 ft BGL.

The Bracht private well, located approximately 1.6 mi northwest of the former CCC/USDA facility (Figure 2.2) is not in use. H. Bracht, the property owner and most recent resident, indicated that she moved from the home upon the death of her husband several years ago and that the property has been vacant since that time. Bracht stated that the well was previously used for all domestic purposes. R. Burton (head of Public Utilities for Montgomery City) indicated that the Bracht home lies within the Montgomery City limits and that a public water line supplies service to a number of homes directly across the street from this property, but that the Bracht residence is not presently connected to the public system. A lithologic log obtained from MDNR records indicates a depth of 500 ft BGL for the Bracht well; no other well construction information is available.

The Jorgesen private well is on an undeveloped property approximately 1.2 mi southwest of the former CCC/USDA facility (Figure 2.2) that is rented from the owner (J. Jorgesen) for use as a pasture and riding area for horses. The well is used only for watering of the property and

livestock. The reported casing and total depths for the well (from MDNR records) are 126 ft and 545 ft, respectively.

Data obtained from the MDNR in 2009 identified a well at the Montgomery County R-2 High School, located approximately 1.5 mi southeast of the former CCC/USA facility (Figure 2.2) as a “non-community public well” that was formerly used to supply drinking water. Information obtained from the Montgomery City Public Utilities office in September 2010 indicates, however, that the well at this location is now used for irrigation purposes only. Billing records provided by the Public Utilities office confirm that drinking water is now supplied to the school by the municipal delivery system. The reported casing and total depths of the school well (obtained from MDNR records) are 350 ft and 1,100 ft BGL, respectively.

The K. Cobb private well is located at a residence and landscape business approximately 0.4 mi south-southeast of the former CCC/USDA facility. The owner indicated that the well is used for lawn and garden purposes only; billing records from the Public Utilities office indicate that the K. Cobb property is serviced by the Montgomery City municipal supply. No records are known to be available for this well, and the owner stated that the driller of the well is now deceased. The owner believes that the well is 600-700 ft deep. Access to the well for measurement of its depth could not be obtained.

The Subway private well is approximately 0.35 mi south-southeast of the former CCC/USDA facility. The owner (M. Sevier) indicated that the well was installed in approximately 1992 and was formerly used for all business purposes at the restaurant, including drinking water supply. In approximately 1997, however, water service from the Montgomery City public system was extended to the restaurant, and the wiring and piping to the well were disconnected. The depth of the well, as determined by Argonne staff, is 180.8 ft BGL.

Two potential additional private well locations (Vajzovic and the Algermissen Ice Plant; Figure 2.2) identified on the basis of records obtained from the MDNR in 2009 were investigated in September 2010; however, no wells were found at these locations.

In preparation of the Phase I *Work Plan* (Argonne 2010), a search was conducted of records available from the MDNR Missouri Water Resources Center (for wells drilled prior to 1987) and the MDNR Water Protection Program, Public Drinking Water Branch, Wellhead Protection Section, for private wells in the vicinity of Montgomery City. The results of this

search (summarized in Table 2.2 of the *Work Plan* [Argonne 2010]) identified a potential well in Section 30, Township 49N, Range 5W, owned by N. Vajzovic. The MDNR data for this well are inconsistent, however, in that the stated location of the well — in the city of Cuba, Crawford County, Missouri (approximately 64 mi south of Montgomery City) — does not correspond to the location indicated by the associated latitude and longitude coordinates and T-S-R designation.

Argonne staff investigated the apparent location of the Vajzovic well near Montgomery City, as determined from the latitude, longitude, and T-S-R information mapped in Figure 2.2. The owner of the property at the mapped location (L. Wick) indicated that no private well is located on this land, and that all domestic water needs at this location are served by the Montgomery City public water supply. Records available from the Montgomery County Assessor also show no past association between N. Vajzovic and the Wick or other nearby properties. The Cuba, Missouri, address stated as the location for the N. Vajzovic well in the MDNR records is consistent with the current residence for this individual, suggesting that the latitude, longitude, and T-S-R data for the Vajzovic well in the MDNR records are in error.

Well construction and lithologic data were also obtained from MDNR records for an industrial high-capacity well installed in 1938 at the Algermissen Ice Plant. R. Burton (head of Public Utilities for Montgomery City and a long-time resident of the town), identified the location of the former ice plant at the intersection of Second St. and Walker St. in west-central Montgomery City. No evidence of either the plant or the former well remains, however. The site of the former plant is now a gravel parking lot, directly adjacent to a small office building. No other information pertaining to the former ice plant well was discovered.

### **3.2 Analytical Data for Soil Samples**

All soil samples collected during the 2010-2011 investigations were analyzed by the purge-and-trap method described in Section 2.3.3. Selected soil samples were also analyzed by a screening headspace method to assist with decision making in the field. The analytical data for VOCs in soil samples are summarized in Tables 3.2-3.4. The complete analytical data are in Appendix D, Tables D.1-D.3. Figures 3.1-3.4 and Figures 3.5-3.6, respectively, illustrate the lateral distributions of carbon tetrachloride and chloroform in soils at various depths.



### 3.2.1 Headspace Analyses of Volatile Organic Compounds in Shallow Soil Samples

Shallow soil samples were collected initially at 35 locations (SB01-SB35; Figure 2.3) in October 2010 to investigate for the possible presence and distribution of carbon tetrachloride in soils in the upper portion of the soil column in the immediate vicinity of the former CCC/USDA grain storage structures. These samples were collected, in part, as a basis for prioritizing locations for subsequent deeper soil sampling. As the investigations progressed, shallow soil samples ( $\leq 20$  ft BGL) were also collected at 10 additional locations (SB36, SB40-SB42, SB44, SB46, SB47, SB49, SB50, and SB54; Figures 2.3 and 2.4) in conjunction with the deeper coring and sampling described in Section 2.3.2.

A total of 146 shallow soil samples were initially collected at locations SB01-SB35 in October 2010 (Figure 2.3), representing targeted depths of 4 ft, 8 ft, 12 ft, 16 ft, and (at 6 locations) 20 ft BGL. These samples were preserved on dry ice as described in Section 2.3.1 and were analyzed at the AGEM Laboratory by a headspace method with a gas chromatograph and electron capture detector, to provide timely data for evaluation in the field. All of the soil samples, including the shallow soil samples collected later, were subsequently analyzed by the purge-and-trap sample preparation method with analysis by GC-MS, as discussed in Sections 2.3.3 and 3.2.2.

Table 3.2 summarizes the analytical results obtained for carbon tetrachloride with the headspace method for the initial group of samples (SB01-SB35); the complete VOCs analytical data for these samples are in Appendix D, Table D.1.

Carbon tetrachloride concentrations at or above the reporting limit of  $1.0 \mu\text{g}/\text{kg}$  for the *headspace method* were detected in 79 of the shallow soil samples collected at SB01-SB35 in October 2010. Estimated maximum carbon tetrachloride concentrations in excess of  $1,000 \mu\text{g}/\text{kg}$  were indicated at locations SB01 and SB32 (at 16 ft BGL in both cases). Concentrations greater than  $100 \mu\text{g}/\text{kg}$  were detected by the headspace method at additional locations SB02, SB08, SB09, SB17, and SB25 (Table 3.2) at 12-16 ft BGL. Concentrations  $> 100 \mu\text{g}/\text{kg}$  are highlighted with shading in Table 3.2.

The results of the headspace analyses of the shallow soils at SB01-SB35 were evaluated by Argonne personnel in October 2010 as a basis for recommending initial locations for deeper soil sampling and analyses for VOCs. In this application, the distributions of headspace values at

each sampling horizon in the shallow soil column 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 additional contamination in the deeper subsurface.

Carbon tetrachloride was detected only sporadically, at generally low levels (Table 3.2) at the 4-ft and 8-ft BGL sampling horizons; however, somewhat more consistent patterns of elevated carbon tetrachloride concentrations were identified at the 12-ft and 16-ft BGL levels, as shown in Figures 3.1 and 3.2, respectively. Carbon tetrachloride was not detected by the headspace method or was identified only at relatively low levels at all of the locations sampled to the south and east of the former CCC/USDA grain storage structures. In contrast, relatively higher headspace carbon tetrachloride concentrations were identified in the following two areas:

- In association with and immediately to the west-northwest of the three remaining rectangular foundations (former rectangular grain storage structures)
- In the southern portion of the area formerly occupied by the double row of circular grain bins

### 3.2.2 Purge-and-Trap Analyses of Volatile Organic Compounds in Shallow Soil Samples

Table 3.3 presents the results of purge-and-trap analyses for all of the shallow samples collected in the 2010-2011 investigations. The complete purge-and-trap data for VOCs in these samples are in Appendix D, Table D.2. Figure 3.3 illustrates the areal distribution of the maximum contaminant levels (at all depths) detected in the shallow soils by the purge-and-trap method.

Figure 3.3 indicates that the locations of *purge-and-trap method* carbon tetrachloride concentrations above the MRBCA DTL of 79.6 µg/kg (Table 3.3) qualitatively coincide with the locations of elevated *headspace method* concentrations (> 100 µg/kg) detected at SB01, SB02, SB08, SB09, SB17, SB25, and SB32 (Figures 3.1 and 3.2 and Table 3.2). Carbon tetrachloride concentrations above the DTL were also detected by the purge-and-trap method at locations SB41, SB42, SB46, SB47, and SB48, which were sampled in November-December 2010. No



carbon tetrachloride concentrations exceeding the DTL were identified by the purge-and-trap method at any of the other locations sampled (Figure 3.3 and Tables 3.3 and 3.4). With only one exception (at SB09), no carbon tetrachloride concentrations above the quantitation limit of 10 µg/kg for the purge-and-trap method were detected in soils shallower than 8 ft BGL (Table 3.3). The maximum carbon tetrachloride levels detected in the shallow soils by the purge-and-trap method occurred at SB32 (2,412 µg/kg at 16 ft BGL), SB01 (1,751-2,353 µg/kg at 16-20 ft BGL), and SB41 (891 µg/kg at 20 ft BGL) (Figure 3.3).

Relatively little to no chloroform (generally  $\leq 10$  µg/kg) was detected in most of the shallow soil samples analyzed by the purge-and-trap method (Appendix D, Table D.2). Chloroform levels greater than the MRBCA DTL (76.6 µg/kg) for this contaminant in soils were detected in only three soil samples, at SB01 (86-111 µg/kg at 16-20 ft BGL) and SB32 (133 µg/kg at 16 ft BGL) (Figure 3.5).

### 3.2.3 Volatile Organic Compounds in Deeper Soil Samples

A total of 166 deeper (> 20 ft BGL) soil samples were collected during the 2010-2011 investigations for VOCs analyses, at 19 locations near the former CCC/USDA grain storage facility. Six locations for deeper sampling (SB01, SB09, SB17, SB22, SB25, SB36; Figure 2.5) were selected in October 2010 on the basis of the headspace analyses of shallow soils outlined in Section 3.2.1. Additional deep soil boring and sampling locations were chosen for investigation in November-December 2010 and May 2011, with the approval of the CCC/USDA and MDNR project managers, on the basis of the soil and groundwater contaminant data acquired as the investigations progressed (see Sections 2.1, 2.3.2, and 2.4).

All of the deeper soil samples were preserved on dry ice and were analyzed by the purge-and-trap method, as discussed in Section 2.3.3. The complete analytical results for VOCs in the deeper soils are in Appendix D, Table D.2. Table 3.4 summarizes the results for carbon tetrachloride in the deeper soil samples. The areal distribution of the maximum carbon tetrachloride levels detected in the deeper soils is illustrated in Figure 3.4.

Carbon tetrachloride concentrations at or above the quantitation limit of 10 µg/kg for the purge-and-trap method were identified in 103 soil samples, at 13 of the sampled locations (SB01, SB08, SB09, SB16, SB17, SB25, SB27, SB41, SB42, SB46, SB47, SB48, and SB50). Carbon

tetrachloride concentrations above the DTL for this contaminant in soils (79.6 µg/kg) were detected at 12 of these locations; values greater than 500 µg/kg were identified at borings SB01, SB41, SB46, and SB47 to the northwest of the rectangular foundations, as well as at SB50 to the east-northeast of the foundations (Figure 3.4). The maximum carbon tetrachloride concentrations identified in the deeper soils (> 20 ft BGL; Table 3.4) were detected at 24-36 ft BGL in SB01 (1,095-1,522 µg/kg), at 24-28 ft BGL in SB41 (1,110-1,489 µg/kg), and at 54.5 ft BGL in SB46 (1,068 µg/kg).

Except at SB09, no carbon tetrachloride concentrations greater than the quantitation limit of 10 µg/kg for the purge-and-trap method were detected in soils shallower than 8 ft BGL. The results of groundwater level monitoring during the 2010-2011 investigations (Section 4.2.2.1) indicate that the apparent onset of saturation in the soils across the investigation site occurs at depths of about 1-8 ft BGL. These observations therefore suggest that the concentrations of carbon tetrachloride detected in many of the deeper soils analyzed for VOCs might reflect contamination that is (1) adsorbed to the solid soil particles, (2) dissolved in the pore water contained in the soils, or (3) in a combination of these two physical states.

No chloroform was detected in any of the deeper soil samples (> 20 ft BGL) at levels above the DTL (76.6 µg/kg) for this contaminant (Appendix D, Table D.2). Concentrations of chloroform exceeding the purge-and-trap method quantitation limit of 10 µg/kg were detected only at SB01 (43-59 µg/kg at 24-36 ft BGL and 197 µg/kg at 57.5 ft BGL) and at SB41 (14-54 µg/kg at 24-32 ft BGL) (Figure 3.6).

### **3.2.4 Lithologic and Physical Property Data for Deeper Soils**

Lithologic descriptions for the continuous soil cores recovered at borings SB01, SB08, SB09, SB16, SB17, SB22, SB25, SB27, SB36, SB40, SB41, SB42, SB44, SB46, SB47, SB48, SB49, SB50, and SB54 (Figure 2.5) and CPT log traces for borings SB01, SB09, SB11, SB17, SB22, SB25, SB27, SB36-SB43, and SB45 (Figure 2.9) are in Appendix E.

The results of physical property analyses for selected intervals from borings SB01, SB17, SB22, SB25, SB49, and SB50 are in Appendix D, Table D.3. The core intervals submitted for laboratory analyses were chosen to reflect the predominant sediment types penetrated at the investigation site, as well as subtle variations in the properties of these soils suggested by visual

inspection. Bulk dry density, moisture content, specific gravity, porosity, total organic carbon content, and sediment particle size distribution determinations were completed by the physical testing laboratory (Alfred Benesch and Company, Lincoln, Nebraska) for all samples as requested; however, vertical permeability determinations could be obtained only for selected samples from borings SB22, SB49, and SB50 because of the relatively small volume of soil material available from the (split) 1.125-in.-diameter core at each depth interval.

### **3.3 Installation of Permanent Monitoring Wells**

As outlined in Section 2.4.4, 52 small-diameter (0.5-in.- or 1-in.-ID) groundwater monitoring points were completed as *permanent monitoring wells* in accord with Variance No. 4952 issued by the MDNR, which permitted use of the direct-push construction technique for these installations. The locations of the monitoring wells are shown in Figure 2.8, and their construction details are in Table 2.2. Copies of the MDNR certification forms for the wells (including the approved variance form) are in Appendix B.

As shown in Table 2.2, two or three individual monitoring points were installed at different depths at most of the well locations to permit evaluation of the potential vertical distribution of contamination in the groundwater, as well as possible vertical hydraulic gradients. For convenience of identification in the field, the wells at each location were designated as “shallow” and “deep” (S, D) for well pairs, or “shallow,” “middle,” and “deep” (S, M, D) for clusters of three wells, on the basis of the relative depth of each well in a specific grouping.

### **3.4 Analytical Data for Groundwater and Surface Water Samples**

During the 2010-2011 studies, 151 groundwater samples, 1 surface water sample, and 1 sample of treated water from the Montgomery City municipal water delivery system were collected for VOCs analyses. The sampling was conducted, to the extent possible (as discussed further below), in accordance with the procedures outlined in Section 2.3, in the site-specific *Work Plan* (Argonne 2010), and in the *Master Work Plan* (Argonne 2002).

The specific conditions under which each water sample was collected are in Appendix C, Table C.1. The analytical results for the VOCs in water samples are in Table 3.5 (compiled chronologically) and Table 3.6 (compiled by location and depth). The water parameter measurements obtained for these samples in the field are in Appendix F, Table F.2.

In October 2010, samples of groundwater from the three Montgomery City public water supply wells and the Hemeyer, K. Cobb, and Subway private wells (Figure 2.6) were collected for VOCs analyses. A sample of treated water from the Montgomery City public distribution system was also analyzed for VOCs. No carbon tetrachloride or chloroform was identified in these samples (at an instrumental detection limit of 0.1 µg/L for each compound; Table 3.5).

Water samples from the three public water supply wells, the treated water from the municipal supply, and groundwater from the Hemeyer and K. Cobb private wells were collected for analyses of selected inorganic geochemical parameters. The results of the geochemical analyses are in Appendix F, Table F.3. Samples for inorganic analyses were not collected from the monitoring wells because of the generally limited availability of groundwater at these locations.

A sample of surface water was collected for VOCs analyses from an intermittent drainageway that runs through the northwestern portion of the fairgrounds property and exits the property at its northern margin (Figure 2.1). The drainage was generally dry during the 2010-2011 investigations, but it developed a small flow after several rains in October 2010. No carbon tetrachloride or chloroform was detected in the surface water sample at an instrumental detection limit of 0.1 µg/L for each compound (Table 3.5).

During the 2010-2011 soil coring program, a show of groundwater in the soil coring barrel of sufficient quantity for immediate sampling for VOCs analysis was encountered at only one location: at SB24 in the interval at 18-22 ft BGL (Figure 2.5). At all other locations, the installation of temporary or permanent screens and risers was required to obtain groundwater samples for VOCs analyses, as discussed in Section 2.4.

An array of temporary and permanent groundwater monitoring points was developed as the field program progressed to permit groundwater sampling and monitoring over three general depth intervals. These intervals were selected primarily on the basis of continuous soil coring and logging, analyses for VOCs in soils, and monitoring of groundwater levels.

For the purposes of this report, the three sampling intervals are termed “upper,” “intermediate,” and “lower.” These designations are distinct from the “shallow,” “middle,” and “deep” (S, M, D) designations used to identify the relative depths of individual monitoring points in well clusters (Section 3.3). The sampling interval (upper, intermediate, or lower) represented

by each temporary or permanent monitoring point sampled for VOCs during the 2010-2011 program is indicated in Table 3.7.

As noted in Section 2.3, in many of the temporary and permanent monitoring points the rate of initial groundwater accumulation and the rate of subsequent recovery following groundwater withdrawal were very slow. These slow rates largely precluded the collection of samples by standard (volume-purge or low-flow) methods. Consequently, a bailer was used to obtain an initial sample from each monitoring point as soon as this was physically possible, upon accumulation of sufficient groundwater and in the context of the field schedule outlined in Section 2.1. The date of initial groundwater sampling for each monitoring point is shown in Table 2.2. The results of the analyses of these initial samples for carbon tetrachloride are summarized in Figures 3.7-3.9, for monitoring points in the upper, intermediate, and lower sampling intervals, respectively.

A number of the individual temporary monitoring points were resampled, as indicated in Table 3.5. In April 2011, however, groundwater samples for VOCs analyses were collected from all 53 of the temporary monitoring points present at that time (retained from October-December 2010). The purpose was to obtain a coincident set of VOCs analyses prior to the abandonment of 21 of these temporary monitoring points in May 2011. The April 2011 sampling event was conducted without purging because of the slow responses of the water levels in many of the wells, as noted above. The results of the April 2011 groundwater analyses for carbon tetrachloride are in Figures 3.10-3.12, respectively, for monitoring points in the upper, intermediate, and lower sampling intervals.

Carbon tetrachloride concentrations above the MRBCA DTL (5.0 µg/L) for this contaminant in groundwater were identified in 75 of the groundwater samples collected from the temporary and permanent monitoring points during the 2010-2011 investigations (Tables 3.5 and 3.6). Figures 3.10-3.12 demonstrate that the carbon tetrachloride concentrations determined in the April 2011 sampling event variably increased, decreased, or remained relatively unchanged in comparison to the “initial” water analyses obtained for the corresponding locations (Figures 3.7-3.9). The analyses for all samples, however, yielded similar patterns of the spatial distribution of carbon tetrachloride. The results indicate that (with few exceptions) the identified concentrations in groundwater in each sampling interval decrease rapidly away from an apparent “hot spot” immediately to the west and northwest of the remaining rectangular foundations. The maximum carbon tetrachloride concentrations detected in each sampling interval are as follows:

- Upper sampling interval:
  - SB01S (1,581-2,796 µg/L)
  
- Intermediate sampling interval:
  - SB01M (8,001-10,616 µg/L)
  
  - SB41M (1,260-6,226 µg/L)
  
  - SB42S (918-1,065 µg/L)
  
  - SB47S (1,560-2,306 µg/L)
  
  - SB48S (658-1,136 µg/L)
  
- Lower sampling interval:
  - SB08D (1,209-1,422 µg/L)
  
  - SB17D (1,231-1,310 µg/L)
  
  - SB46D (1,341-1,508 µg/L)
  
  - SB48D (65-586 µg/L)

Concentrations of chloroform greater than the DTL (80 µg/L) for this contaminant were detected in 25 of the groundwater samples collected from the temporary and permanent monitoring points, in association with the elevated concentrations of carbon tetrachloride noted above at locations SB01, SB08, SB41, SB42, SB46, SB47, and SB48 (Table 3.6). The maximum concentrations of chloroform detected in groundwater during the 2010-2011 investigations were in wells SB01M (1,437-2,084 µg/L), SB41M (502-957 µg/L), and SB01D (240-869 µg/L).

### **3.5 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 periodically measured manually at all available temporary or permanent monitoring points as the investigations progressed, as outlined in Section 2.1. The specific dates on which groundwater levels were measured in each monitoring point and the results of the manual measurements are in Table 3.8.

Upon completion of the May 2011 field session, self-contained, downhole pressure-sensing and data-logging units were installed in 14 of the permanent monitoring wells at the site (Figure 2.12). The complete set of water levels recorded by the data loggers is 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 4.2.2.

Information on precipitation in the Montgomery City 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 (Auxvasse, approximately 20 mi west of Montgomery City) were obtained from the Missouri Historical Weather Database (MUE 2011). The precipitation data are in Supplement 1, Table S1.2.

### **3.6 Coordinates Survey Data**

In December 2010, the spatial locations of all existing investigative borings (SB01-SB48) installed in October 2010 and November-December 2010 were determined by using on-site measurements made relative to selected fixed physical reference points at the fairgrounds, 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. At this time an interim survey was also performed by Schwab-Eaton, P.A., Manhattan, Kansas, to obtain representative spatial coordinates and ground surface elevations for the locations at which temporary monitoring wells or well clusters had been installed.

After the completion of the May 2011 field session, a second survey was performed by Schwab-Eaton (in June 2011) to provide horizontal and vertical control for the suite of 52 permanent groundwater monitoring wells established at the site.

Together, the GPS and survey data provide a basis for the areal identification and depiction of the 2010-2011 investigation locations, as well as for the correlation and interpretation of stratigraphic, subsurface sampling, and groundwater level data. The coordinates for all of the investigated locations are in Appendix G, Tables G.1 and G2.

### **3.7 Results of Quality Control Activities**

The QA/QC procedures for sample collection, handling, and analysis followed during the investigation are described in detail in the *Master Work Plan* (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 QC/QC activities are summarized as follows:

- Sample integrity was maintained successfully throughout the collection, shipping, and analysis activities by the documentation of samples as they were collected and the use of chain-of-custody records and custody seals.
- Trip blanks, equipment rinsates, and a field blank were collected to monitor sample collection and handling activities. Field replicate samples were collected, and samples were selected for duplicate analysis as a measure of analytical precision. Method blanks were analyzed with each sample delivery group. Analytical results indicate that sample handling procedures were followed during the investigation and that no cross-contamination of samples occurred during collection, shipment, and analysis.
- Soil samples were quick-frozen on dry ice as they were collected. To investigate the presence of potential carbon tetrachloride soil sources, two soil analysis methodologies were used. Shallow soil samples (4-20 ft BGL) were collected initially. Analysis of these samples by the headspace method (a



modification of the protocol in EPA Method 5021) provided a sensitive indicator of possible contamination in the associated deeper soils. The headspace data are not quantitative but were examined to determine contaminant distribution patterns to prioritize the follow-up sampling of deeper soils. On the basis of the headspace results, locations were selected for deeper soil sampling. Subsequently, all soil samples were subjected to purge-and-trap sample preparation with analysis on a GC-MS system (a modification of EPA Method 8260B) to provide a quantitative measure of contamination.

- Water samples shipped to the AGEM Laboratory were analyzed by using EPA Method 524.2 to achieve a quantitation limit of 1.0 µg/L. 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.
- In accordance with the QA/QC procedures defined in the *Master Work Plan* (Argonne 2002), approximately 10% of the soil and 10% of the groundwater samples analyzed at the AGEM Laboratory were subjected to verification analysis at a second laboratory with the same analytical procedures. Agreement was good over the range of contaminant concentrations detected, with average relative percent difference values for carbon tetrachloride and chloroform of < 10% for both the water and soil samples in which contamination was detected. The carbon tetrachloride and chloroform concentrations detected in analysis at the AGEM Laboratory are supported by the verification analyses.
- Groundwater samples were collected for inorganic analyses to aid in geochemical characterization of the water-bearing zone(s). These samples were shipped immediately to TestAmerica, University Park, Illinois, for filtration and analysis. The analyses included dissolved anion concentrations (bromide, chloride, sulfate, nitrate, nitrite, and phosphate) by EPA Method 300 and dissolved metals (aluminum, calcium, iron, magnesium, manganese, phosphorus, potassium, silicon, sodium, and zinc) by EPA

Method 6010. The inorganic results for groundwater samples from TestAmerica are acceptable for geochemical characterization, on the basis of the recovery of known concentrations of the analytes of concern in laboratory control samples analyzed with the groundwater samples.

### **3.8 Waste Characterization, Handling, and Disposal**

No waste requiring disposal was generated during the 2010-2011 investigations. The soil cores brought to the surface by the CPT units were retained for logging and future reference. No other waste soil was accumulated. With only a few exceptions, the groundwater samples were collected without purging. When purging was conducted, the amounts of purge water were small, and the water was used to mix cement for well surface completions. No waste samples were analyzed, and no waste was transported off-site for disposal.

TABLE 3.1 Property ownership data for the Phase I target investigation area (approximately 380 separate parcels).

Map and Parcel Numbers			Listed Owner(s)		Mailing Address of Record					Phone Number	Notes
Map	Block	Parcel	Last Name	First Name	Street	Number	City	State	Zip Code		
50-11-3-5-1	2	1.002	York	Philip & Julie	Aguilar Dr.	1155	Montgomery City	MO	63361	573-564-8002	c/o York & Glassford Law.
50-11-3-5-1	5	15	B&R Real Estate LLC		Aguilar Dr.	1230	Montgomery City	MO	63361		
50-06-9-32-1	1	18.001	Dowling	Douglas	Alan Dr.	101	Montgomery City	MO	63361	573-564-3155	
50-06-9-32-1	2	6	Elmore	Ralph	Alan Dr.	102	Montgomery City	MO	63361	573-564-3654	
50-06-9-32-1	1	19	Bratcher	James	Alan Dr.	103	Montgomery City	MO	63361	573-564-3949	
50-06-9-32-1	2	5	Cunningham	Martin & Lisa	Alan Dr.	104	Montgomery City	MO	63361	573-564-2822	
50-06-9-32-1	2	4	Hoette	Gary	Alan Dr.	106	Montgomery City	MO	63361	573-564-2577	Phone number is for Gary Hoette, 645 White Rd.
50-06-9-32-1	1	15	Harness	Eric	Alan Dr.	107	Montgomery City	MO	63361	573-564-2848	
50-06-9-32-1	2	3	Davidson	Joseph	Alan Dr.	108	Montgomery City	MO	63361	573-564-2008	
50-06-9-32-1	2	2	Ruhl	James & Laurie	Alan Dr.	110	Montgomery City	MO	63361	573-564-2299	Phone listing at this address is for Jacob Ruhl.
50-06-9-32-1	1	20	Bainbridge	J. Richard & Carole	Alan Dr.	111	Montgomery City	MO	63361	573-564-3581	
50-06-9-32-1	2	1	Blaue	Melvin & Marjorie	Alan Dr.	112	Montgomery City	MO	63361	573-564-2037	
50-06-9-32-1	1	21	Bequette	Ethel	Alan Dr.	113	Montgomery City	MO	63361	573-564-6343	Phone listing at this address is for Haley Bequette.
50-06-9-32-1	2	9	Felton	Corey & Melisa	Alan Dr.	114	Montgomery City	MO	63361	573-564-6084	
50-06-9-32-1	1	22	Calhoun	Ronald	Alan Dr.	115	Montgomery City	MO	63361	573-564-3568	
50-06-9-32-1	1	23	Sippel	Richard	Alan Dr.	117	Montgomery City	MO	63361	573-564-5083	
50-06-9-32-1	2	7	Finke	Kenneth & Anita	Alan Dr.	122	Montgomery City	MO	63361	573-564-1146	
50-06-9-32-1	1	26	Guffie	Jimmy & Beverley	Alan Dr.	123	Montgomery City	MO	63361	573-564-2061	
50-06-9-32-1	2	6.001	Arens	Richard	Alan Dr.	124	Montgomery City	MO	63361	573-564-3185	Phone listing at this address is for Brad Arens.
50-06-9-32-1	1	27	Upton	Mary	Alan Dr.	125	Montgomery City	MO	63361	573-564-3105	
50-06-9-32-3	2	2	Finley	Jerald & Linda	Amy Dr.	497	Montgomery City	MO	63361	573-564-2009	
50-11-3-5-1	3	1	Brower	Jackie & Deborah	Amy Dr.	504	Montgomery City	MO	63361	573-564-2269	Phone number is for Jackie Brower, 17 Craven Dr.
50-06-9-32-4	1	28	Stark	Raymond A.	Aspen Ave.	901	Warrenton	MO	63383	636-456-5253	
50-06-9-32-4	3	8.001	Montgomery City Old Threshers Assoc.		Auchly Rd.	60	Montgomery City	MO	63361	573-564-2841	c/o William Auchly. Agricultural land.
50-11-3-5-1	5	14	Ecton Construction Inc.		Baugh Dr.	109	Montgomery City	MO	63361	573-564-6344	c/o Michael Ecton.
50-06-9-32-3	19	13	Block Construction Inc.		Block Ln.	67	Montgomery City	MO	63361	Unlisted	c/o Tom Block.
50-06-9-32-3	21	6.001	Stumbaugh	Patrick & Janet	Blue Jay Rd.	161	Montgomery City	MO	63361	573-564-3467	
50-06-9-32-2	26	6	Stumbaugh	Patrick	Blue Jay Rd.	161	Montgomery City	MO	63361	573-564-3467	
50-06-9-32-4	1	26	Hannan	Phyllis	Brown Rd.	78	Hermann	MO	65041	573-486-2072	Vacant industrial building at entrance to County Fairground.
50-06-9-32-1	1	9	Newsom	Norma	Carol Ln.	101	Montgomery City	MO	63361	573-564-3394	Phone listing at this address is for George Newsom.
50-06-9-32-1	1	17	Deiter	Daniel	Carol Ln.	104	Montgomery City	MO	63361	573-564-3419	
50-06-9-32-1	1	11	Wood	Eddie & Helen	Carol Ln.	105	Montgomery City	MO	63361	573-564-7936	(R.L.T.)
50-06-9-32-1	1	16	Sollberger	Leonard	Carol Ln.	106	Montgomery City	MO	63361	573-564-6185	
50-06-9-32-1	1	12	Penrod	Thomas & Jennifer	Carol Ln.	107	Montgomery City	MO	63361	573-564-3389	
50-06-9-32-1	1	15.001	Smith	Shannon & Cherie	Carol Ln.	108	Montgomery City	MO	63361	573-564-3049	
50-06-9-32-3	20	16	Schlanker	Frank	Carol Ln.	109	Montgomery City	MO	63361	573-564-5103	Frank's Quick Change.
50-06-9-32-1	1	13	Schlanker	Frank & Jo	Carol Ln.	109	Montgomery City	MO	63361	573-564-5103	
50-06-9-32-1	3	7	Crooks	Richard	Chateau Dumont	1883	Florissant	MO	63031	314-839-5211	
50-06-9-32-3	16	7	Witnauer	Gregory	Coral Cir.	400	Phoenix	OR	97535	573-564-3186	Phone number is for Gregory G. Witnauer, 755 S. Waker St.
50-06-9-32-2	26	3	Certificate Holders CWABS Inc.		Corporate Dr.	7105	Plano	TX	75093		Bank of New York Mellon Trustee.

TABLE 3.1 (Cont.)

Map and Parcel Numbers			Listed Owner(s)		Mailing Address of Record					Phone Number	Notes
Map	Block	Parcel	Last Name	First Name	Street	Number	City	State	Zip Code		
50-06-9-32-1	1	29	Schroer	Scott	Craven Dr.	7	Montgomery City	MO	63361	573-564-3730	Phone number is for Scott Schroer, 110 Meadow Ln.
50-06-9-32-1	1	18	Schlanker	Robert	Danville Rd.	209	Montgomery City	MO	63361	573-564-3664	Phone number is for Robert Schlanker, 102 Carol Ln.
50-06-8-33-3	1	2	Benney	Dustin etal	Deves Rd.	66	Montgomery City	MO	63361	573-564-2260	Now has a house, not in map aerial photo.
50-06-9-32-4	3	1	Peters	Floyd & Lana	Deves Rd.	84	Montgomery City	MO	63361	573-564-6427	
50-06-9-32-1	Qtr. Sec.	3	Deves	Gerald & Sandra	Deves Rd.	87	Montgomery City	MO	63361	573-564-2131	Phone listing at this address is for Steven & Karen Deves.
50-06-9-32-4	3	3	Heidelberger	Walter & Debra	Deves Rd.	94	Montgomery City	MO	63361	573-564-3232	
50-06-9-32-3	19	14.001	High Five Investments LLC		Deves Rd.	95	Montgomery City	MO	63361	573-564-3736	
50-06-9-32-1	Qtr. Sec.	3.001	Deves	Steven & Karen	Deves Rd.	95	Montgomery City	MO	63361	573-564-3736	
50-06-9-32-1	Qtr. Sec.	3.002		Steven & Karen	Deves Rd.	95	Montgomery City	MO	63361	573-564-3736	
50-06-9-32-4	3	4	Millam	Marty & Lori	Deves Rd.	96	Montgomery City	MO	63361	573-564-8183	
50-06-9-32-3	21	2	Huff	Shirley	E. Ford Ln.	112	Montgomery City	MO	63361	573-564-3081	Phone listing at this address is for Paul & Jessica Horn.
50-06-9-32-3	21	1	Horn	James & Jessica	E. Ford Ln.	116	Montgomery City	MO	63361	573-564-1263	
50-06-9-32-2	2	10	Reagan	Dennis & Phyllis	E. Spinsby St.	220	Montgomery City	MO	63361	573-564-2928	Name shown is current as resident for this address.
50-06-9-32-2	2	12	Mattox	Anthony & Judy	E. Spinsby St.	301	Montgomery City	MO	63361	Unlisted	
50-06-9-32-2	2	13	Anson	Altus etal	E. Spinsby St.	303	Montgomery City	MO	63361	573-564-1231	
50-06-9-32-2	26	5	Brake	Alan	E. Spinsby St.	304	Montgomery City	MO	63361	573-564-3038	
50-06-9-32-2	2	13.001	Dickson	Ronald & Rhiannan	E. Spinsby St.	305	Montgomery City	MO	63361	573-564-1042	
50-06-9-32-3	10	4 and 5	Julia Robertson Trust		E. Spinsby St.	307	Montgomery City	MO	63361	573-564-2425	
50-06-9-32-2	2	14	Nelson	Charles	E. Spinsby St.	307	Montgomery City	MO	63361	573-564-2425	c/o Judith Nelson. Phone listing at this address is for Chas Nelson Jr.
50-06-9-32-2	26	4.001	Clement	C. Richard & Dena	E. Spinsby St.	308	Montgomery City	MO	63361	573-564-2141	
50-06-9-32-2	2	15	Groteluschen	John & Shelly	E. Spinsby St.	309	Montgomery City	MO	63361	573-564-2451	Phone number for City Administrator.
50-06-9-32-2	2	16	Englehart	Jay	E. Spinsby St.	315	Montgomery City	MO	63361	573-564-8077	
50-06-9-32-2	26	2	Robinson	Raymond	E. Spinsby St.	316	Montgomery City	MO	63361	573-564-2520	
50-06-9-32-2	2	17	Trower	Jacqueline	E. Spinsby St.	319	Montgomery City	MO	63361	573-564-2643	
50-06-9-32-2	26	1	Gardner	Gary	E. Spinsby St.	320	Montgomery City	MO	63361	573-564-3301	
50-06-9-32-1	1	8	Hawkins	Dale & Amanda	E. Spinsby St.	401	Montgomery City	MO	63361	573-564-6411	
50-06-9-32-4	1	27	City of Montgomery		E. Third St.	123	Montgomery City	MO	63361	573-564-3160	
50-06-9-32-3	1	3	Arens	Richard & Shirley	E. Walsh Ave.	300	Montgomery City	MO	63361	573-564-2330	
50-06-9-32-2	26	8.001	Rives	Linda	E. Walsh Ave.	301	Montgomery City	MO	63361	573-564-3772	
50-06-9-32-3	1	2	Widner	Gregory & Kelly	E. Walsh Ave.	302	Montgomery City	MO	63361	Unlisted	
50-06-9-32-3	1	1	Callaway	Ellen	E. Walsh Ave.	312	Montgomery City	MO	63361	573-564-3358	
50-06-9-32-2	26	9	Koch	John	E. Walsh Ave.	319	Montgomery City	MO	63361	573-564-7957	
50-06-9-32-2	26	10	Schmidt	William & Elizabeth	E. Walsh Ave.	327	Montgomery City	MO	63361	573-564-3377	
50-06-9-32-2	26	11.001	Fry	James	E. Walsh Ave.	331	Montgomery City	MO	63361	573-564-2285	
50-06-9-32-2	26	11.003	Terry	Crystal	E. Walsh Ave.	333	Montgomery City	MO	63361	573-564-3638	
50-06-9-32-4	1	7	Muchow	Alvin & Valerie	E. Walsh Ave.	410	Montgomery City	MO	63361	573-564-3684	
50-06-9-32-4	1	3	Korman	Charles	E. Walsh Ave.	418	Montgomery City	MO	63361	573-564-2312	
50-06-9-32-4	1	4	Korman	Charles etal	E. Walsh Ave.	418	Montgomery City	MO	63361	573-564-2312	
50-06-9-32-4	1	2	Hanneken	Christina	E. Walsh Ave.	500	Montgomery City	MO	63361	Unlisted	
50-06-9-32-4	1	1	Snarr	George	E. Walsh Ave.	506	Montgomery City	MO	63361	573-564-2528	
50-06-9-32-3	16	6.001	Curry	Rodney & Lisa	Eagle Ln.	3	Montgomery City	MO	63361	573-564-7904	
50-06-9-32-3	16	6	See	Johnny & Teresa	Eagle Ln.	5	Montgomery City	MO	63361	573-564-2601	
50-06-9-32-3	21	16	Murray	Phillip & Katherine	Eagle Roost Ln.	23525	Warrenton	MO	63383	636-456-5360	
50-06-9-32-1	1	14	Harrison	Donnan & Shirley	Edith Dr.	4911	Albany	GA	31721	229-903-8890	

TABLE 3.1 (Cont.)

Map and Parcel Numbers			Listed Owner(s)		Mailing Address of Record					Phone Number	Notes
Map	Block	Parcel	Last Name	First Name	Street	Number	City	State	Zip Code		
50-06-9-32-3	1	28	McNeely	Valerie	Garden Pl.	1	Montgomery City	MO	63361		
50-06-9-32-4	1	8	Bishop	Howell Calvin	Garden Pl.	2	Montgomery City	MO	63361	573-564-3253	
50-06-9-32-3	1	27	Bishop	Howell	Garden Pl.	2	Montgomery City	MO	63361	573-564-3253	
50-06-9-32-3	1	26	Davis	Robert	Garden Pl.	3	Montgomery City	MO	63361	Unlisted	Shown as current address for Lola Davis.
50-06-9-32-3	1	25	Snell	James	Garden Pl.	4	Montgomery City	MO	63361	573-564-3190	
50-06-9-32-3	1	18	Ludy	Mark & Pamela	Garden Pl.	5	Montgomery City	MO	63361	573-564-5027	
50-06-9-32-3	1	19	Hinken	Carl etal	Garden Pl.	6	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.
50-06-9-32-3	1	20	Hennessey	Martha	Garden Pl.	7	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.
50-06-9-32-3	1	21	Schroff	Calvin	Garden Pl.	8	Montgomery City	MO	63361	573-564-3323	
50-06-9-32-3	2	4	Schroff	Calvin	Garden Pl.	8	Montgomery City	MO	63361	573-564-3323	Business.
50-06-9-32-3	1	22	Witthaus	Gerald	Garden Pl.	9	Montgomery City	MO	63361	573-564-2497	
50-06-9-32-3	1	23	Velk	Richard & Bernice	Garden Pl.	11	Montgomery City	MO	63361		
50-06-9-32-3	1	24	Wilson	Johnnie & Mary	Garden Pl.	12	Montgomery City	MO	63361	573-564-2161	
50-11-3-5-1	2	8	Goran	Betty	Gillespie Bridge Rd.	6501	Columbia	MO	65203		
50-06-9-32-3	20	5	White	Sandra etal	Glazier Trail	483	Montgomery City	MO	63361		
50-06-8-33-3	1	9	Beck	Gerald & Julie	Golden Oak Ct.	6	Montgomery City	MO	63361	573-564-2404	
50-06-8-33-3	1	10	Weekley	Matthew & Rachel	Golden Oak Ct.	7	Montgomery City	MO	63361	573-564-3988	
50-06-9-32-3	17	4	Richard	Charles	Harper St.	522	Montgomery City	MO	63361	573-564-2408	Second listing as 564-8045, C. Richards, same address.
50-06-9-32-3	9	2	D&S Partners LLC		Harris Rd.	102	Montgomery City	MO	63361		
50-06-9-32-1	1	10	Gilbert	James	Hensley St.	121	Montgomery City	MO	63361	573-564-2032	
50-06-9-32-3	9	2.001	Wilkerson	Robert & Ann	Hwy 161	1680	Montgomery City	MO	63361	573-564-3816	
50-06-9-32-3	16	5	Kraus (Brookman)	Desiree	Hwy 161	2014	Montgomery City	MO	63361	573-564-2210	Phone number is for Desiree Brookman, 910 N. Sturgeon St.
50-06-9-32-3	16	6.002	Brookman	c/o Desiree	Hwy 161	2014	Montgomery City	MO	63361	573-564-2210	PO Box 147 as part of address in tax records. See above for Brookman address.
50-11-3-5-1	2	4	Church of the Nazarene		Hwy 19		Montgomery City	MO	63361	573-564-2735	Phone number is for 1012 S. Sturgeon St. (same as Hwy. 9).
50-06-9-32-3	20	3	Johnson	David	Hwy B	150	Montgomery City	MO	63361	573-564-2198	Johnson Construction.
50-11-3-5-1	3	3	David Johnson Construction Co. INC.		Hwy B	150	Montgomery City	MO	63361	573-564-2198	
50-06-9-32-3	16	15	Gotsch	Irwin & Virginia	Hwy CC	392	Wellsville	MO	63384	Unlisted	Vacant land.
50-11-3-5-1	4	4	Brandkamp	Robert & Kathy	Industrial Park Dr.	1012	Montgomery City	MO	63361	573-564-2628	Phone listing at this address is for Brandkamp Industries Inc.
50-06-9-32-4	1	6	Baugh	Joseph & Florence	Kay Ln.	514	Montgomery City	MO	63361	573-564-3086	
50-06-9-32-4	4	1	Parker	Chris & Carla	Keller Ct.	2	Montgomery City	MO	63361	573-564-5068	
50-06-9-32-4	4	3	Benney	Thomas & Kaye	Keller Ct.	3	Montgomery City	MO	63361	573-564-3665	
50-06-9-32-3	1	6	Jahner	Kim	Kyle St.	511	Montgomery City	MO	63361	573-564-3121	Phone listing at this address is for Lisa Jahner.
50-06-9-32-4	3	5	N. MO Dist. Coun. of Assemblies of God		Lake Maurer Rd.	PO Box 6	Excelsior Springs	MO	64024		

TABLE 3.1 (Cont.)

Map and Parcel Numbers			Listed Owner(s)		Mailing Address of Record					Phone Number	Notes
Map	Block	Parcel	Last Name	First Name	Street	Number	City	State	Zip Code		
50-06-9-32-4	5	1.001	Sarchette	Jennifer	Long Rd.	35	Montgomery City	MO	63361	573-564-1001	And Michael Nelson.
50-11-3-5		9	James Waggoner Trust		Long Rd.	643	New Florence	MO	63363	573-564-2044	Address shown is for James & Mary Waggoner.
50-06-9-32-4	1	29	MocMo LLC		McKelvey #100A	3801	Bridgeton	MO	63044		
50-06-9-32-4	1	29.001	MocMo LLC		McKelvey #100A	3801	Bridgeton	MO	63044		Combined with B1, P29, in February 2008.
50-06-9-32-4	1	29.002	Stag #3 LLC		McKelvey #100A	3810	Bridgeton	MO	63044		
50-06-9-32-1	1	34	Bothe	Marion	Meadow Ln.	101	Montgomery City	MO	63361	573-564-6272	
50-06-9-32-1	1	33	Swanson	Steven	Meadow Ln.	102	Montgomery City	MO	63361	573-564-3147	
50-06-9-32-1	1	35	Slagg	Rose	Meadow Ln.	103	Montgomery City	MO	63361	573-564-3052	
50-06-9-32-1	1	32	Yager	Jeff	Meadow Ln.	104	Montgomery City	MO	63361	573-564-2381	
50-06-9-32-1	1	36	Blaue Family Trust		Meadow Ln.	105	Montgomery City	MO	63361	573-564-3151	c/o Lillian Blaue; phone listing at this address is for Robert Blaue.
50-06-9-32-1	1	31	Tichacek	Elizabeth	Meadow Ln.	106	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.
50-06-9-32-1	1	37	Smith	Merle	Meadow Ln.	107	Montgomery City	MO	63361	573-564-1114	
50-06-9-32-1	1	38	Johnson	Mary	Meadow Ln.	109	Montgomery City	MO	63361	573-564-5091	
50-06-9-32-1	1	39	Boulware	Donna	Meadow Ln.	111	Montgomery City	MO	63361	573-564-3097	Phone listing at this address is for Larry Boulware.
50-06-9-32-1	6	1.002	Boulware	Donna	Meadow Ln.	111	Montgomery City	MO	63361	573-564-3097	Phone listing at this address is for Larry Boulware.
50-06-9-32-1	6	1.001	Biggs	William & Victoria	Meadow Ln.	113	Montgomery City	MO	63361	573-564-5277	Phone number is for William & Victoria Biggs, 1 Eagle Ln.
50-06-9-32-1	5	1.001	Richardson	Dennis & Linda	Meadow Ln.	114	Montgomery City	MO	63361	573-564-2653	
50-06-9-32-1	6	1	Bond	Dorothy	Meadow Ln.	115	Montgomery City	MO	63361	573-564-1201	
50-06-9-32-1	5	2	Hoette	Katherine	Meadow Ln.	116	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.
50-06-9-32-1	6	1.003	Finders	Debra	Meadow Ln.	119	Montgomery City	MO	63361	573-564-9909	Phone number is for Debra Finders, 150 Hickory St.
50-06-9-32-1	1	28	Wehrman Family Trust		Miller Rd.	62	Montgomery City	MO	63361	573-564-3131	c/o Karen Miller; phone listing at this address is for Robert Miller.
50-06-9-32-3	20	1 and 2	Dryden	Robert & Kim	N. Columbus St.	107	Montgomery City	MO	63361	573-564-2515	
50-06-9-32-3	11	7	Hauskins	Kenneth & Maxine	N. Columbus	107	Montgomery City	MO	63361	573-564-8061	(J.R.T.)
50-06-9-32-3	20	9	Hoffman Oil Co.		N. Hwy 19	PO Box 13	Montgomery City	MO	63361	573-564-3392	Phone number is for Arthur Hoffman Oil Co., 1114 N. Sturgeon (N. Hwy 19).
50-06-9-32-3	1	8	A&B Rental Properties LLC		N. Meadow Ln.	109	Montgomery City	MO	63361	573-564-2502	c/o Brent Taylor.
50-06-9-32-3	1	9	M&R Associates LLC		N. Meadow Ln.	109	Montgomery City	MO	63361	573-564-2502	Phone listing at this address is for Brent Taylor.
50-06-9-32-3	1	12	Taylor	Brent	N. Meadow Ln.	109	Montgomery City	MO	63361	573-564-2502	
50-06-9-32-4	1	28.002	City of Montgomery		N. Sturgeon	723	Montgomery City	MO	63361	573-564-3160	Phone number for City Administrator.
50-06-9-32-3	17	3	Scarlet	Bob & Ann	N. Sturgeon St.	628	Montgomery City	MO	63361	573-564-2079	Phone number is for Bob L. Scarlet, 79 Graveyard Hill Rd.
50-11-3-5-1	1	1	City of Montgomery		N. Sturgeon St.	723	Montgomery City	MO	63361	573-564-3160	Phone number for City Administrator.
50-11-3-5-1	2	13 to 15	City of Montgomery		N. Sturgeon St.	723	Montgomery City	MO	63361	573-564-3160	Vacant lots. Phone number for City Administrator.
50-11-3-5-1	5	9 to 13	City of Montgomery		N. Sturgeon St.	723	Montgomery City	MO	63361	573-564-3160	Vacant lots. Phone number for City Administrator.
50-11-3-5-1	6	2 to 8	City of Montgomery		N. Sturgeon St.	723	Montgomery City	MO	63361	573-564-3160	Vacant lots. Phone number for City Administrator.
50-11-3-5-1	4	2	Claussen	Mark	N. Washington	303	Mexico	MO	65265		
50-06-8-33-3	1	1	G&J Beck Properties LLC		Oakridge Rd.	98	Montgomery City	MO	63361	573-564-2159	Phone listing at this address is for G. Beck.
50-06-8-33-3	1	3 to 8	G&J Beck Properties LLC		Oakridge Rd.	98	Montgomery City	MO	63361	573-564-2159	All are undeveloped lots in Royal Oak.
50-06-8-33-3	2	1 to 3	G&J Beck Properties LLC		Oakridge Rd.	98	Montgomery City	MO	63361	573-564-2159	Estates subdivision.
50-06-9-32-3	1	11	Garner	James & Patricia	Pear Orchard Rd.	233	Hawn Point	MO	63349	636-338-9361	
50-06-9-32-4	1	14	Hadden	Ryan & Stacy	Penrose Ln.	102	Montgomery City	MO	63361	573-564-3042	Phone number is for second address for Ryan Hadden,

TABLE 3.1 (Cont.)

Map and Parcel Numbers			Listed Owner(s)		Mailing Address of Record					Phone Number	Notes
Map	Block	Parcel	Last Name	First Name	Street	Number	City	State	Zip Code		
50-06-9-32-4	1	15	Hoemann	John	Penrose Ln.	104	Montgomery City	MO	63361	573-564-3284	740 N. Sturgeon St.
50-06-9-32-4	1	16	Cunningham	Hubert & Amelia	Penrose Ln.	106	Montgomery City	MO	63361	573-564-2383	
50-06-9-32-4	1	17	Korte	Wayne & Pamela	Penrose Ln.	108	Montgomery City	MO	63361	573-564-6335	
50-06-9-32-4	1	13	Eoff	Chris W.	Penrose Ln.	109	Montgomery City	MO	63361	573-564-3783	
50-06-9-32-4	1	18	Eatherton	Gary	Penrose Ln.	110	Montgomery City	MO	63361	573-564-3118	
50-06-9-32-4	1	12	Spradley	Roger	Penrose Ln.	111	Montgomery City	MO	63361	573-564-5150	
50-06-9-32-4	1	11	Reagan	JoAnn	Penrose Ln.	113	Montgomery City	MO	63361	573-564-2535	
50-06-9-32-4	1	19 to 21	Bishop	Robert	Penrose Ln.	114	Montgomery City	MO	63361	573-564-3520	
50-06-9-32-4	1	9	Davis	James	Penrose Ln.	117	Montgomery City	MO	63361	573-564-3622	
50-06-9-32-4	1	22	Lamb	James & Darlie	Penrose Ln.	118	Montgomery City	MO	63361	573-564-3219	Nelson Lamb listed as resident.
50-06-9-32-4	1	23	Holtz	Steven	Penrose Ln.	120	Montgomery City	MO	63361	573-564-3985	PO Box 93 as part of address in tax records.
50-06-9-32-3	21	5	Goran	Thomas	PO Box 101		Montgomery City	MO	63361		
50-06-9-32-3	21	18	Weeks Enterprises LLC		PO Box 123		New Florence	MO	63363	573-835-3570	Phone number for Weeks Enterprises, 101S S. Main St., New Florence.
50-06-9-32-3	20	7	Bethel Family Trust etal		PO Box 173		New Florence	MO	63363	Unlisted	Address shown is for Joseph & Barbara Bethel.
50-06-9-32-2	26	4	Brower	Jackie & Deborah	PO Box 183		Montgomery City	MO	63361		
50-11-3-5-1	2	1.001	Brower	Jackie	PO Box 183		Montgomery City	MO	63361	573-564-2269	Phone number is for Jackie Brower, 17 Craven Dr.
50-11-3-5-1	1	1.001	IBP Redevelopment Corp.		PO Box 2020		Springdale	AZ	72765		c/o Tyson Foods, Attn: Tax Dept.
50-06-9-32-4	1	28.001	Earnest Higgins Trust		PO Box 218		Montgomery City	MO	63361	573-564-3464	Phone for Earnest Higgins, 10 Craven Dr.
50-06-9-32-4	3	8	Wright-Keller LLC		PO Box 2652		S. Padre Island	TX	78592		Vacant land.
50-11-3-5-1	4	6	Rhineland Grain Inc.		PO Box 365		Rhineland	MO	65069	573-236-4479	Phone Number is for Rhineland Grain, 115 Bluffton Rd., Rhineland.
50-06-9-32-3	2	1.001	M&R Express Inc.		PO Box 43		Montgomery City	MO	63361	573-564-3794	Address with phone listing is 124 E. Walsh Ave.
50-11-3-5-1	3	2	Peoples Saving Bank of Rhineland		PO Box 528		Hermann	MO	65041	573-564-3444	Phone number is for branch at 1005 S. Sturgeon St.
50-06-9-32-3	21	3	Casey's Marketing Co.		PO Box 54288		Lexington	KY	40555	573-564-7972	Store #1267; 600 S Sturgeon St.
50-11-3-5-1	4	1	Cargill Inc.		PO Box 5626		Minneapolis	MN	55440	573-564-2292	Attn: Property Tax. Phone number is for Cargill Inc., 1006 Industrial Park Dr.
50-06-9-32-4	1	5	Federal National Mortgage Assoc.		PO Box 650043		Dallas	TX	75265		
50-06-9-32-3	1	29	Fannie Mae		PO Box 650043		Dallas	TX	75265		
50-06-9-32-3	19	14.009	Barr	Christopher	Poplar St.	200	Montgomery City	MO	63361	573-564-6254	Phone listing at this address is for Amanda Barr.
50-06-9-32-3	19	12.002	Quinones	Andres & Alejandrina	Poplar St.	201	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.
50-06-9-32-2	2	25	Simpson	John	Rainbow Cir.	1	Montgomery City	MO	63361	573-564-2784	
50-06-9-32-2	2	24	Jahner (Hunsucker)	Charlene	Rainbow Cir.	2	Montgomery City	MO	63361	573-564-3037	
50-06-9-32-2	2	23	Cobb	Thomas	Rainbow Cir.	3	Montgomery City	MO	63361	573-564-3539	
50-06-9-32-2	2	22	Parker	Terry	Rainbow Cir.	4	Montgomery City	MO	63361	573-564-3814	
50-06-9-32-2	2	21	Krattli	James	Rainbow Cir.	6	Montgomery City	MO	63361	573-564-3846	
50-06-9-32-2	2	20	Banfield	George	Rainbow Cir.	8	Montgomery City	MO	63361	573-564-3841	
50-06-9-32-2	2	19	Huenefeld	Donna	Rainbow Cir.	9	Montgomery City	MO	63361	573-564-2367	
50-06-9-32-2	2	18	Cahall	Brian & Chastity	Rainbow Cir.	10	Montgomery City	MO	63361	573-564-1235	
50-11-3-5-1	4	3	Missouri Farmers Association		Ray Young Dr.	201	Columbia	MO	65201	573-876-5458	Phone listing at this address is for MFA Foundation.
50-06-9-32-1	3	13	Watson	Christopher & Jenna	Robyn Ln.	101	Montgomery City	MO	63361	573-564-3035	
50-06-9-32-1	5	1	Rodgers	Christopher & Chastity	Robyn Ln.	102	Montgomery City	MO	63361	573-564-2458	Phone number is for Christopher Rodgers, no address listed.
50-06-9-32-1	5	2.001	McKay	Harry & Helen	Robyn Ln.	104	Montgomery City	MO	63361	573-564-3601	
50-06-9-32-1	3	15	Beattie	James & Laura	Robyn Ln.	105	Montgomery City	MO	63361	573-564-3013	
50-06-9-32-4	3	2	Glassford	Michael & Andi	Robyn Ln.	109	Montgomery City	MO	63361	573-564-8002	Michael Glassford, Glassford Law LLC, 1155 Aguilar Dr.
50-06-9-32-1	3	16	Glassford	Michael & Andi	Robyn Ln.	109	Montgomery City	MO	63361	573-564-8002	Phone number is for Michael Glassford, Glassford Law LLC, 1155 Aguilar Dr.

TABLE 3.1 (Cont.)

Map and Parcel Numbers			Listed Owner(s)		Mailing Address of Record					Phone Number	Notes
Map	Block	Parcel	Last Name	First Name	Street	Number	City	State	Zip Code		
50-06-9-32-1	3	17	Spirz	Michael	Robyn Ln.	111	Montgomery City	MO	63361	573-564-2826	
50-06-9-32-3	16	6.003	Green	Erlene	Rose St.	450	Montgomery City	MO	63361	573-564-3098	
50-06-9-32-3	16	6.004	Smith	Kevin & Diana	Rose St.	452	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.
50-06-9-32-3	16	6.005	Peggy Readey Trust		Rose St.	454	Montgomery City	MO	63361	573-564-3673	Phone listing at this address is for P. Readey.
50-06-9-32-3	16	4.002	McCormack	Jessie & Catherine	Rose St.	455	Montgomery City	MO	63361	573-564-3820	Phone listing at this address is for Ed & Cathy McCormack.
50-06-9-32-3	16	6.006	Rodriguez	Robert & Alysia	Rose St.	456	Montgomery City	MO	63361	573-564-2814	
50-06-9-32-3	16	6.007	Garrett	Randall & Pat	Rose St.	458	Montgomery City	MO	63361	573-564-3203	Phone listing at this address is for Joe and Pat Garrett.
50-06-9-32-4	3	6	York	Philip & Julie	Rosendahl Ln.	103	Montgomery City	MO	63361	573-564-1078	
50-06-9-32-4	4	5	Duckett	Roy & Bonnie	Rosendahl Ln.	150	Montgomery City	MO	63361	573-564-2936	
50-06-8-33-3	2	4	Maupin	Roberta	Royal Oak Ln.	107	Montgomery City	MO	63361	573-564-6485	
50-06-9-32-3	9	5	Cuno	Gary & Linda	S. Allen St.	420	Montgomery City	MO	63361	573-564-3578	(R.L.T.)
50-06-9-32-3	20	4	Hoffman	Casey & Brigitte	S. Allen St.	630	Montgomery City	MO	63361	573-564-6420	
50-06-9-32-3	20	6	Burton	Russell & Sherry	S. Allen St.	638	Montgomery City	MO	63361	573-564-5241	
50-06-9-32-3	20	8	Glass	Sandra	S. Allen St.	664	Montgomery City	MO	63361	573-564-3188	Phone number is for Sandra Glass, 109 W. Spinsby St.
50-06-9-32-1	1	4	Cole	Daniel	S. Columbus St.	102	Montgomery City	MO	63361	573-564-2948	
50-06-9-32-1	1	5	Truitt	Don	S. Columbus St.	104	Montgomery City	MO	63361	573-564-3275	
50-06-9-32-1	1	6	Torbeck	Edmund & Dorothy	S. Columbus St.	106	Montgomery City	MO	63361	573-564-8076	
50-06-9-32-1	1	7	Moseley	Tony & Rebecca	S. Columbus St.	108	Montgomery City	MO	63361	573-564-8188	
50-06-9-32-1	3	2	Genovese	Joseph & Rory	S. Columbus St.	112	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.
50-06-9-32-1	3	3	Holmes	Julia	S. Columbus St.	114	Montgomery City	MO	63361	573-564-3132	Phone listing at this address is for Paul Holmes.
50-06-9-32-2	26	11	Hinkel	Randy	S. Columbus St.	115	Montgomery City	MO	63361	573-564-2957	
50-06-9-32-1	3	4	Wischmeyer	Elton	S. Columbus St.	116	Montgomery City	MO	63361	573-564-5028	
50-06-9-32-2	26	11.002	Richardson	William & Eileen	S. Columbus St.	117	Montgomery City	MO	63361	573-564-1081	
50-06-9-32-1	3	5	Burton	Becky	S. Columbus St.	118	Montgomery City	MO	63361	573-564-2671	
50-06-9-32-4	2	1.001	Reagan	Ronald	S. Hwy 161	1955	Montgomery City	MO	63361	573-564-2542	
50-06-9-32-3	12	5	Reagan	Ronald	S. Hwy 161	1955	Montgomery City	MO	63361	573-564-2542	
50-06-9-32-3	16	6.010	Reagan	Ronald	S. Hwy 161	1955	Montgomery City	MO	63361	573-564-2542	
50-06-9-32-3	20	12	Reagan	Ronald	S. Hwy 161	1955	Montgomery City	MO	63361	573-564-2542	
50-06-9-32-2	2	10.001	Clement	Donald	S. Norwood Ave.	204	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.
50-06-9-32-2	2	11.001	Dickens	Nancy	S. Norwood Ave.	210	Montgomery City	MO	63361	573-564-6040	
50-06-9-32-2	2	11	Dyke	Elizabeth	S. Norwood Ave.	216	Montgomery City	MO	63361	573-564-3293	
50-06-9-32-2	26	7	Slovensky	Arline	S. Norwood Ave.	324	Montgomery City	MO	63361	573-564-3384	
50-06-9-32-2	26	8	Stonebarger	Angela	S. Norwood Ave.	326	Montgomery City	MO	63361	573-564-6199	
50-06-9-32-3	1	17	Davis	Tina	S. Sturgeon St.	401	Montgomery City	MO	63361	573-564-2156	
50-06-9-32-3	9	1	Davis	Tina	S. Sturgeon St.	401	Montgomery City	MO	63361	573-564-2156	
50-06-9-32-3	9	7	China King		S. Sturgeon St.	405	Montgomery City	MO	63361	573-564-5888	
50-06-9-32-3	2	5	Krattli	James & Linda	S. Sturgeon St.	420	Montgomery City	MO	63361	573-564-3282	Jim Krattli Insurance.
50-06-9-32-3	10	2	Buchanan	Sarah	S. Sturgeon St.	500	Montgomery City	MO	63361	573-564-3135	Phone listing at this address is for Wallace Buchanan.
50-06-9-32-3	11	1	Cuno	Donald	S. Sturgeon St.	501	Montgomery City	MO	63361	573-564-3576	Phone listing at this address is for Otto Cuno.
50-06-9-32-3	10	3	Snell	Wanda	S. Sturgeon St.	510	Montgomery City	MO	63361	573-564-3607	
50-06-9-32-3	11	8	Pilliard	Duane & Virginia	S. Sturgeon St.	511	Montgomery City	MO	63361	573-564-2760	Phone listing at this address is for Duane & Ginger Pilliard.
50-06-9-32-3	11	6	Harber	John	S. Sturgeon St.	523	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.
50-06-9-32-3	20	15	Cobb	Thomas & Margaret	S. Sturgeon St.	631	Montgomery City	MO	63361	573-564-2318	c/o Dairy Queen Brazier.
50-06-9-32-3	20	13	MS MGC INC.		S. Sturgeon St.	635	Montgomery City	MO	63361	573-564-3333	Medicine Shoppe.
50-06-9-32-3	21	10	Young	Sandra	S. Sturgeon St.	646	Montgomery City	MO	63361		



TABLE 3.1 (Cont.)

Map and Parcel Numbers			Listed Owner(s)		Mailing Address of Record					Phone Number	Notes
Map	Block	Parcel	Last Name	First Name	Street	Number	City	State	Zip Code		
50-06-9-32-3	20	11	Gliser	Charlotte	S. Sturgeon St.	683	Montgomery City	MO	63361	573-564-3652	
50-06-9-32-3	20	10	Holden	Albert & Beverly	S. Sturgeon St.	685	Montgomery City	MO	63361	573-564-2043	Phone listing at this address is for Holden Welding & Fabricating.
50-06-9-32-4	2	3	Blaue	Marie etal	S. Sturgeon St.	909	Montgomery City	MO	63361	573-564-3366	c/o Blaue's Service Inc.
50-11-3-5-1	2	7	Shootin' Irons Inc.		S. Sturgeon St.	1030	Montgomery City	MO	63361	573-564-2992	c/o of Subway of Montgomery City. Phone number is for Subway.
50-11-3-5-1	2	11	Cobb	Kenneth	S. Sturgeon St.	1100	Montgomery City	MO	63361	573-220-3393	Cell phone.
50-11-3-5-1	2	9	Milner-Porter Properties LLC		S. Sturgeon St.	1040C	Montgomery City	MO	63361	573-564-3433	c/o Matt Milner. Phone listing at this address is for Milner Agency LLC.
50-11-3-5-1	6	1	Montgomery City Scale LC		S. Sturgeon St.	1040C	Montgomery City	MO	63361	573-564-3433	c/o Matt Milner. Phone listing at this address is for Milner Agency LLC.
50-06-9-32-3	21	11 and 12	Montgomery City Farm Bureau		S. Sturgeon St.	652-A	Montgomery City	MO	63361	573-564-8011	
50-06-9-32-3	12	3	Meyers	Jackie & Dorothy	S. Walker St.	402	Montgomery City	MO	63361	573-564-3471	
50-06-9-32-3	12	6	Lynn	Bruce	S. Walker St.	410	Montgomery City	MO	63361	573-564-3180	
50-06-9-32-3	12	4	Joyce	James	S. Walker St.	420	Montgomery City	MO	63361	573-564-3109	
50-06-9-32-3	17	1 and 2	Scherer	John	S. Walker St.	501	Montgomery City	MO	63361	573-564-3256	
50-06-9-32-3	18	1 and 2	John	Annetta	S. Walker St.	502	Montgomery City	MO	63361	573-564-3683	Phone listing at this address is for M.K. John.
50-06-9-32-3	18	3	Deering	Jayson etal	S. Walker St.	508	Montgomery City	MO	63361		
50-06-9-32-3	18	4	Barney	Thomas	S. Walker St.	514	Montgomery City	MO	63361	573-564-3542	Phone listing at this address is for Joyce Barney.
50-06-9-32-3	18	5	Long	Bernadine	S. Walker St.	520	Montgomery City	MO	63361	573-564-3340	
50-06-9-32-3	17	5	Reagan	Charles & Bernice	S. Walker St.	521	Montgomery City	MO	63361	573-564-3158	Phone listing at this address is for Jack Reagan.
50-06-9-32-3	19	2	Shears	George	S. Walker St.	600	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.
50-06-9-32-3	16	20	Hinkel	Christopher	S. Walker St.	603	Montgomery City	MO	63361	573-564-2957	Phone number is for second address for Christopher Hinkel, 115 S. Columbus St.
50-06-9-32-3	19	3	Covington	Fred & Bertha	S. Walker St.	606	Montgomery City	MO	63361	573-564-3692	Phone listing at this address is for Ellen Covington.
50-06-9-32-3	16	19	Palmer	Robert	S. Walker St.	609	Montgomery City	MO	63361	573-564-3937	
50-06-9-32-3	19	5	Brock	Gary & Michelle	S. Walker St.	610	Montgomery City	MO	63361	573-564-2371	
50-06-9-32-3	16	17.003	Eikel	Mary	S. Walker St.	615	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.
50-06-9-32-3	19	6	Boothe	Linda	S. Walker St.	618	Montgomery City	MO	63361	573-564-3463	
50-06-9-32-3	16	17.001	Jones	Max	S. Walker St.	619	Montgomery City	MO	63361		
50-06-9-32-3	19	8	Prior	Connie	S. Walker St.	621	Montgomery City	MO	63361		
50-06-9-32-3	19	7	Hoffman	Bette	S. Walker St.	624	Montgomery City	MO	63361	573-564-3229	Phone listing at this address is for Bob & Anne Hoffman.
50-06-9-32-3	16	17	Carroz	Jared etal	S. Walker St.	625	Montgomery City	MO	63361	573-564-6198	
50-06-9-32-3	16	16	Gonzalez	Michael	S. Walker St.	629	Montgomery City	MO	63361	573-564-3039	
50-06-9-32-3	16	14	Colbert	Millard & Mildred	S. Walker St.	631	Montgomery City	MO	63361	573-564-3486	Phone listing at this address is for Joseph Colbert.
50-06-9-32-3	19	9	Mohundro	Debbie	S. Walker St.	668	Montgomery City	MO	63361	573-564-5299	
50-06-9-32-3	19	10	Rieke	Dustin	S. Walker St.	678	Montgomery City	MO	63361	573-564-8016	
50-06-9-32-3	19	11.002	White (Young)	Brenda	S. Walker St.	680	Montgomery City	MO	63361	573-564-3415	Phone listing at this address is for Brenda Young
50-06-9-32-3	19	11.001	Chandler	Shaun & Jennifer	S. Walker St.	682	Montgomery City	MO	63361	Unlisted	PO Box 42 as part of address in tax records.
50-06-9-32-3	19	12.001	Kessler	Kenneth & Michelle	S. Walker St.	688	Montgomery City	MO	63361	573-564-6017	
50-06-9-32-3	19	12	Block	Kathleen	S. Walker St.	694	Montgomery City	MO	63361	573-564-5172	PO Box 134 as part of address in tax records.
50-06-9-32-3	16	13	Schaper	Charles & Margaret	S. Walker St.	701	Montgomery City	MO	63361	573-564-3198	
50-06-9-32-3	19	15	Boone	Gerald	S. Walker St.	706	Montgomery City	MO	63361	573-564-1045	Phone listing at this address is for J. Boone.
50-06-9-32-3	16	12	Stiles	Michael	S. Walker St.	709	Montgomery City	MO	63361	573-564-2150	
50-06-9-32-3	19	17	Thielmeier	Jeff	S. Walker St.	718	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.
50-06-9-32-3	16	11	Altenthal	Phyllis	S. Walker St.	721	Montgomery City	MO	63361	573-564-2571	
50-06-9-32-3	19	17.001	Zumwalt	Robin	S. Walker St.	722	Montgomery City	MO	63361	573-564-1171	
50-06-9-32-3	16	10	Walch	Joseph	S. Walker St.	729	Montgomery City	MO	63361	573-564-3000	
50-06-9-32-3	19	19	Dryden	Mary	S. Walker St.	734	Montgomery City	MO	63361	573-564-2122	Phone listing at this address is for John Dryden.
50-06-9-32-3	16	9	Kopp	Kalan	S. Walker St.	739	Montgomery City	MO	63361	573-564-3514	
50-06-9-32-3	16	8	Wehrman	Dennis & Sharon	S. Walker St.	743	Montgomery City	MO	63361	573-564-3724	
50-06-9-32-3	1	4	Rogers	Joy	S. Wentz St.	400	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.

TABLE 3.1 (Cont.)

Map and Parcel Numbers			Listed Owner(s)		Mailing Address of Record					Phone Number	Notes
Map	Block	Parcel	Last Name	First Name	Street	Number	City	State	Zip Code		
50-06-9-32-3	2	1	Quevreaux	Anna	S. Wentz St.	403	Montgomery City	MO	63361	573-564-2105	
50-06-9-32-3	2	7	Frye	Howard	S. Wentz St.	411	Montgomery City	MO	63361	573-564-3277	
50-06-9-32-3	2	6	Fischer	John	S. Wentz St.	419	Montgomery City	MO	63361	573-564-2302	
50-06-9-32-3	1	5	Dobbs	Ruth	S. Wentz St.	428	Montgomery City	MO	63361	573-564-2926	
50-06-9-32-3	10	1	Fuller	Martin	S. Wentz St.	505	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.
50-06-9-32-3	1	7	Zerr	Donald	S. Wentz St.	512	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.
50-06-9-32-3	1	10	Rogers	Carol	S. Wentz St.	532	Montgomery City	MO	63361	Unlisted	Current address for Carol Rogers listed as 400 S. Wentz St.
50-06-9-32-3	1	10.001	Ellis	Helen	S. Wentz St.	536	Montgomery City	MO	63361	573-564-1255	
50-06-9-32-3	21	17	Doris Kuntz Trust		S. Wentz St.	637	Montgomery City	MO	63361	573-564-5051	c/o Joe Rouse; phone listing at this address is for Tammy Rouse.
50-06-9-32-3	21	15	Conner	Dorothy	S. Wentz St.	647	Montgomery City	MO	63361	573-564-3522	Phone listing at this address is for Edward R. Conner.
50-06-9-32-3	21	14	Plumb Brock & Deanna		S. Wentz St.	657	Montgomery City	MO	63361	573-564-6139	
50-06-9-32-3	21	13	Bartley Deborah & Keith		S. Wentz St.	667	Montgomery City	MO	63361	573-564-6291	
50-06-9-32-3	21	12.001	Addis	Everett & Anna	Sandy Ln.	36700	Grand Island	FL	32735	352-483-1069	
50-06-9-32-1	3	1	Gibbs	Nancy etal	Sharon Dr.	101	Montgomery City	MO	63361	573-564-3867	
50-06-9-32-1	4	1.001	Shelton	Robert & Joyce	Sharon Dr.	102	Montgomery City	MO	63361	573-564-3593	
50-06-9-32-1	3	6	Bocklitz	Jean	Sharon Dr.	103	Montgomery City	MO	63361	573-564-2168	
50-06-9-32-1	4	2.001	Boone	Shirley	Sharon Dr.	104	Montgomery City	MO	63361	573-564-6190	
50-06-9-32-3	16	7.001	Gardner	Donald	Sharon Dr.	107	Montgomery City	MO	63361	573-564-2803	
50-06-9-32-1	3	8	Gardner	Donald	Sharon Dr.	107	Montgomery City	MO	63361	573-564-2803	
50-06-9-32-1	3	9	Dowling	David	Sharon Dr.	109	Montgomery City	MO	63361	573-564-3644	
50-06-9-32-1	3	10	Hinton	Paul	Sharon Dr.	111	Montgomery City	MO	63361	573-564-2007	
50-06-9-32-1	4	2	Dowling	Mildred	Sharon Dr.	114	Montgomery City	MO	63361	573-564-2402	Phone listing at this address is for Kerry Dowling.
50-06-9-32-1	3	11	Miller (John)	Marjorie	Sharon Dr.	115	Montgomery City	MO	63361	573-564-2370	Phone listing at this address is for John Miller Jr.
50-06-9-32-1	3	14	Miller (John)	Marjorie	Sharon Dr.	115	Montgomery City	MO	63361	573-564-2370	Phone listing at this address is for John Miller Jr.
50-06-9-32-1	4	1	Johnson	John & Virginia	Sharon Dr.	116	Montgomery City	MO	63361	573-564-1261	Phone listing at this address is for Steve & Virginia Johnson.
50-06-9-32-1	3	12	Devlin	Randy & Nicole	Sharon Dr.	117	Montgomery City	MO	63361	573-564-3532	
50-06-9-32-4	5	1	Upchruch Legacy No. 1 LLC		Shetland Valley Ct.	351	Chesterfield	MO	63005		Agricultural land.
50-06-9-32-4	4	2	Patterson	Kathryn	Skyline Dr.	47	New Florence	MO	63363	636-585-9242	Vacant lot in recent subdivision.
50-11-3-5-1	2	12	L&K Enterprises LLC		Sunbeam Rd.	394	New Florence	MO	63367	573-835-5555	c/o Lance Kobusch. Phone number is for Lance Kobusch, 392 Sunbeam Rd.
50-06-9-32-1	1	30	Gensler	Terry	Teson Rd.	1106	Hazelwood	MO	63042	573-564-2782	Phone number is for Terry Gensler, 108 Meadow Ln.
50-06-9-32-3	9	4	Cuno Inc.		W. Bell St.	110	Montgomery City	MO	63361	573-564-2160	Phone listing is for Cuno Pick-Up Coach & Trailer Sales, 100 Bell St.
50-06-9-32-3	9	6	Cuno Inc.		W. Bell St.	110	Montgomery City	MO	63361	573-564-2160	Phone listing is for Cuno Pick-Up Coach & Trailer Sales, 100 Bell St.
50-06-9-32-3	11	2	Cuno Inc.		W. Bell St.	110	Montgomery City	MO	63361	573-564-2160	Phone listing is for Cuno Pick-Up Coach & Trailer Sales, 100 Bell St.
50-06-9-32-3	16	1	Killday Living Trust		W. Bell St.	402	Montgomery City	MO	63361	573-564-3519	c/o/ Patrick Killday.
50-06-9-32-3	16	2	Dettenwanger	Jerome	W. Bell St.	410	Montgomery City	MO	63361	573-564-2563	
50-06-9-32-4	2	1	Bernat	c/o Otto	W. Bell St.	512	Montgomery City	MO	63361	573-564-1059	Phone number is for Otto Bernat, New Florence Lumber Co., 905 S. Sturgeon St.
50-06-9-32-4	2	2	Bernat	Otto & Phyllis	W. Bell St.	512	Montgomery City	MO	63361	573-564-1059	Phone number is for Otto Bernat, New Florence Lumber Co., 905 S. Sturgeon St.
50-06-9-32-3	19	1	Block	Melvin	W. Ford Ave.	204	Montgomery City	MO	63361	573-564-3303	

TABLE 3.1 (Cont.)

Map and Parcel Numbers			Listed Owner(s)		Mailing Address of Record					Phone Number	Notes
Map	Block	Parcel	Last Name	First Name	Street	Number	City	State	Zip Code		
50-06-9-32-3	18	6	Bufka	Kevin & Shannon	W. Ford Ave.	205	Montgomery City	MO	63361	573-564-3951	
50-06-9-32-3	11	5	Tyler	Derwin & Tamara	W. Ford Ave.	215	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.
50-06-9-32-3	19	18	Bufka	James	W. Sixth St.	623	Montgomery City	MO	63361	573-564-3962	
50-06-9-32-3	21	7	Bufka	James	W. Sixth St.	623	Montgomery City	MO	63361	573-564-3962	(R.L.T.)
50-06-9-32-3	21	9	Bufka	Janice	W. Sixth St.	623	Montgomery City	MO	63361	573-564-3962	
50-06-9-32-3	16	3	Esslinger	Charles & Cheryl	W. Walsh Ave.	510	Montgomery City	MO	63361	Unlisted	Name shown is current as resident for this address.
50-06-9-32-3	16	4.001	Banks	William	W. Walsh Ave.	600	Montgomery City	MO	63361	573-564-3566	
50-06-9-32-3	16	4	Broz	William & Terri	W. Walsh Ave.	610	Montgomery City	MO	63361	573-564-5062	
50-06-9-32-3	16	6.009	Huenefeld	Lisa & Curtis	W. Walsh Ave.	730	Montgomery City	MO	63361	573-564-6304	
50-06-9-32-3	16	6.001	Oliver	Thomas & Phyllis	W. Walsh Ave.	750	Montgomery City	MO	63361	573-564-2200	both (R.T.A.)
50-06-9-32-1	1	24	Smith	Burton	West St.	218	Wellsville	MO	63384	573-684-2524	Vacant lot.
50-06-9-32-3	21	6	Higgenbotham RI. Est. Farm & Ranch LLC		Williamsburg Sq.	1666	Lakeland	FL	33803	863-644-6681	c/o Martin Higgenbotham.
50-06-9-32-3	19	14	Began	Virginia & Edward	Winding Bend Ln.	1511	Manchester	MO	63021	636-227-5186	City for this street address now shown as Baldwin, MO.
50-06-9-32-4	4	6	Hillebrand	JoAnn	Wright Ct.	1	Montgomery City	MO	63361	573-564-2120	
50-06-9-32-4	4	7	Porter	Jeffrey & Julie	Wright Ct.	2	Montgomery City	MO	63361	573-564-2792	
50-06-9-32-4	4	9	Cobb	David & Janet	Wright Ct.	4	Montgomery City	MO	63361	573-564-3817	
50-06-9-32-4	4	10	Miller	Marjorie	Wright Ct.	5	Montgomery City	MO	63361	573-564-2901	(U/T/A)
50-06-9-32-4	4	8	Block	James & Linda	Wright Ct.	6	Montgomery City	MO	63361	573-564-2310	Vacant lot.
50-06-9-32-4	4	11	Block	James & Linda	Wright Ct.	6	Montgomery City	MO	63361	573-564-2310	
50-06-9-32-4	1	24	Montgomery County Fair Society							573-564-3526	Phone number for Fairgrounds.
50-06-9-32-4	1	25	Boy Scouts of America								
50-06-9-32-4		12	Hunzel	Daniel							No other info available; cannot locate on map.
50-06-9-32-3	1	15 and 16	Montgomery County Fair Society							573-564-3526	Phone number for Fairgrounds.
50-06-9-32-1	1	3	Methodist Church								

TABLE 3.2 Results of headspace analyses for carbon tetrachloride in the initial set of shallow soils collected in mid October 2010.<sup>a</sup>

Location	Carbon Tetrachloride ( $\mu\text{g}/\text{kg}$ ) at Indicated Depth				
	4 ft BGL	8 ft BGL	12 ft BGL	16 ft BGL	20 ft BGL
SB01	ND <sup>b</sup>	ND	390	> 1,000	- <sup>c</sup>
SB02	ND	ND	106	223	-
SB03	ND	ND	0.1	ND	-
SB04	ND	ND	0.2	0.8	-
SB05	ND	ND	ND	ND	-
SB06	ND	ND	ND	ND	-
SB07	0.40	0.30	2.2	0.6	-
SB08	5.3	ND	522	264	-
SB09	34	47	35	129	-
SB10	ND	ND	0.2	0.2	-
SB11	ND	ND	2.3	45	59
SB12	ND	22	0.3	ND	-
SB13	ND	42	0.7	ND	-
SB14	ND	ND	15	24	-
SB15	0.28	ND	27	56	-
SB16	0.33	ND	17	43	-
SB17	0.20	12	373	48	-
SB18	ND	ND	ND	71	-
SB19	ND	ND	0.8	3.1	-
SB20	ND	ND	ND	7.7	-
SB21	ND	ND	0.1	ND	-
SB22	ND	ND	ND	ND	-
SB23	ND	ND	ND	ND	-
SB24	ND	ND	ND	ND	14
SB25	ND	0.3	22	119	-
SB26	ND	ND	8.3	24	-
SB27	0.3	50	2.1	3.4	-
SB28	ND	ND	1.9	5.0	-
SB29	ND	1.3	9.4	7.8	2
SB30	ND	ND	6.6	17	-
SB31	ND	ND	1.4	24	-
SB32	ND	ND	308	> 1,000	-
SB33	ND	ND	77	23	76
SB34	1.2	0.8	4.9	3.0	2.0
SB35	3.2	2.6	70	2.4	0.2

<sup>a</sup> Gray shading marks concentrations > 100  $\mu\text{g}/\text{kg}$ .

<sup>b</sup> ND, not detected at the headspace method reporting limit of 0.1  $\mu\text{g}/\text{kg}$ .

<sup>c</sup> Not sampled for headspace analysis.

TABLE 3.3 Results of purge-and-trap analyses for carbon tetrachloride in shallow soils collected in 2010-2011.<sup>a,b</sup>

Location	Carbon Tetrachloride ( $\mu\text{g}/\text{kg}$ ) at Indicated Depth				
	4 ft BGL	8 ft BGL	12 ft BGL	16 ft BGL	20 ft BGL
SB01	ND <sup>c</sup>	ND	338	2,353	1,751
SB02	ND	ND	90	207	226 <sup>d</sup>
SB03	ND	ND	ND	8.1 J	- <sup>e</sup>
SB04	ND	ND	ND	ND	-
SB05	ND	ND	ND	ND	-
SB06	ND	ND	ND	ND	-
SB07	ND	ND	ND	ND	-
SB08	ND	ND	473	263	157
SB09	11	38	40	44	178
SB10	ND	ND	ND	ND	-
SB11	ND	ND	1.5 J	38	35
SB12	ND	ND	ND	20	-
SB13	ND	ND	ND	10	-
SB14	ND	6.1 J	4.6 J	7.2 J	-
SB15	ND	ND	9.6 J	29	-
SB16	ND	ND	5.6 J	13	33
SB17	ND	11	376	23	28
SB18	ND	ND	3.6 J	69	-
SB19	ND	ND	ND	ND	-
SB20	ND	ND	ND	8.2 J	-
SB21	ND	ND	ND	2.6 J	-
SB22	ND	ND	ND	ND	ND
SB23	ND	ND	ND	ND	-
SB24	ND	ND	ND	ND	ND
SB25	ND	ND	16	126	78
SB26	ND	ND	2.9 J	14	-
SB27	ND	12	2.0 J	3.8 J	ND
SB28	ND	ND	ND	ND	-
SB29	ND	ND	7.7 J	4.7 J	ND
SB30	ND	ND	ND	5.5 J	-
SB31	ND	ND	ND	22	-
SB32	ND	ND	263	2,412	-
SB33	ND	ND	43	9.0 J	ND
SB34	ND	ND	ND	2.4 J	ND
SB35	ND	ND	31	2.0 J	ND
SB36	ND	ND	ND	ND	ND
SB40	ND	ND	ND	ND	ND
SB41	ND	ND	ND	65	891
SB42	ND	ND	48	72	91
SB44	ND	ND	ND	ND	ND
SB46	ND	ND	22	121	93
SB47	ND	ND	386	507	402
SB49	ND	ND	ND	ND	ND
SB50	ND	ND	ND	ND	ND
SB54	ND	ND	ND	ND	ND

TABLE 3.3 (Cont.)

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- a Complete results are in Appendix D, Table D.1.
- b Gray highlights mark concentrations above the DTL of 79.6 µg/kg for carbon tetrachloride in soil.
- c ND, not detected at the instrument detection limit of 1.0 µg/kg.
- d Value obtained from adjacent deeper cored location SB48.
- e Not sampled.

TABLE 3.4 Summary of purge-and-trap analysis results for carbon tetrachloride in deeper soil samples collected in 2010-2011.<sup>a,b,c</sup>

Location	Sample Date	Depth (ft BGL)	Number of Samples	Carbon Tetrachloride (µg/kg)
SB01	10/18/10	4-8	2	ND <sup>d</sup>
	10/18/10	12	1	338
	10/18/10	16	1	2,353
	10/22/10	20	1	1,751
	10/22/10	24	1	1,095
	10/22/10	28	1	1,400
	10/22/10	32	1	1,522
	10/22/10	36	1	1,125
	10/22/10	40	1	87
	10/22/10	44	1	78
	10/22/10	48	1	229
	10/22/10	52	1	120
	10/22/10	56	1	23
10/22/10	57.5	1	56	
SB08	10/18/10	4-8	2	ND
	10/18/10	12	1	473
	10/18/10	16	1	263
	12/4/10	20	1	157
	12/4/10	24	1	162
	12/4/10	28	1	120
	12/4/10	32	1	219
	12/4/10	36	1	221
	12/4/10	40	1	52
	12/4/10	44	1	75
	12/4/10	48	1	128
	12/4/10	52	1	246
	12/4/10	56	1	189
SB09	10/19/10	4	1	11
	10/19/10	8	1	38
	10/19/10	12	1	40
	10/19/10	16	1	44
	10/26/10	20	1	178
	10/26/10	24	1	66
	10/26/10	28	1	30
	10/26/10	32	1	64
	10/26/10	36	1	16
	10/26/10	40-56	5	ND
	10/26/10	60	1	4.4 J <sup>e</sup>
SB16	10/19/10	4-8	2	ND
	10/19/10	12	1	5.6 J
	10/19/10	16	1	13
	12/6/10	20	1	33
	12/6/10	24	1	70
	12/6/10	28	1	113
	12/6/10	32	1	25
	12/6/10	36	1	15
	12/6/10	40-56	5	ND

TABLE 3.4 (Cont.)

Location	Sample Date	Depth (ft BGL)	Number of Samples	Carbon Tetrachloride (µg/kg)	
SB17	10/19/10	4	1	ND	
	10/19/10	8	1	11	
	10/19/10	12	1	376	
	10/19/10	16	1	23	
	10/25/10	20	1	28	
	10/25/10	24	1	27	
	10/25/10	28	1	27	
	10/25/10	32	1	34	
	10/25/10	36	1	26	
	10/25/10	40	1	6.7 J	
	10/25/10	44	1	3.4 J	
	10/25/10	48	1	96	
	10/25/10	52	1	304	
10/25/10	56	1	413		
SB22	10/19/10	4-60	15	ND	
SB25	10/20/10	4-8	2	ND	
	10/20/10	12	1	16	
	10/20/10	16	1	126	
	10/24/10	20	1	78	
	10/24/10	24	1	93	
	10/24/10	28	1	94	
	10/24/10	32	1	32	
	10/24/10	36	1	38	
	10/24/10	40-48	3	ND	
	10/24/10	52	1	3.5 J	
SB27	10/20/10	4	1	ND	
	10/20/10	8	1	12	
	10/20/10	12	1	2.0 J	
	10/20/10	16	1	3.8 J	
	12/1/10	20-47	8	ND	
SB36	10/25/10	4-48	12	ND	
SB40	12/1/10	4-48	12	ND	
SB41	12/2/10	4-12	3	ND	
	12/2/10	16	1	65	
	12/2/10	20	1	891	
	12/2/10	24	1	1,110	
	12/2/10	28	1	1,489	
	12/2/10	32	1	388	
	12/2/10	36	1	236	
	12/2/10	40	1	4.8 J	
	12/2/10	44	1	ND	
	12/2/10	48	1	1.7 J	
	12/2/10	52-56	2	ND	
	SB42	12/2/10	4-8	2	ND
		12/2/10	12	1	48
12/2/10		16	1	72	
12/2/10		20	1	91	



TABLE 3.4 (Cont.)

Location	Sample Date	Depth (ft BGL)	Number of Samples	Carbon Tetrachloride (µg/kg)
	12/2/10	24	1	79
	12/2/10	28	1	64
	12/2/10	32	1	40
	12/2/10	36	1	15
	12/2/10	40-48	3	ND
	12/2/10	52	1	4.5 J
SB44	12/3/10	4-56	14	ND
	12/3/10	60	1	3.7 J
SB46	12/4/10	4-8	2	ND
	12/4/10	12	1	22
	12/4/10	16	1	121
	12/4/10	20	1	93
	12/4/10	24	1	42
	12/4/10	28	1	25
	12/5/10	32	1	12
	12/4/10	36	1	8.4 J
	12/4/10	40-44	2	ND
	12/4/10	48	1	358
	12/4/10	52	1	882
	12/4/10	54.5	1	1,068
SB47	12/5/10	4-8	2	ND
	12/5/10	12	1	386
	12/5/10	16	1	507
	12/5/10	20	1	402
	12/5/10	24	1	451
	12/5/10	28	1	902
	12/5/10	32	1	387
	12/5/10	36-44	3	ND
	12/5/10	48	1	11
	12/5/10	56	1	2.7 J
SB48	12/5/10	20	1	226
	12/5/10	24	1	230
	12/5/10	28	1	246
	12/5/10	32	1	214
	12/5/10	36	1	116
	12/5/10	40	1	38
	12/5/10	44	1	9.9
	12/5/10	48	1	11
	12/5/10	52	1	9.9
SB49	5/12/11	4-59.5	15	ND
SB50	5/10/11	4-28	7	ND
	5/11/11	32	1	5.9 J
	5/11/11	36	1	132
	5/11/11	40	1	596
	5/11/11	44	1	282
	5/11/11	48	1	325
	5/11/11	52	1	134
	5/11/11	56	1	132

TABLE 3.4 (Cont.)

Location	Sample Date	Depth (ft BGL)	Number of Samples	Carbon Tetrachloride ( $\mu\text{g}/\text{kg}$ )
	5/11/11	60	1	71
	5/11/11	64	1	20
SB54	5/13/11	4-52	13	ND

- a Complete results are in Appendix D, Table D.2.
- b Gray highlights mark concentrations above the DTL of 79.6  $\mu\text{g}/\text{kg}$  for carbon tetrachloride in soil.
- c Surficial and shallow subsurface data are included to illustrate the complete profile.
- d ND, not detected at the instrument detection limit of 1.0  $\mu\text{g}/\text{kg}$ .
- e Qualifier J indicates an estimated concentration below the method quantification limit of 10  $\mu\text{g}/\text{kg}$ .

TABLE 3.5 Chronological compilation of analytical results from the AGEM Laboratory for volatile organic compounds in water samples collected in 2010-2011.

Location	Sample	Sample Date	Depth (ft BGL)	Concentration (µg/L)	
				Carbon Tetrachloride	Chloroform
<i>October 2010</i>					
SB01	MCSB01-W-32410	10/28/10	8-18	1,581	213
SB01	MCSB01-W-32646	10/23/10	20-30	10,616	2,084
SB01	MCSB01-W-32330	10/23/10	52.5-57.5	535	498
SB01S	MCSB01S-W-32411	10/28/10	20-30	10,414	2,036
SB01D	MCSB0157-W-32415	10/29/10	52.5-57.5	448	240
SB10	MCSB10-W-32405	10/27/10	8-18	ND <sup>a</sup>	ND
SB11	MCSB11-W-32638	10/25/10	15-25	70	15
SB22D	MCSB22-W-32409	10/28/10	57.2-67.2	11	0.7 J <sup>b</sup>
SB24	MCSB24-W-32643	10/21/10	8.3-18.3	ND	ND
SB24	MCSB24-W-32651	10/20/10	20	ND	ND
SB27	MCSB27-W-32406	10/27/10	41-51	4.2	1.0
SB29	MCSB29-W-32649	10/21/10	11.4-21.4	33	7.5
SB33	MCSB33-W-32636	10/25/10	12-22	233	24
SB34	MCSB34-W-32637	10/25/10	17-22	6.5	4.7
Creek	MCCREEK-W-32408	10/27/10	–	ND	ND
Hemeyer	MICHEMEYER-W-32633	10/22/10	–	ND	ND
Ken Cobb	MCKCOBB-W-32635	10/22/10	–	ND	ND
Subway	MCSUBWAY-W-32413	10/28/10	–	ND	ND
PWS1	MCPWS1-W-32630	10/22/10	–	ND	ND
PWS2	MCPWS2-W-32631	10/22/10	–	ND	ND
PWS3	MCPWS3-W-32632	10/22/10	–	ND	ND
City Water Supply	MCTREAT-W-32634	10/22/10	–	ND	ND
<i>November 15, 2010</i>					
SB09D	MCSB09D-W-32424	11/15/10	58-63	8.7	0.9 J
SB17D	MCSB17D-W-32422	11/15/10	51.3-61.3	1,310	35
SB22M	MCSB22S-W-32426	11/15/10	18-28	0.5 J	ND
SB22D	MCSB22D-W-32427	11/15/10	57.2-67.2	11	0.4 J
SB27S	MCSB27S-W-32428	11/15/10	20-30	82	10
SB36S	MCSB36S-W-32421	11/15/10	15-25	2.0	1.3
SB36D	MCSB36D-W-32420	11/15/10	42.2-52.2	1.8	0.3 J

TABLE 3.5 (Cont.)

Location	Sample	Sample Date	Depth (ft BGL)	Concentration (µg/L)	
				Carbon Tetrachloride	Chloroform
<i>November 29-December 10, 2010</i>					
SB08D	MCSB08D-W-32508	12/6/10	47-57	1,422	42
SB09S	MCSB09S-W-32430	11/30/10	18-28	105	5.2
SB17S	MCSB17S-W-32431	11/30/10	18-28	152	19
SB37S	MCSB37S-W-32433	11/30/10	15-25	ND	ND
SB37D	MCSB37D-W-32434	12/1/10	35.8-45.8	ND	ND
SB38D	MCSB38D-W-32599	12/7/10	41.2-51.2	ND	ND
SB39D	MCSB39D-W-32435	12/1/10	45.8-55.8	123	32
SB40D	MCSB40D-W-32601	12/7/10	43.3-53.3	0.4 J	ND
SB41M	MCSB41M-W-32500	12/2/10	20-30	6,226	957
SB41D	MCSB41D-W-32595	12/7/10	48-58	14	78
SB42D	MCSB42D-W-32596	12/7/10	47-57	7.4	1.4
SB43D	MCSB43D-W-32503	12/5/10	37.4-47.4	ND	ND
SB44D	MCSB44D-W-32504	12/5/10	50-60	10	ND
SB45D	MCSB45D-W-32598	12/7/10	56-66	2.8	1.1
SB46M	MCSB46M-W-32597	12/7/10	20-30	76	33
SB46D	MCSB46D-W-32600	12/7/10	44.5-54.5	1,341	240
SB48D	MCSB48D-W-32509	12/6/10	44-54	586	252
<i>January 13-15, 2011</i>					
SB16D	MCSB16D-W-32606	1/14/11	48-58	2.5	0.5 J
SB22S	MCSB22S-W-32603	1/13/11	8-18	ND	ND
SB22M	MCSB22M-W-32604	1/13/11	18-28	ND	ND
SB38M	MCSB38M-W-32615	1/14/11	15-25	ND	ND
SB39S	MCSB39S-W-32617	1/14/11	23-33	85	35
SB40S	MCSB40S-W-32613	1/14/11	8-18	1.6	ND
SB40M	MCSB40M-W-32612	1/14/11	20-30	ND	ND
SB41S	MCSB41S-W-32620	1/15/11	8-18	85	36
SB42S	MCSB42S-W-32611	1/14/11	17-27	1,065	141
SB43M	MCSB43M-W-32616	1/14/11	20-30	ND	ND

TABLE 3.5 (Cont.)

Location	Sample	Sample Date	Depth (ft BGL)	Concentration (µg/L)	
				Carbon Tetrachloride	Chloroform
SB44S	MCSB44S-W-32619	1/15/11	8-18	ND	ND
SB44M	MCSB44M-W-32605	1/14/11	20-30	ND	ND
SB47S	MCSB47S-W-32610	1/14/11	20-30	2,306	103
SB47D	MCSB47D-W-32609	1/14/11	47-57	135	6.1
SB48S	MCSB48S-W-32621	1/15/11	20-30	658	137
SB48D	MCSB48D-W-32608	1/14/11	44-54	449	318
<i>February 26, 2011</i>					
SB08S	MCSB08S-W-32566	2/26/11	20-30	1,485	154
SB16M	MCSB16M-W-32568	2/26/11	20-30	491	44
SB45S	MCSB45S-W-32567	2/26/11	18-28	ND	ND
<i>March 23, 2011</i>					
SB16S	MCSB16S-W-32623	3/23/11	8-18	165	21
SB38S	MCSB38S-W-32624	3/23/11	10-15	ND	ND
SB43S	MCSB43S-W-32625	3/23/11	8-18	ND	ND
SB46S	MCSB46S-W-32626	3/23/11	8-18	8.9	6.0
<i>April 4-13, 2011</i>					
SB01M	MCSB1S-W-32879	4/5/11	20-30	8,001	1,397
SB08S	MCSB8S-W-32871	4/5/11	20-30	66	5.4
SB08D	MCSB8D-W-32872	4/5/11	47-57	1,209	61
SB09S	MCSB9S-W-32875	4/5/11	18-28	403	31
SB09D	MCSB9D-W-32876	4/5/11	58-63	4.0	1.1
SB10	MCSB10-W-32921	4/6/11	8-18	ND	0.4 J
SB11	MCSB11-W-32920	4/6/11	15-25	79	21
SB16S	MCSB16S-W-32915	4/6/11	8-18	111	16
SB16M	MCSB16M-W-32916	4/6/11	20-30	600	48
SB16D	MCSB16D-W-32917	4/6/11	48-58	1.0	ND
SB17S	MCSB17S-W-32918	4/6/11	18-28	166	20
SB17D	MCSB17D-W-32919	4/6/11	51.3-61.3	1,231	47
SB22S	MCSB22S-W-32926	4/6/11	8-18	ND	ND
SB22M	MCSB22M-W-32927	4/6/11	18-28	ND	ND
SB22D	MCSB22D-W-32928	4/6/11	57.2-67.2	7.7	0.4 J
SB24	MCSB24-W-32925	4/6/11	8-18	ND	ND

TABLE 3.5 (Cont.)

Location	Sample	Sample Date	Depth (ft BGL)	Concentration (µg/L)	
				Carbon Tetrachloride	Chloroform
SB27S	MCSB27S-W-32892	4/6/11	20-30	21	10
SB27D	MCSB27D-W-32893	4/6/11	41-51	3.1	0.7 J
SB29	MCSB29-W-32891	4/6/11	12-22	16	4.8
SB33	MCSB33-W-32870	4/5/11	12-22	243	38
SB34	MCSB34-W-32874	4/5/11	17-22	6.1	5.3
SB36S	MCSB36S-W-32901	4/6/11	15-25	0.5 J	1.1
SB36D	MCSB36D-W-32902	4/6/11	42.2-52.2	0.4 J	ND
SB37S	MCSB37S-W-32886	4/6/11	15-25	ND	ND
SB37D	MCSB37D-W-32887	4/6/11	35.8-45.8	ND	ND
SB38S	MCSB38S-W-32888	4/6/11	10-15	ND	ND
SB38M	MCSB38M-W-32889	4/6/11	15-25	ND	ND
SB38D	MCSB38D-W-32890	4/6/11	41.2-51.2	ND	ND
SB39S	MCSB39S-W-32898	4/6/11	23-33	90	22
SB39D	MCSB39D-W-32899	4/6/11	45.8-55.8	42	34
SB40S	MCSB40S-W-32903	4/6/11	8-18	ND	ND
SB40M	MCSB40M-W-32904	4/6/11	20-30	ND	ND
SB40D	MCSB40D-W-32905	4/6/11	43.3-53.3	0.2 J	ND
SB41S	MCSB41S-W-32880	4/5/11	8-18	57	33
SB41M	MCSB41M-W-32881	4/5/11	20-30	1,260	502
SB41D	MCSB41D-W-32882	4/5/11	48-58	14	26
SB42S	MCSB42S-W-32883	4/5/11	17-27	918	132
SB42D	MCSB42D-W-32884	4/5/11	47-57	6.8	1.4
SB43S	MCSB43S-W-32894	4/6/11	8-18	ND	ND
SB43M	MCSB43M-W-32895	4/6/11	20-30	ND	ND
SB43D	MCSB43D-W-32897	4/6/11	37.4-47.4	ND	ND
SB44S	MCSB44S-W-32922	4/6/11	8-18	0.2 J	ND
SB44M	MCSB44M-W-32923	4/6/11	20-30	ND	ND
SB44D	MCSB44D-W-32924	4/6/11	50-60	8.1	ND
SB45S	MCSB45S-W-32929	4/6/11	18-28	ND	ND
SB45D	MCSB45D-W-32900	4/6/11	56-66	ND	ND
SB46S	MCSB46S-W-32912	4/6/11	8-18	7.9	8.2
SB46M	MCSB46M-W-32913	4/6/11	20-30	186	15
SB46D	MCSB46D-W-32914	4/6/11	44.5-54.5	1,508	159
SB47S	MCSB47S-W-32910	4/6/11	20-30	1,560	93
SB47D	MCSB47D-W-32911	4/6/11	47-57	135	4.3
SB48S	MCSB48S-W-32877	4/5/11	20-30	1,136	90
SB48D	MCSB48D-W-32878	4/5/11	44-54	65	94

TABLE 3.5 (Cont.)

Location	Sample	Sample Date	Depth (ft BGL)	Concentration (µg/L)	
				Carbon Tetrachloride	Chloroform
<i>May 9-18, 2011</i>					
SB01S	MCSB01S-W-33302	5/17/11	8-18	2,796	842
SB01M	MCSB01M-W-33290	5/17/11	20-30	9,150	1,437
SB01D	MCSB01D-W-33291	5/17/11	47-57	22	869
SB49S	MCSB49S-W-33292	5/17/11	8-18	ND	0.3 J
SB49D	MCSB49D-W-33293	5/17/11	49.5-59.5	ND	ND
SB50M	MCSB50M-W-33301	5/17/11	20-30	4.5	5.5
SB50D	MCSB50D-W-33296	5/17/11	47-57	144	45
SB51D	MCSB51D-W-33294	5/17/11	41-51	ND	ND
SB52S	MCSB52S-W-33297	5/17/11	8-18	ND	ND
SB52M	MCSB52M-W-33298	5/17/11	20-30	ND	ND
SB52D	MCSB52D-W-33299	5/17/11	40-50	0.8 J	ND
SB53D	MCSB53D-W-33300	5/17/11	43-53	ND	ND
SB54D	MCSB54D-W-33288	5/14/11	42-52	ND	ND
SB54D	MCSB54D-W-33295	5/17/11	42-52	ND	ND
<i>June 9, 2011</i>					
SB49M	MCSB49M-W-33304	6/9/11	20-30	ND	ND
SB51S	MCSB51S-W-33310	6/9/11	8-18	ND	ND
SB51M	MCSB51M-W-33309	6/9/11	20-30	ND	ND
SB53M	MCSB53M-W-33307	6/9/11	20-30	ND	ND
SB54S	MCSB54S-W-33306	6/9/11	8-18	ND	ND
SB54M	MCSB54M-W-33305	6/9/11	20-30	ND	ND
<i>September 1, 2011</i>					
SB50S	MC50S-W-33312	9/1/11	8-18	1.9	1.9
SB53S	MC53S-W-33313	9/1/11	8-18	ND	ND

<sup>a</sup> ND, not detected at the instrument detection limit of 0.1 µg/L.

<sup>b</sup> Qualifier J indicates an estimated concentration below the purge-and-trap method quantitation limit of 1.0 µg/L.

TABLE 3.6 Location-depth compilation of analytical results from the AGEM Laboratory for volatile organic compounds in groundwater samples collected in 2010-2011.

Location	Sample	Date Sampled	Depth (ft BGL)	Sampling Interval <sup>a</sup>	Concentration (µg/L)	
					Tetrachloride Carbon	Chloroform
SB01	MCSB01-W-32410	10/28/10	8-18	U	1,581	213
SB01S	MCSB01S-W-33302	5/17/11	8-18	U	2,796	842
SB01	MCSB01-W-32646	10/23/10	20-30	I	10,616	2,084
SB01M	MCSB1S-W-32879	4/5/11	20-30	I	8,001	1,397
SB01M	MCSB01M-W-33290	5/17/11	20-30	I	9,150	1,437
SB01S	MCSB01S-W-32411	10/28/10	20-30	I	10,414	2,036
SB01D	MCSB01D-W-33291	5/17/11	47-57	L	22	869
SB01	MCSB01-W-32330	10/23/10	52.5-57.5	L	535	498
SB01D	MCSB0157-W-32415	10/29/10	52.5-57.5	L	448	240
SB08S	MCSB08S-W-32566	2/26/11	20-30	I	1,485	154
SB08S	MCSB8S-W-32871	4/5/11	20-30	I	66	5.4
SB08D	MCSB08D-W-32508	12/6/10	47-57	L	1,422	42
SB08D	MCSB8D-W-32872	4/5/11	47-57	L	1,209	61
SB09S	MCSB09S-W-32430	11/30/10	18-28	I	105	5.2
SB09S	MCSB9S-W-32875	4/5/11	18-28	I	403	31
SB09D	MCSB09D-W-32424	11/15/10	58-63	L	8.7	0.9 J <sup>b</sup>
SB09D	MCSB9D-W-32876	4/5/11	58-63	L	4.0	1.1
SB10	MCSB10-W-32405	10/27/10	8-18	U	ND <sup>c</sup>	ND
SB10	MCSB10-W-32921	4/6/11	8-18	U	ND	0.4 J
SB11	MCSB11-W-32638	10/25/10	15-25	I	70	15
SB11	MCSB11-W-32920	4/6/11	15-25	I	79	21
SB16S	MCSB16S-W-32623	3/23/11	8-18	U	165	21
SB16S	MCSB16S-W-32915	4/6/11	8-18	U	111	16
SB16M	MCSB16M-W-32568	2/26/11	20-30	I	491	44
SB16M	MCSB16M-W-32916	4/6/11	20-30	I	600	48
SB16D	MCSB16D-W-32606	1/14/11	48-58	L	2.5	0.5 J
SB16D	MCSB16D-W-32917	4/6/11	48-58	L	1.0	ND
SB17S	MCSB17S-W-32431	11/30/10	18-28	I	152	19
SB17S	MCSB17S-W-32918	4/6/11	18-28	I	166	20
SB17D	MCSB17D-W-32422	11/15/10	51.3-61.3	L	1,310	35
SB17D	MCSB17D-W-32919	4/6/11	51.3-61.3	L	1,231	47
SB22S	MCSB22S-W-32603	1/13/11	8-18	U	ND	ND
SB22S	MCSB22S-W-32926	4/6/11	8-18	U	ND	ND
SB22M	MCSB22S-W-32426	11/15/10	18-28	I	0.5 J	ND
SB22M	MCSB22M-W-32604	1/13/11	18-28	I	ND	ND
SB22M	MCSB22M-W-32927	4/6/11	18-28	I	ND	ND
SB22D	MCSB22-W-32409	10/28/10	57.2-67.2	L	11	0.7 J
SB22D	MCSB22D-W-32427	11/15/10	57.2-67.2	L	11	0.4 J
SB22D	MCSB22D-W-32928	4/6/11	57.2-67.2	L	7.7	0.4 J
SB24	MCSB24-W-32925	4/6/11	8-18	U	ND	ND
SB24	MCSB24-W-32643	10/21/10	8.3-18.3	U	ND	ND
SB24	MCSB24-W-32651	10/20/10	20	-	ND	ND



TABLE 3.6 (Cont.)

Location	Sample	Date Sampled	Depth (ft BGL)	Sampling Interval <sup>a</sup>	Concentration (µg/L)	
					Tetrachloride Carbon	Chloroform
SB27S	MCSB27S-W-32428	11/15/10	20-30	1	82	10
SB27S	MCSB27S-W-32892	4/6/11	20-30	I	21	10
SB27	MCSB27-W-32406	10/27/10	41-51	L	4.2	1
SB27D	MCSB27D-W-32893	4/6/11	41-51	L	3.1	0.7 J
SB29	MCSB29-W-32649	10/21/10	11.4-21.4	U	33	7.5
SB29	MCSB29-W-32891	4/6/11	12-22	U	16	4.8
SB33	MCSB33-W-32636	10/25/10	12-22	U	233	24
SB33	MCSB33-W-32870	4/5/11	12-22	U	243	38
SB34	MCSB34-W-32637	10/25/10	17-22	U	6.5	4.7
SB34	MCSB34-W-32874	4/5/11	17-22	U	6.1	5.3
SB36S	MCSB36S-W-32421	11/15/10	15-25	I	2.0	1.3
SB36S	MCSB36S-W-32901	4/6/11	15-25	I	0.5 J	1.1
SB36D	MCSB36D-W-32420	11/15/10	42.2-52.2	L	1.8	0.3 J
SB36D	MCSB36D-W-32902	4/6/11	42.2-52.2	L	0.4 J	ND
SB37S	MCSB37S-W-32433	11/30/10	15-25	I	ND	ND
SB37S	MCSB37S-W-32886	4/6/11	15-25	I	ND	ND
SB37D	MCSB37D-W-32434	12/1/10	35.8-45.8	L	ND	ND
SB37D	MCSB37D-W-32887	4/6/11	35.8-45.8	L	ND	ND
SB38S	MCSB38S-W-32888	4/6/11	10-15	U	ND	ND
SB38S	MCSB38S-W-32624	3/23/11	10-15	U	ND	ND
SB38M	MCSB38M-W-32615	1/14/11	15-25	I	ND	ND
SB38M	MCSB38M-W-32889	4/6/11	15-25	I	ND	ND
SB38D	MCSB38D-W-32599	12/7/10	41.2-51.2	L	ND	ND
SB38D	MCSB38D-W-32890	4/6/11	41.2-51.2	L	ND	ND
SB39S	MCSB39S-W-32617	1/14/11	23-33	I	85	35
SB39S	MCSB39S-W-32898	4/6/11	23-33	I	90	22
SB39D	MCSB39D-W-32435	12/1/10	45.8-55.8	L	123	32
SB39D	MCSB39D-W-32899	4/6/11	45.8-55.8	L	42	34
SB40S	MCSB40S-W-32613	1/14/11	8-18	U	1.6	ND
SB40S	MCSB40S-W-32903	4/6/11	8-18	U	ND	ND
SB40M	MCSB40M-W-32612	1/14/11	20-30	I	ND	ND
SB40M	MCSB40M-W-32904	4/6/11	20-30	I	ND	ND
SB40D	MCSB40D-W-32601	12/7/10	43.3-53.3	L	0.4 J	ND
SB40D	MCSB40D-W-32905	4/6/11	43.3-53.3	L	0.2 J	ND
SB41S	MCSB41S-W-32620	1/15/11	8-18	U	85	36
SB41S	MCSB41S-W-32880	4/5/11	8-18	U	57	33
SB41M	MCSB41M-W-32500	12/2/10	20-30	I	6,226	957
SB41M	MCSB41M-W-32881	4/5/11	20-30	I	1,260	502
SB41D	MCSB41D-W-32595	12/7/10	48-58	L	14	78
SB41D	MCSB41D-W-32882	4/5/11	48-58	L	14	26
SB42S	MCSB42S-W-32611	1/14/11	17-27	I	1,065	141
SB42S	MCSB42S-W-32883	4/5/11	17-27	I	918	132
SB42D	MCSB42D-W-32596	12/7/10	47-57	L	7.4	1.4

TABLE 3.6 (Cont.)

Location	Sample	Date Sampled	Depth (ft BGL)	Sampling Interval <sup>a</sup>	Concentration (µg/L)	
					Tetrachloride Carbon	Chloroform
SB42D	MCSB42D-W-32884	4/5/11	47-57	L	6.8	1.4
SB43S	MCSB43S-W-32625	3/23/11	8-18	U	ND	ND
SB43S	MCSB43S-W-32894	4/6/11	8-18	U	ND	ND
SB43M	MCSB43M-W-32616	1/14/11	20-30	I	ND	ND
SB43M	MCSB43M-W-32895	4/6/11	20-30	I	ND	ND
SB43D	MCSB43D-W-32503	12/5/10	37.4-47.4	L	ND	ND
SB43D	MCSB43D-W-32897	4/6/11	37.4-47.4	L	ND	ND
SB44S	MCSB44S-W-32619	1/15/11	8-18	U	ND	ND
SB44S	MCSB44S-W-32922	4/6/11	8-18	U	0.2 J	ND
SB44M	MCSB44M-W-32605	1/14/11	20-30	I	ND	ND
SB44M	MCSB44M-W-32923	4/6/11	20-30	I	ND	ND
SB44D	MCSB44D-W-32504	12/5/10	50-60	L	10	ND
SB44D	MCSB44D-W-32924	4/6/11	50-60	L	8.1	ND
SB45S	MCSB45S-W-32567	2/26/11	18-28	I	ND	ND
SB45S	MCSB45S-W-32929	4/6/11	18-28	I	ND	ND
SB45D	MCSB45D-W-32598	12/7/10	56-66	L	2.8	1.1
SB45D	MCSB45D-W-32900	4/6/11	56-66	L	ND	ND
SB46S	MCSB46S-W-32626	3/23/11	8-18	U	8.9	6
SB46S	MCSB46S-W-32912	4/6/11	8-18	U	7.9	8.2
SB46M	MCSB46M-W-32597	12/7/10	20-30	I	76	33
SB46M	MCSB46M-W-32913	4/6/11	20-30	I	186	15
SB46D	MCSB46D-W-32914	4/6/11	44.5-54.5	L	1,508	159
SB46D	MCSB46D-W-32600	12/7/10	44.5-54.5	L	1,341	240
SB47S	MCSB47S-W-32610	1/14/11	20-30	I	2,306	103
SB47S	MCSB47S-W-32910	4/6/11	20-30	I	1,560	93
SB47D	MCSB47D-W-32609	1/14/11	47-57	L	135	6.1
SB47D	MCSB47D-W-32911	4/6/11	47-57	L	135	4.3
SB48S	MCSB48S-W-32621	1/15/11	20-30	I	658	137
SB48S	MCSB48S-W-32877	4/5/11	20-30	I	1,136	90
SB48D	MCSB48D-W-32509	12/6/10	44-54	L	586	252
SB48D	MCSB48D-W-32608	1/14/11	44-54	L	449	318
SB48D	MCSB48D-W-32878	4/5/11	44-54	L	65	94
SB49S	MCSB49S-W-33292	5/17/11	8-18	U	ND	0.3 J
SB49M	MCSB49M-W-33304	6/9/11	20-30	I	ND	ND
SB49D	MCSB49D-W-33293	5/17/11	49.5-59.5	L	ND	ND
SB50S	MC50S-W-33312	9/1/11	8-18	U	1.9	1.9
SB50M	MCSB50M-W-33301	5/17/11	20-30	I	4.5	5.5
SB50D	MCSB50D-W-33296	5/17/11	47-57	L	144	45
SB51S	MCSB51S-W-33310	6/9/11	8-18	U	ND	ND
SB51M	MCSB51M-W-33309	6/9/11	20-30	I	ND	ND
SB51D	MCSB51D-W-33294	5/17/11	41-51	L	ND	ND
SB52S	MCSB52S-W-33297	5/17/11	8-18	U	ND	ND
SB52M	MCSB52M-W-33298	5/17/11	20-30	I	ND	ND
SB52D	MCSB52D-W-33299	5/17/11	40-50	L	0.8 J	ND

TABLE 3.6 (Cont.)

Location	Sample	Date Sampled	Depth (ft BGL)	Sampling Interval <sup>a</sup>	Concentration (µg/L)	
					Tetrachloride Carbon	Chloroform
SB53S	MC53S-W-33313	9/1/11	8-18	U	ND	ND
SB53M	MCSB53M-W-33307	6/9/11	20-30	I	ND	ND
SB53D	MCSB53D-W-33300	5/17/11	43-53	L	ND	ND
SB54S	MCSB54S-W-33306	6/9/11	8-18	U	ND	ND
SB54M	MCSB54M-W-33305	6/9/11	20-30	I	ND	ND
SB54D	MCSB54D-W-33288	5/14/11	42-52	L	ND	ND
SB54D	MCSB54D-W-33295	5/17/11	42-52	L	ND	ND

<sup>a</sup> Sampling intervals: U, upper (< 20 ft BGL); I, intermediate (20-30 ft BGL); L, lower (> 40 ft BGL).

<sup>b</sup> Qualifier J indicates an estimated concentration below the purge-and-trap method quantitation limit of 1.0 µg/L.

<sup>c</sup> ND, not detected at an instrument detection limit of 0.1 µg/L.

TABLE 3.7 Sampling intervals represented by the temporary and permanent monitoring points sampled for volatile organic analyses in 2010-2011.<sup>a</sup>

Upper Interval		Intermediate Interval		Lower Interval	
Monitoring Point	Screened Interval (ft BGL)	Monitoring Point	Screened Interval (ft BGL)	Monitoring Point	Screened Interval (ft BGL)
SB01S	8-18	SB01M	20-30	SB01	52.5-57.5
SB10	8-18	SB08S	20-30	SB01D	47-57
SB16S	8-18	SB09S	18-28	SB08D	47-57
SB22S	8-18	SB11	15-25	SB09D	58-63
SB24	8-18	SB16M	20-30	SB16D	48-58
SB29	12-22	SB17S	18-28	SB17D	51.3-61.3
SB33	12-22	SB22M	18-28	SB22D	57.2-67.2
SB34	17-22	SB27S	20-30	SB27D	41-51
SB38S	10-15	SB36S	15-25	SB36D	42.2-52.2
SB40S	8-18	SB37S	15-25	SB37D	35.8-45.8
SB41S	8-18	SB38M	15-25	SB38D	41.2-51.2
SB43S	8-18	SB39S	23-33	SB39D	45.8-55.8
SB44S	8-18	SB40M	20-30	SB40D	43.3-53.3
SB46S	8-18	SB41M	20-30	SB41D	48-58
SB49S	8-18	SB42S	17-27	SB42D	47-57
SB50S	8-18	SB43M	20-30	SB43D	37.4-47.4
SB51S	8-18	SB44M	20-30	SB44D	50-60
SB52S	8-18	SB45S	18-28	SB45D	56-66
SB53S	8-18	SB46M	20-30	SB46D	44.5-54.5
SB54S	8-18	SB47S	20-30	SB47D	47-57
		SB48S	20-30	SB48D	44-54
		SB49M	20-30	SB49D	49.5-59.5
		SB50M	20-30	SB50D	47-57
		SB51M	20-30	SB51D	41-51
		SB52M	20-30	SB52D	40-50
		SB53M	20-30	SB53D	43-53
		SB54M	20-30	SB54D	42-52

<sup>a</sup> Shading indicates temporary monitoring points. All others were completed as permanent wells.





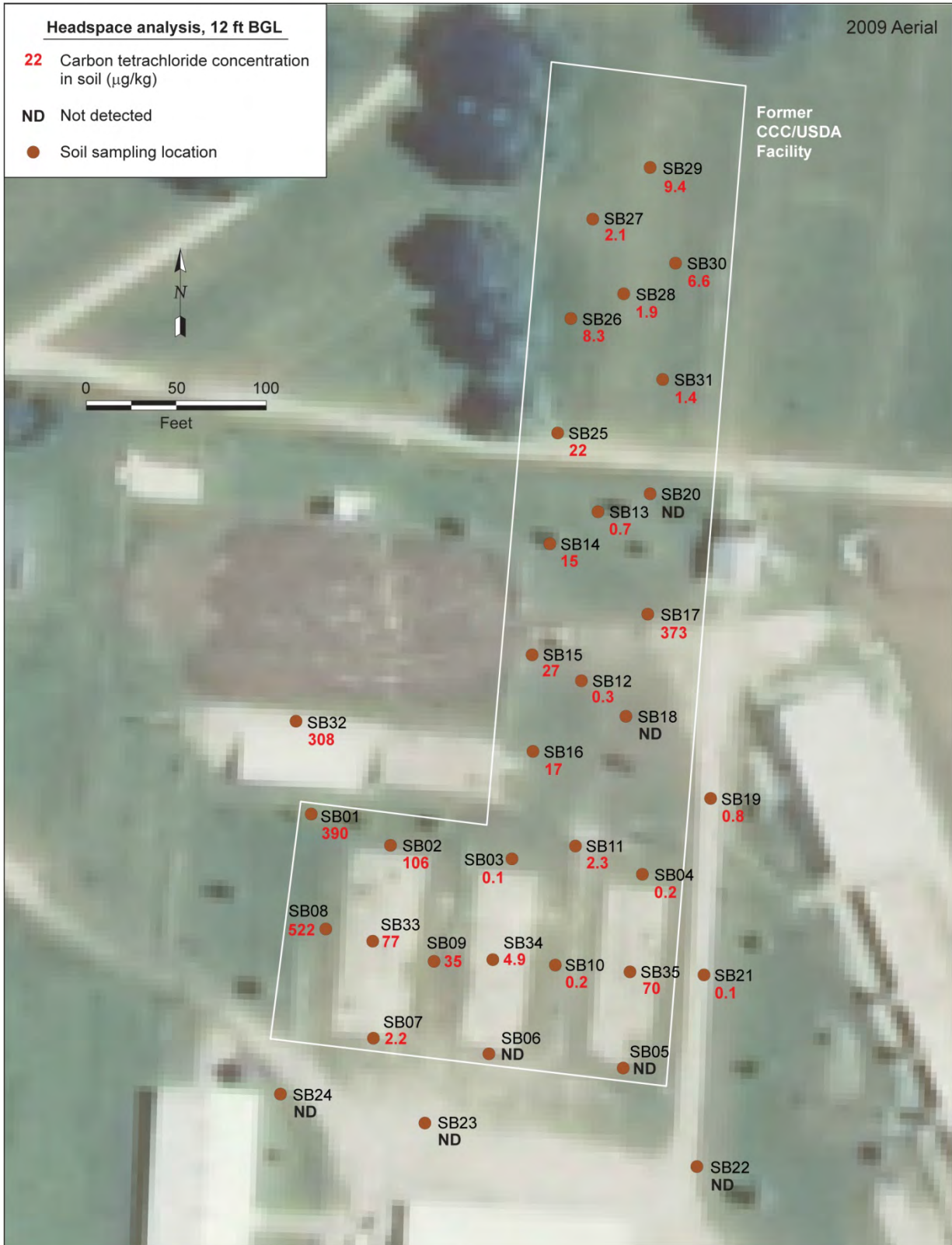


FIGURE 3.1 Results of headspace analyses for carbon tetrachloride in the initial set of soil samples collected near the former CCC/USDA grain storage structures at a depth of 12 ft BGL. Source of photograph: NAIP (2009).



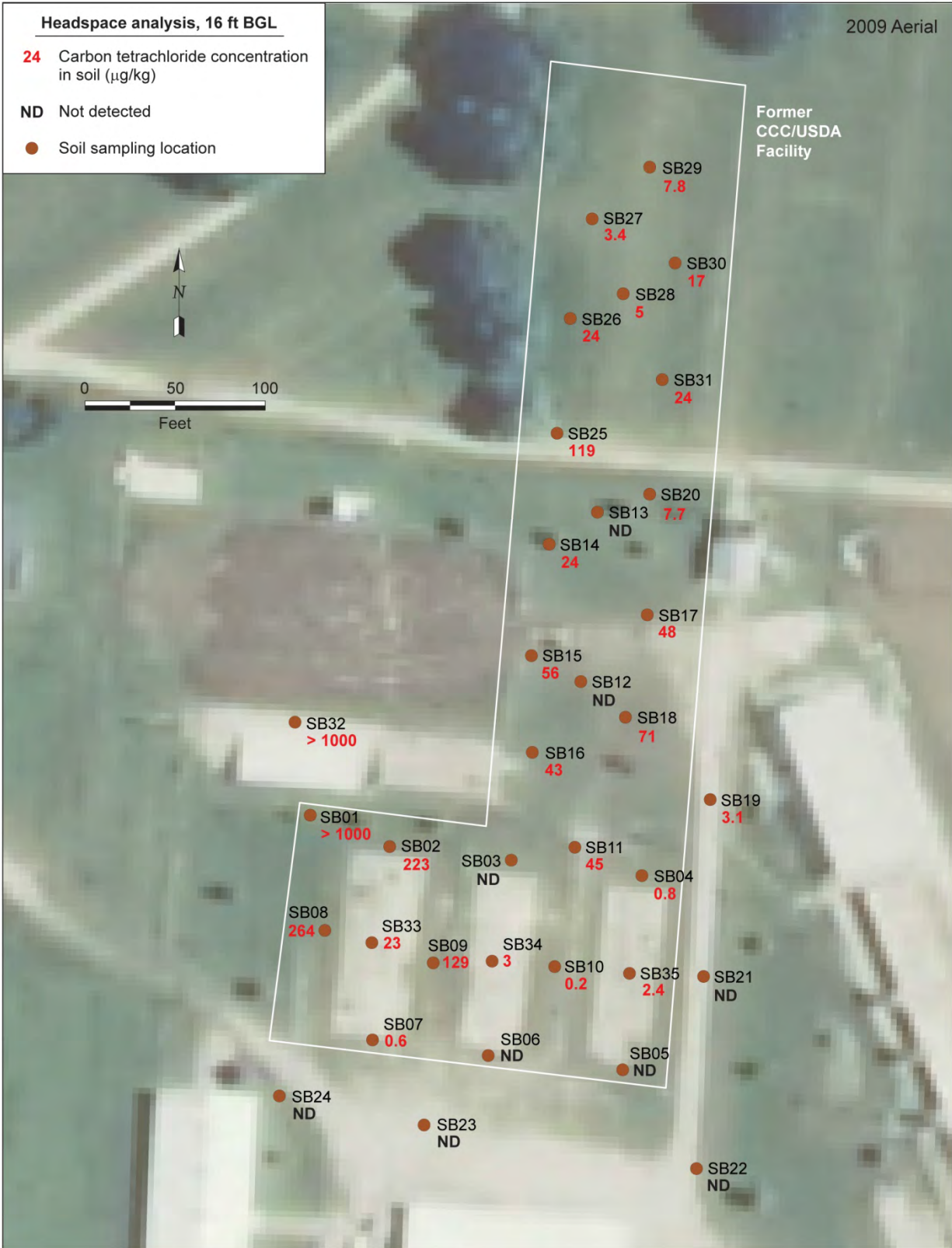


FIGURE 3.2 Results of headspace analyses for carbon tetrachloride in the initial set of soil samples collected near the former CCC/USDA grain storage structures at a depth of 16 ft BGL. Source of photograph: NAIP (2009).



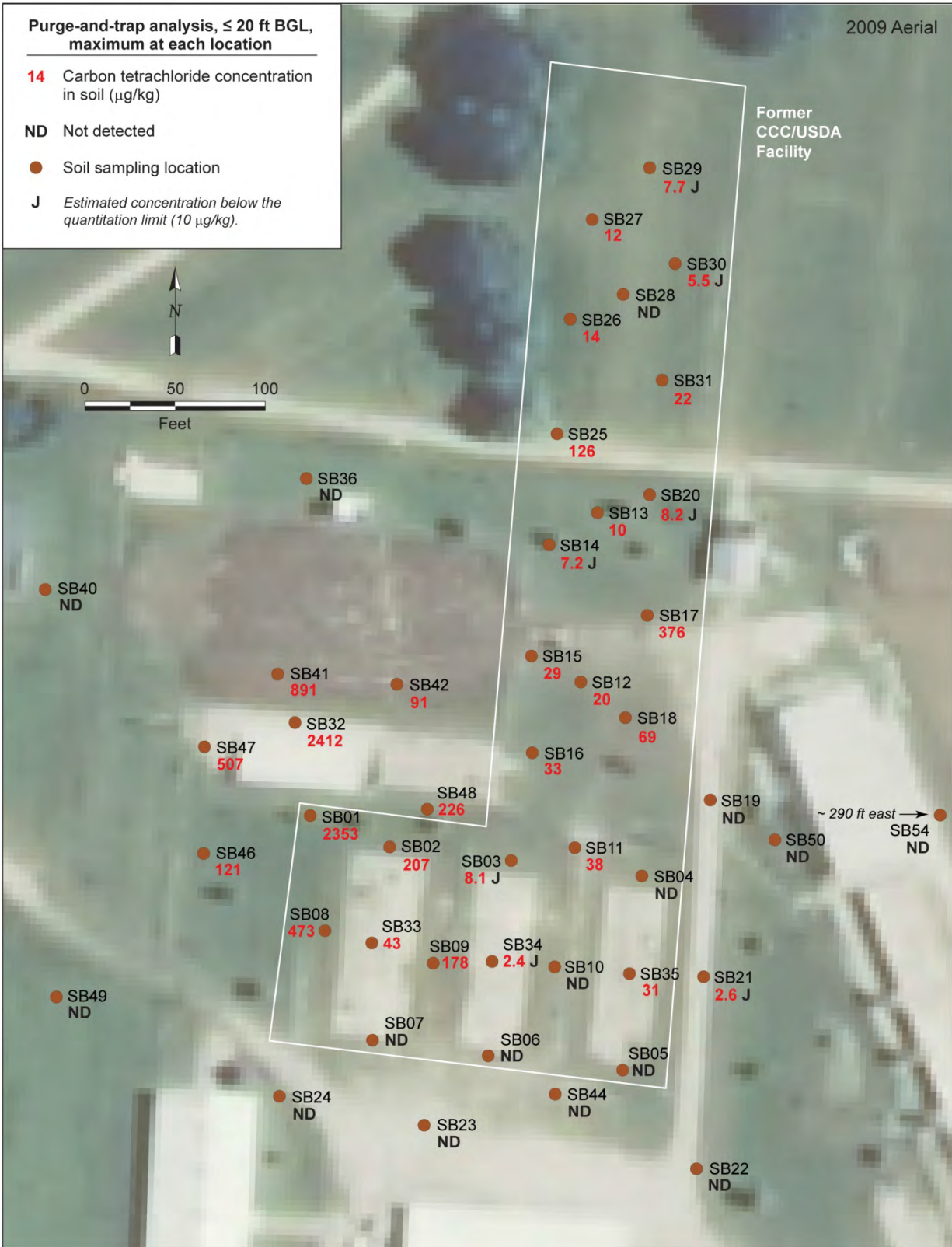


FIGURE 3.3 Lateral distribution of carbon tetrachloride in shallow soils (≤ 20 ft BGL), as determined by purge-and-trap analysis. The maximum detected value is shown for each location. Source of photograph: NAIP (2009).



FIGURE 3.4 Lateral distribution of carbon tetrachloride in deeper soils (> 20 ft BGL), as determined by purge-and-trap analysis. The maximum detected value is shown for each location. Source of photograph: NAIP (2009).





FIGURE 3.5 Lateral distribution of chloroform in shallow soils (≤ 20 ft BGL), as determined by purge-and-trap analysis. The maximum detected value is shown for each location. Source of photograph: NAIP (2009).



FIGURE 3.6 Lateral distribution of chloroform in deeper soils (> 20 ft BGL), as determined by purge-and-trap analysis. The maximum detected value is shown for each location. Source of photograph: NAIP (2009).





FIGURE 3.7 Lateral distribution of carbon tetrachloride in groundwater, as determined in the initial sampling (on various dates) of temporary and permanent monitoring points in the upper sampling interval (< 20 ft BGL). Source of photograph: NAIP (2009).

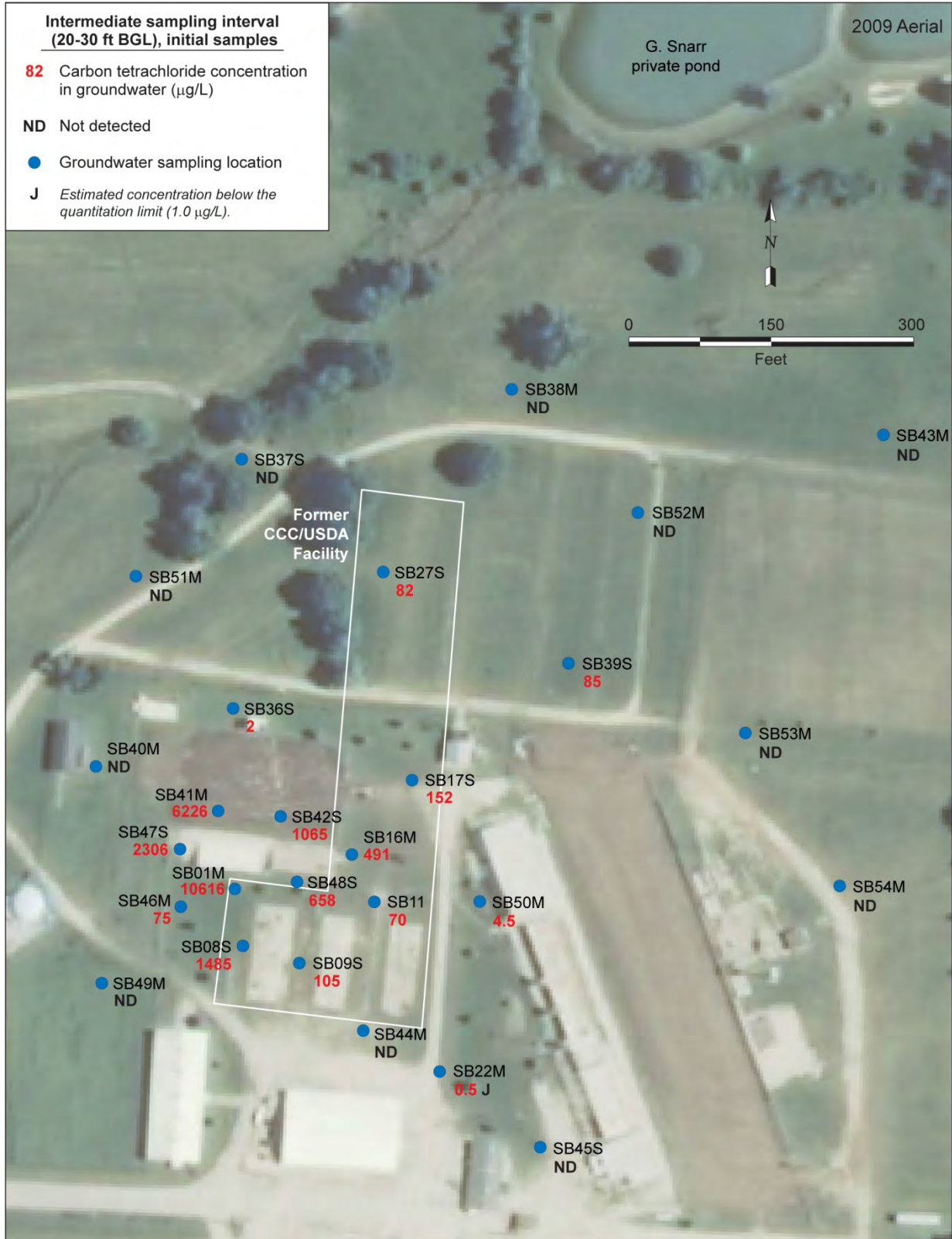


FIGURE 3.8 Lateral distribution of carbon tetrachloride in groundwater, as determined in the initial sampling (on various dates) of temporary and permanent monitoring points in the intermediate sampling interval (20-30 ft BGL). Source of photograph: NAIP (2009).



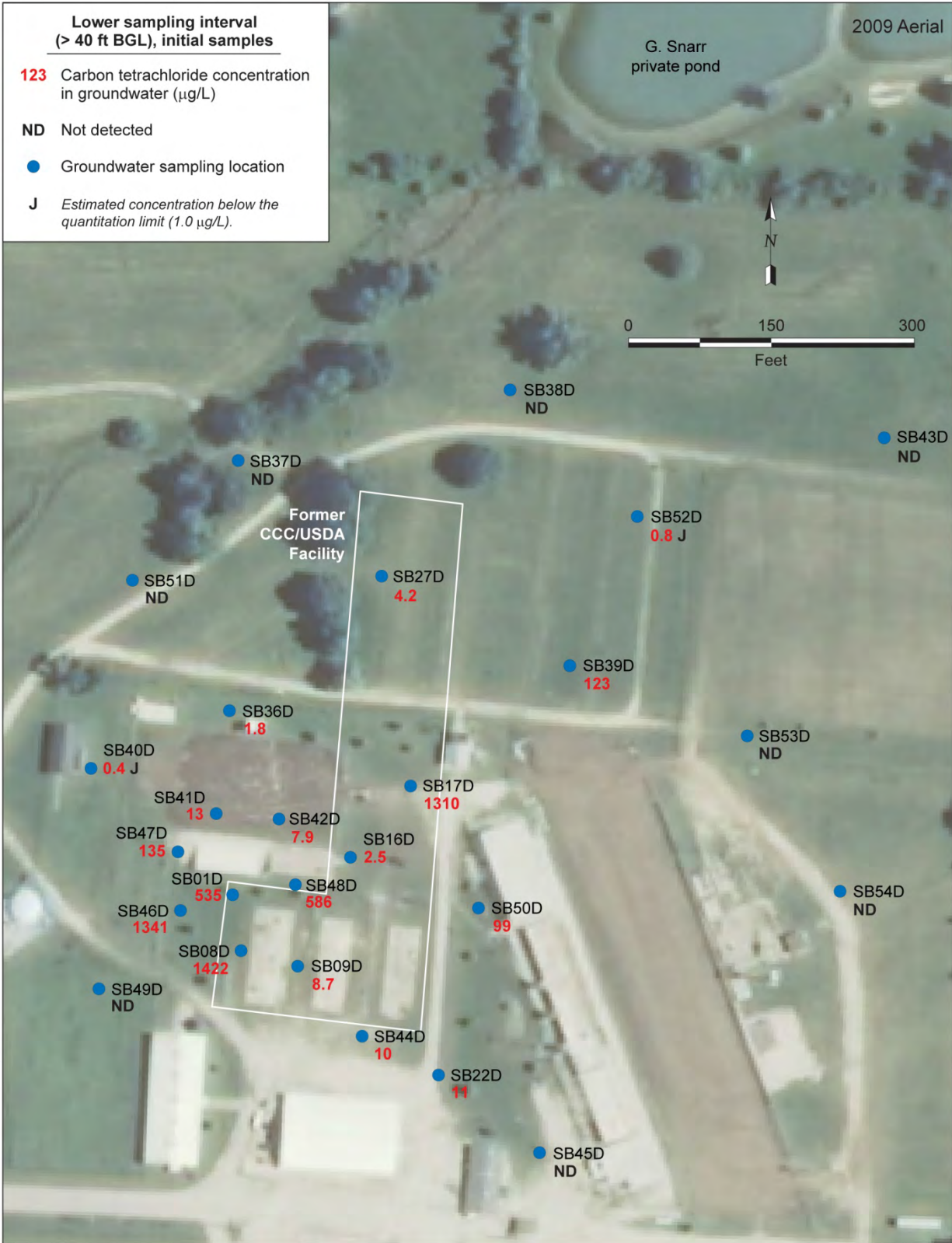


FIGURE 3.9 Lateral distribution of carbon tetrachloride in groundwater, as determined in the initial sampling (on various dates) of temporary and permanent monitoring points in the lower sampling interval (> 40 ft BGL). Source of photograph: NAIP (2009).



FIGURE 3.10 Lateral distribution of carbon tetrachloride in groundwater, as determined in the April 2011 sampling of temporary monitoring points in the upper sampling interval (< 20 ft BGL). Source of photograph: NAIP (2009).





FIGURE 3.11 Lateral distribution of carbon tetrachloride in groundwater, as determined in the April 2011 sampling of temporary monitoring points in the intermediate sampling interval (20-30 ft BGL). Source of photograph: NAIP (2009).

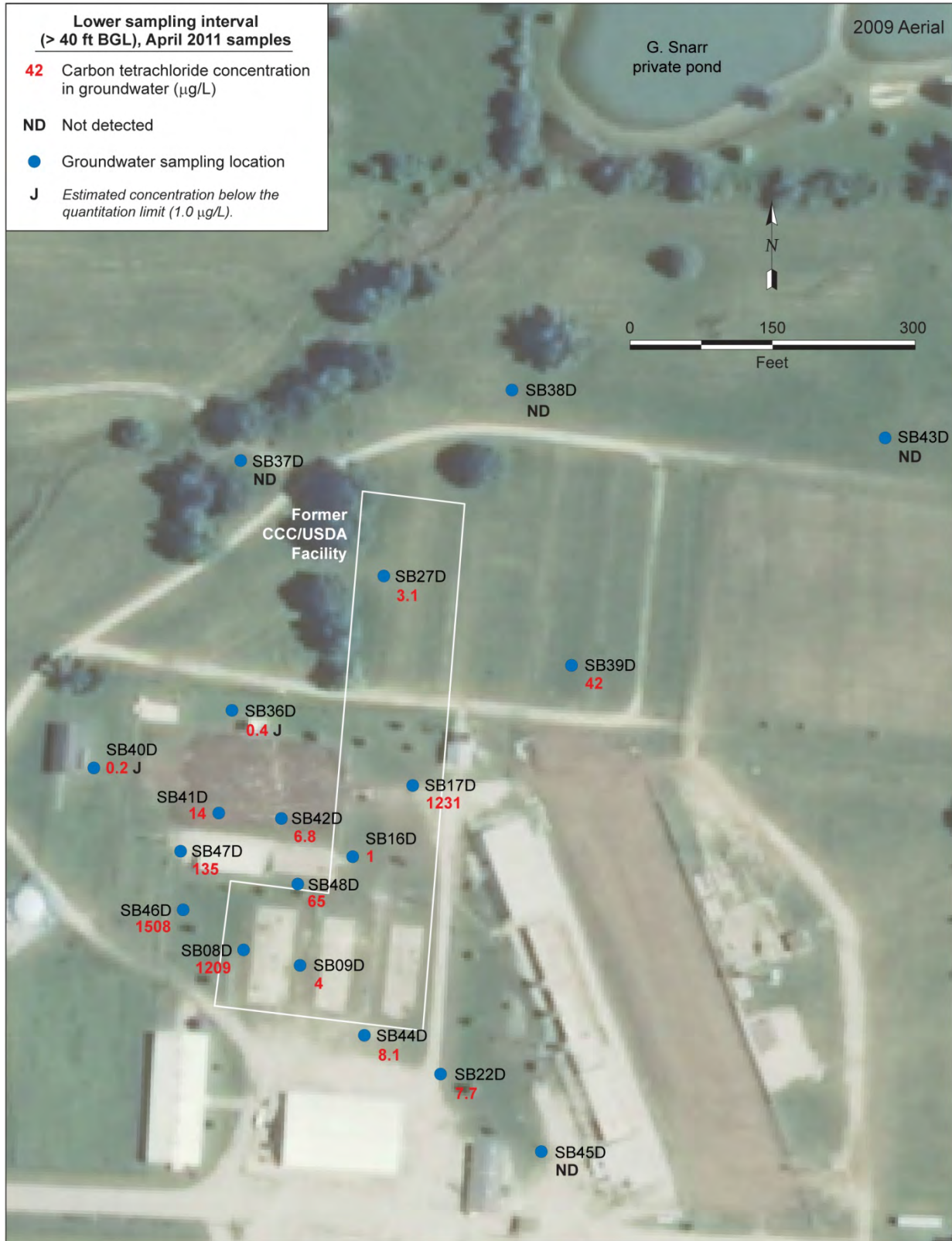


FIGURE 3.12 Lateral distribution of carbon tetrachloride in groundwater, as determined in the April 2011 sampling of temporary monitoring points in the lower sampling interval (> 40 ft BGL). Source of photograph: NAIP (2009).

## 4 Interpretation of Results

In this section, the investigation results summarized in Section 3 are reviewed in the context of the primary technical objectives originally identified for Phase I (Section 1), as well as in terms of the subsequently expanded (with CCC/USDA and MDNR approval) program of studies outlined in Section 2. The site-specific results and interpretations, together with regional and local data for the Montgomery City area summarized in the Phase I *Work Plan* (Argonne 2010), 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 Montgomery City. Finally, these results provide a basis for the preliminary consideration of potential risks to human health, public welfare, and the environment associated with the contamination identified in soil and groundwater during the 2010-2011 investigations.

The MDNR has established DTL values for chemicals of concern, against which the results of site characterization studies in Missouri are to be compared, as outlined in the MRBCA (MDNR 2006) guidance. The DTL values for carbon tetrachloride in groundwater and in soils of all types are 5.0 µg/L and 79.6 µg/kg, respectively. The DTL values for chloroform in groundwater and in soils of all types are 80 µg/L and 78.8 µg/kg, respectively.

### 4.1 Status of Public Wells, Private Wells, and Drinking Water Sources in the Investigation Area

#### 4.1.1 Inventory and Status of Private Wells near the Former CCC/USDA Facility

With the approval of the CCC/USDA and the MDNR, an irregular area extending approximately 0.5 mi in each direction from the former CCC/USDA facility was delineated as the target area for the determination of domestic water sources and for the identification, location, and sampling of existing private wells. As outlined in the approved *Work Plan* (Argonne 2010), locations and current status were also verified for selected private and public wells outside the target area — previously identified on the basis of available MDNR records (Figure 4.1).

The results of this study (summarized in Section 3.1) confirmed that all of the identified, occupied properties in the target area are serviced by and receive domestic water from the Montgomery City municipal water system. The municipal delivery system also extends to all of the presently unoccupied residential and commercial properties available for development in the target area.

Montgomery City currently obtains its public water supply from three active groundwater wells located within 0.75-1.5 mi of the former CCC/USDA facility. Wells PWS1 and PWS2 are northwest of the former facility, and PWS3 lies to the south-southeast (Figure 4.1). Access to the public wells for the measurement of well depths and water levels was not obtained in the 2010-2011 investigations; however, Montgomery City utility department personnel confirmed the available MDNR records, indicating that these wells are cased from the surface to depths of 350-500 ft BGL. They range from 1,150 ft to 1,275 ft in total depth. The groundwater obtained from wells PWS1-PWS3 is softened, chlorinated, and aerated (to address hydrogen sulfide) prior to distribution. Analytical results for samples of groundwater from each of the public wells and the treated water delivered to the municipal system demonstrated the samples to be free of both carbon tetrachloride and chloroform, at a laboratory method detection limit of 0.1 µg/L for these compounds (Table 3.5).

Ten private wells (Brookman, Bracht, K. Cobb, Dyke, Hemeyer, Hendricks, High School 1, Jorgesen, Montgomery Salvage, and Subway) and three heat pump wells (Cobb, Block, and Porter; Figure 4.1) identified in the approved *Work Plan* (Argonne 2010) were investigated. Eight of these wells (Brookman, Bracht, Dyke, Hemeyer, Hendricks, High School 1, Jorgesen, and Montgomery Salvage) lie outside the target area radius of approximately 0.5 mi. Four of the wells outside the target area (Dyke, Hendricks, Hemeyer, and Montgomery Salvage) are used for all domestic and other purposes at the respective locations. The Bracht private well provides the sole source of groundwater for domestic use at this location; however, this residence has been vacant for several years, and the well has not been used as a source of drinking water. Access for the measurement of well and groundwater depths at these locations was not available; however, records on file with the MDNR indicate that the well depths range from 455 ft to 680 ft BGL. The High School 1, Jorgesen, and Brookman wells are used only for yard and irrigation purposes.

Two previously unidentified private wells (K. Cobb and Subway; Figure 4.1) were found in the target area during the 2010-2011 studies. The K. Cobb well (approximately 0.4 mi south-

southeast of the former CCC/USDA facility) is used for lawn and garden purposes only and is believed by the owner to be 600-700 ft deep. The second private well, located at a Subway restaurant approximately 0.35 mi south-southeast of the former CCC/USDA facility, was formerly used for all business purposes, including drinking water supply, but it was taken out of service by the owner in approximately 1997. The maximum depth that could presently be reached in the Subway well was 180.8 ft (as measured by Argonne staff).

#### **4.1.2 Sampling of Selected Wells for VOCs and Geochemical Analyses**

Samples of groundwater from the Hemeyer, K. Cobb, and Subway private wells (representing the closest identified private wells to the former CCC/USDA facility) were collected for VOCs analyses. No carbon tetrachloride or chloroform was identified in these wells at the laboratory method detection limit of 0.1 µg/L (Table 3.5).

Samples of water from the three Montgomery City public wells, the treated municipal supply, and the Hemeyer and K. Cobb private wells were collected for analyses of selected additional parameters to help characterize the inorganic geochemistry of the water sources tapped for private and public use at Montgomery City. The results of the analyses are in Appendix F, Tables F.2 and F.3.

The groundwater samples from the sampled private wells had relatively elevated levels of calcium, magnesium, and sulfate; low nitrate and dissolved oxygen concentrations (DO; 1.46-3.81 mg/L); and low to negative oxidation-reduction potential values (ORP; 63.9 mV to -114.6 mV) indicative of mildly reducing subsurface conditions. Together, these parameters suggest relatively little direct influence of fresh (surface) water recharge to the groundwater-bearing zones penetrated. Hence, these results are qualitatively consistent with groundwater production from the regionally developed, predominantly carbonate (limestones and dolomites) bedrock aquifer units that underlie east-central Missouri and the Montgomery City area at the depths indicated for these wells. (See Section 4.2 and also the *Work Plan* [Argonne 2010].)

In contrast, the high DO and ORP levels observed in the water from the public distribution system (8.34 mg/L and 400.2 mV, respectively) reflect the treatment processes (particularly aeration) used by Montgomery City to improve the quality of the finished municipal water supply.



## 4.2 Site Geology and Hydrostratigraphy

### 4.2.1 Stratigraphy near the Former CCC/USDA Facility

Montgomery City lies near the southeastern margin of the Dissected Till Plains region of the Central Lowlands Physiographic Province (MDNR 2002), and hence it is near the southern limit of Pleistocene continental glaciation in northeastern Missouri. The topography of the Montgomery City area is relatively flat to gently rolling; the city lies along the crest of a low topographic divide trending northwest-southeast that separates the drainage areas of Clear Fork and Elkhorn Creeks, with topographic relief in the immediate vicinity of the former CCC/USDA facility of approximately 20-30 ft.

In this area, Precambrian basement is overlain by a thick sequence of Paleozoic deposits, consisting predominantly of Cambrian to Mississippian dolomites, limestones, and lesser interbedded cherty limestones, shales, and sandstones. These are in turn overlain by Pennsylvanian shales, siltstones, and sandstones-conglomerate and Quaternary glacial till, drift, and wind-blown loess. Mississippian limestones and Pennsylvanian shales or conglomerate (locally) are believed to form the uppermost bedrock units beneath the glacial cover in the vicinity of Montgomery County and adjacent Audrain County.

In keeping with the approved *Work Plan* (Argonne 2010), the Phase I geologic studies focused on characterization of the unconsolidated sediments overlying the inferred local Mississippian (or Pennsylvanian) bedrock. Information on the site-specific lithologic sequence near the former CCC/USDA facility was obtained from continuous cores recovered by using direct-push technology at 19 deep boring locations (SB01, SB08, SB09, SB16, SB17, SB22, SB25, SB27, SB36, SB40, SB41, SB42, SB44, SB46, SB47, SB48, SB49, SB50, and SB54; Figure 2.5) and from geomechanical logs acquired with the CPT unit at 16 locations (SB01, SB09, SB11, SB17, SB22, SB25, SB27, SB36, SB37, SB38, SB39, SB40, SB41, SB42, SB43, and SB45; Figure 2.9). Lithologic descriptions for the investigative borings are in Appendix E, along with the geomechanical CPT logs. Data regarding sediment physical properties for selected cored intervals are in Appendix D, Table D.3. Four hydrostratigraphic cross sections were developed from the lithologic descriptions and CPT profiles, at the locations shown in Figure 4.2. The cross sections are in Figures 4.3-4.6.

The entire unconsolidated sequence penetrated in 2010-2011 is dominated by fine-grained deposits, consisting primarily of poorly sorted, sub-equal fractions of non-calcareous clay (33-70%) and silt (15-48%), lesser fine sand (3-27%) and only minor (generally less than 10%) coarser-grained materials. Few significant variations in the bulk characteristics of the unconsolidated sediments were identified across the investigation area; however, subtle changes noted in the particle size distribution, coloration, or characteristics of the minor coarser-grained components of the sediments reflect a general pattern of vertical layering within this sequence that could be traced relatively consistently across the site. On the basis of these characteristics, four main stratigraphic units were identified with increasing depth, as discussed below.

#### **4.2.1.1 Stratigraphic Unit 1**

A relatively uniform unit of stiff clay (40-47%), silt (34-44%), and fine sand (8-17%), containing only trace amounts of coarser materials (less than 4%), forms the uppermost stratigraphic interval in the study area. The sediments in Unit 1 range in color from light gray or brown to dark reddish gray or yellowish brown. The sediments are free of calcareous materials, but they frequently contain minor to abundant small, highly oxidized red-orange to black nodules, thin veins, or coated grains. The unit is variably marked by patchy to streaky orange staining. Figures 4.2-4.6 show that Unit 1 generally ranges from approximately 10 ft to 15 ft in thickness, locally thickening to 18-24 ft at boring locations SB17, SB39, and SB45 (Figures 4.2, 4.3, and 4.5).

On the basis of the regionally established stratigraphy for the Montgomery City area outlined above, as well as the non-calcareous nature of this interval, Unit 1 might represent either glacially deposited or wind-borne (loess) materials. For the purposes of this investigation, however, Unit 1 is interpreted in Figures 4.3-4.6 (and in the core descriptions in Appendix E) to form an upward continuation of the till sequence identified in the deeper sections described below.

#### **4.2.1.2 Stratigraphic Unit 2**

Stratigraphic Unit 2, interpreted as an interval of stiff glacial till, is somewhat more heterogeneous than Unit 1. Unit 2 is composed of a mixture of clay (33-44%), silt (31-40%), fine sand (15-27%), and coarser-grained materials (4-12%). The coarse components identified in

Unit 2 include calcareous nodules, along with calcareous (limestone or dolomite) and non-calcareous (primarily siltstone and chert) pebbles up to 0.75 in. or greater in size. Unit 2 also variably includes small, irregular pods and lenses of relatively clean silt to medium sand; dark rust-red to black veins, lenses, nodules, or irregular patches that often have a highly corroded appearance; and small pods or thin lenses of light to dark gray clay. Patchy or mottled to pervasive, light- to dark-orange staining is common throughout this interval, which varies in color from brownish gray to yellowish brown.

The relative abundance of coarser-grained materials can vary rapidly over short vertical and lateral distances in Unit 2. As shown in Figures 4.3-4.6, however, examination of the full suite of Unit 2 cores suggested that the unit can be subdivided into two “textural subfacies” that are irregularly distributed. The proposed subfacies reflect (1) portions of the unit that contain relatively abundant nodules, pebbles, and silty sandy or corroded patches up to 0.75 in. or greater in size and (2) portions of the unit that contain fewer inclusions of these types, of size generally less than 0.5 in. The transitions between these subfacies are not sharply defined, however. Figures 4.3 and 4.5 indicate that somewhat thicker (up to 5 ft) — but laterally discontinuous — lenses of more clayey sediments (similar to the Unit 3 materials described below) may also occur locally in the lower portion of Unit 2 (within the subfacies 2 materials).

Unit 2 ranges in thickness from 17 ft to 27 ft in the central portion of the study area, but it appears to thin slightly (to approximately 14-20 ft) to the east, north, and west from the former location of the CCC/USDA grain storage facility (Figures 4.2-4.6).

#### **4.2.1.3 Stratigraphic Unit 3**

Unit 3 is a slightly plastic interval of till that underlies Unit 2 and is consistently finer grained than any of the other stratigraphic units penetrated. Unit 3 contains 45-70% clay, less than 17% fine sand, and less than 4% coarser-grained materials. The coarser inclusions identified in Unit 3 generally consist of small calcareous nodules of diameter up to 0.25 in., or (rarely) calcareous or non-calcareous pebbles of diameter up to approximately 0.5-0.75 in. Unit 3 is typically a fairly uniform light gray to grayish brown in color, with little to no orange or black staining.



Unit 3 generally ranges in thickness from approximately 7 ft to 10 ft, but it locally thickens, to 14-16 ft, at borings SB40, SB44, and SB46.

#### **4.2.1.4 Stratigraphic Unit 4**

Unit 4 comprises the basal unconsolidated sediments penetrated (above the refusal depth of the CPT direct-push probes). Unit 4 consists of stiff till that is effectively identical in character to the two subfacies described for Unit 2. Figures 4.3, 4.5, and 4.6 indicate that clayey deposits (similar to the Unit 3 materials) up to 5 ft thick were identified in Unit 4 at multiple locations (SB01, SB08, SB09, SB17, SB22, SB39, and SB49); however, the core data from adjacent wells indicate that these deposits do not form a laterally continuous unit.

#### **4.2.1.5 Porosities**

Porosities determined from cores representing the range of identified sediments varied from 19% to 39% (Appendix D). Little significant distinction is apparent among the porosities associated with the sedimentary units outlined above (Unit 1, 24-39%; Unit 2 and Unit 4, 19-37%; Unit 3, 26-39%), reflecting the predominantly fine-grained nature of all units.

#### **4.2.1.6 Contact with Bedrock**

As discussed in Sections 2.3.2 and 2.5, contact with bedrock at the base of the unconsolidated sediments of Unit 4 could not be definitively confirmed in any of the investigative borings. Refusal depths for the CPT direct-push coring device ranged from approximately 47 ft BGL (at SB27) to 64 ft BGL (at SB50). Slightly greater penetration depths (to approximately 68 ft BGL, at SB09) were achieved during the CPT logging runs, which employ slightly smaller-diameter probe rods than those required for coring. Figures 4.3-4.6 indicate, however, that the observed refusal depths appear to define a relatively flat surface beneath the study area, at elevations of approximately 758-770 ft above mean sea level (AMSL). Ground surface elevations in the study area (Appendix G) correlate roughly with those at several heat pump wells installed approximately 0.4 mi northeast of the former CCC/USDA facility (Cobb, Block, and Porter; Figure 4.1), which encountered “chert rock” at depths of 52-84 ft BGL, overlying thick limestones. (Lithologic data for these wells are in Appendix C of the *Work*

*Plan* [Argonne 2010].) The available data therefore suggest that at refusal the CPT borings might have encountered the Pennsylvanian Graydon conglomerate, which is believed to overlie Mississippian cherty limestones in the study area (Argonne 2010).

#### **4.2.2 Hydrostratigraphy near the Former CCC/USDA Facility**

The unconsolidated sediments at Montgomery City, particularly those identified in Unit 2 and Unit 4, commonly include 15-30% (or more) sand- or gravel-sized materials (Appendix D, Table D.3). As discussed in Section 4.2.1, however, these deposits consist of heterogeneous, poorly sorted till, in which very few discrete silty, sandy, or coarser-grained intervals and no prominent (by visual inspection) zones of moisture were identified. Occurrences of relatively clean silt or fine-to-medium sand were generally limited to occasional small ( $\leq 1$  in.), typically dry, irregularly shaped pods, lenses, or thin bands encased within the surrounding till. In light of these observations, no distinct (coarse-grained) aquifer could be readily identified in the unconsolidated sequence in the study area.

Somewhat thicker sandy deposits were penetrated in only five instances:

- SB01, at 26.0-27.0 ft and 57.0-58.0 ft BGL
- SB24, at approximately 18 ft BGL
- SB27, at 18.0-20.8 ft BGL
- SB54, at 50.3-50.9 ft BGL

In each case, the observed deposits could not be traced laterally to adjacent wells; however, wet sediment was encountered, suggesting the possible occurrence of saturated conditions at multiple depths in the till sequence.

#### **4.2.2.1 Water Level Monitoring**

##### **Upper, Intermediate, and Lower Intervals**

To evaluate the potential distribution and movement of groundwater in the unconsolidated sediments, an array of temporary (subsequently permanent) monitoring points was installed. The monitoring points (described in Sections 2.4.4 and 3.3) were constructed to intersect three depth intervals in the till sequence, termed the “upper,” “intermediate,” and “lower” intervals. Construction details for all monitoring points are in Table 2.2, and the distribution of the monitoring points among the selected intervals is summarized in Table 3.7. The areal distribution of monitoring points at the site in January-April 2011, prior to the abandonment of 21 temporary monitoring points, is shown in Figure 2.7; the network of permanent monitoring wells completed by the end of May 2011 is illustrated in Figure 2.8.

The lateral and vertical distribution of most of the temporary and permanent groundwater monitoring points is shown in Figures 4.3-4.6. Monitoring wells in the upper and intermediate intervals were constructed to investigate possible groundwater relationships in stratigraphic Unit 1 and Unit 2. The lower monitoring points were installed in Unit 4, directly above the refusal depth at each boring location. No groundwater monitoring points were placed in Unit 3, in light of the finer-grained nature of this interval and the notably lower levels of carbon tetrachloride identified in soils in this unit (as discussed in Section 4.3.1).

Figures 4.7-4.9 present, respectively, hydrographs generated from water level measurements made by hand for the upper, intermediate, and lower monitoring points in October 2010 to September 2011. At selected upper and intermediate monitoring wells (constructed in May 2011), automatic water level recording devices were installed to supplement the periodic manual measurements, in order to obtain a more continuous picture of potential groundwater level variations across the site. The records from these devices are shown in Figures 4.10-4.11. Daily precipitation data obtained from the weather station in nearby Auxvasse, Missouri (Supplement 1, Table S1.2), are compared to the groundwater level traces for the upper-interval monitoring points in Figures 4.7 and 4.10.

### **Rates of Stabilization of Groundwater Levels**

Figures 4.7-4.11 indicate that the rates of groundwater accumulation at most of the monitoring points were very slow; however, groundwater was ultimately observed in all of the monitoring points with time. With few exceptions, at least 24 hr was required for the recovery of sufficient groundwater for sampling for VOCs analyses; at many wells, a delay of several days to weeks (or longer) was required before initial sampling for VOCs could take place. Similarly, the figures show that a period of weeks to months was required for the groundwater in many of the wells to reach an apparently static level. These observations appear qualitatively consistent with possible restricted movement of groundwater in the predominantly fine-grained, poorly sorted tills (Units 1-4) discussed in Section 4.2.1.

Stabilization of the groundwater levels generally occurred most slowly in the intermediate- and upper-interval monitoring wells (requiring up to 4+ months). Wells in the upper and intermediate intervals that recovered more quickly (SB01M, SB10, SB11, SB24, SB29, SB33, and SB34; Figures 2.7 and 2.8) are located primarily near the remaining rectangular foundations; however, no distinctive lithologic properties could be associated with these locations, in comparison to adjacent wells with longer water level response times. Static levels were achieved in most of the lower-interval wells within 2-4 weeks. Figures 4.7-4.8 and 4.10-4.11 indicate that the groundwater levels in wells SB50S, SB50M, SB53S, and SB53M, installed in May 2011, had not fully stabilized by the end of the observation period (on September 2, 2011).

Except at SB50 and SB53, as noted above, Figures 4.7-4.11 indicate that the (generally) stabilized depths to groundwater observed as the 2010-2011 investigations progressed were relatively consistent across the investigation area, at approximately 1-8 ft BGL, for all well locations and screened intervals. Groundwater levels appeared to reach a transient maximum in April-May 2011 at most of the observation points installed before May 2011, in apparent association with frequent spring rainfalls. The maximum levels were followed by a slight decline during the (relatively drier) summer and early fall. These preliminary observations therefore suggest a subdued groundwater response to seasonal variations in local precipitation levels; however, additional monitoring will be required to substantiate these results.

### **Saturated Conditions and Hydraulic Conductivity**

The similarity in the observed static groundwater levels in the upper, intermediate, and lower monitoring intervals strongly suggests the presence of saturated conditions (and hence potential hydraulic communication) to relatively shallow depths throughout much, if not all, of the till complex underlying the study area. This interpretation is supported by the results of gravimetric moisture content analyses for representative samples of the Unit 1-4 sediments collected at selected boring locations (SB01, SB17, SB22, SB25, SB49, and SB50; Figure 2.5), at depths of 11-59 ft BGL. The analyses reflect volumetric water contents at or very near saturation for all of the tested intervals (Appendix D, Table D.3). Together with the slow groundwater accumulation rates recorded at many wells, these observations further suggest that the potential for groundwater transmittal through the fine-grained sediments is limited.

No determinations of horizontal hydraulic conductivity were proposed in the approved *Work Plan* (Argonne 2010); however, laboratory analyses of permeability for selected cored intervals at three locations (SB22, SB49, and SB50; Appendix D, Table D.3), at depths of 11-59 ft BGL, demonstrate that *the vertical hydraulic conductivity of the till sequence (Units 1-4) is very low*, ranging from approximately  $0.9 \times 10^{-4}$  to  $2.9 \times 10^{-4}$  ft/d.

#### **4.2.2.2 Hydraulic Gradients and Groundwater Flow**

To investigate the spatial relationships among observed groundwater levels and hence the apparent hydraulic gradients that influence potential groundwater (and contaminant) movement, groundwater level data were used to generate mechanically contoured representations of the potentiometric surfaces for the upper, intermediate, and lower intervals in the till sequence. The data used were from the May 9, 2011, measurement event (prior to the abandonment of 21 temporary monitoring points later in May 2011) and the September 2, 2011, event (performed in the network of permanent monitoring points established at the end of the 2010-2011 field program).

The resulting diagrams are in Figures 4.12-4.14 and 4.15-4.17, respectively, for the May 9 and September 2 events. Groundwater level data for September 2 are also shown in hydrogeologic cross sections A-A' to D-D' (Figures 4.3-4.6).

### **Patterns of Lateral Groundwater Flow**

Figures 4.12-4.14 and 4.15-4.17 indicate that the apparent patterns of lateral groundwater flow suggested by the May 9, 2011, and September 2, 2011, measurements (determined from monitoring networks that differ in number and distribution of observation points) are very similar. In each case, a predominant direction of groundwater flow from south to north across the study area is indicated in the upper portion of the till sequence. At progressively deeper intervals in the sequence, however, an increasingly semi-radial pattern of apparent groundwater flow to the north, northeast, and northwest is indicated across the southern portion of the area, in the vicinity of the remaining rectangular foundations and the current fairground facilities.

Figures 4.12-4.14 and 4.15-4.17 also illustrate that from May to September 2011, groundwater levels declined to a somewhat greater degree in many wells in the northern portion of the investigation area than in wells near the southern and western margins of this area. This greater decline in the northern wells (as an inferred possible response to decreased summer and early fall recharge) resulted in slightly greater apparent hydraulic gradients across much of the area during the September measurement event.

Figures 4.12-4.17 indicate that the apparent direction of groundwater flow in the northern portion of the study area, at all sampling intervals in the till sequence, is generally toward the north-northwest. In Figures 4.16 and 4.17 (for the September 2, 2011, data from the intermediate and lower sampling intervals) in particular, a possible focus toward the trend of a shallow, ephemeral surface drainage near the northwestern margin of the study area is empirically suggested. Field observations revealed no evidence of possible groundwater seepage to this drainageway in the investigation area, or in the vicinity of a man-made retention pond (partially visible in Figures 4.12-4.17) immediately north of the study area. Topographic relationships discussed previously (Section 2 of the *Work Plan* [Argonne 2010]) suggest, however, that both surface and groundwater drainage in the vicinity of the former CCC/USDA facility might be influenced by a more prominent, somewhat more deeply incised, natural drainage feature located approximately 0.5 mi northeast of the former facility (Figure 2.3 of the *Work Plan* [Argonne 2010]).

### **Patterns of Vertical Groundwater Flow**

As discussed above, the groundwater relationships illustrated in Figures 4.12-4.17 suggest that lateral groundwater movement throughout the local till sequence is driven predominantly by a groundwater “high” in the southern portion of the study area, the influence of which becomes increasingly more localized with depth in the sequence. The available data also suggest, however, a complex pattern of vertical hydraulic head variations in the till sequence, particularly outside the area of direct influence of this groundwater “high.”

The vertical distribution of groundwater levels identified in the September 2, 2011, monitoring event is depicted in the hydrogeologic cross sections in Figures 4.3-4.6. These figures show that, at any specific location and depth in the till sequence, the hydraulic heads measured in vertically adjacent, clustered wells indicate a variety of local driving force(s) for vertical groundwater flow at individual locations, as follows:

- Where water level elevations decrease from the upper interval to the lower interval, flow is downward.
- Where water level elevations decrease from the lower interval to the upper interval, flow is upward.
- Where the lowest water level is in the intermediate interval, flow is into the intermediate interval from both the upper and lower intervals.
- Where the highest water level is in the intermediate interval, flow is from the intermediate interval to both the upper and lower intervals.
- When the water levels are similar in all intervals, vertical flow is essentially absent.

To examine these vertical relationships further, the potentiometric surfaces generated for the upper, intermediate, and lower intervals from the September 2 data (Figures 4.15-4.17) were used to develop representations of the differences in groundwater levels across the investigation area. Figure 4.18 illustrates the differences for the upper and intermediate intervals (left panel) and for the intermediate and lower intervals (right panel).



In Figure 4.18, positive (green) contours identify locations where the hydraulic head (water level elevation) is greater in the stratigraphically shallower interval than in the deeper interval. The amounts of the differences, in feet, are marked on the contours. The positive (green) contours indicate the potential for downward groundwater flow.

Negative (red) contours in Figure 4.18 identify locations where hydraulic heads (water level elevations) are greater in the deeper interval than in the shallower interval. The negative (red) contours imply a driving force for upward groundwater flow.

The left and right panels of Figure 4.18 both depict positive head differences (green contours) near the southern margin of the study area (in association with the groundwater high noted above). Hydraulic forces at these locations will tend to drive groundwater downward in the unconsolidated till sequence (Units 1-4).

Figure 4.18 (left) indicates that downward groundwater movement (green contours) from the upper interval to the intermediate interval (within stratigraphic Units 1 and 2) would also be expected across much of the southeastern and northwestern portions of the study area. However, in the north-central portion of the study area (north of the remaining rectangular foundations), upward groundwater movement is suggested from Unit 2 to Unit 1 (red contours in Figure 4.18 [left]).

In contrast, the right panel of Figure 4.18 suggests upward flow (red contours) from the lower interval to the intermediate interval (from stratigraphic Unit 4 to Unit 2) in the southeast and far northwest portions of the study area and downward flow (green contours) in the north-central portion of the area. This is opposite the pattern shown in the left panel for the upper and intermediate intervals.

Together, the left and right panels of Figure 4.18 therefore suggest the following preferential directions for potential vertical groundwater flow:

- *Into* the intermediate interval (into stratigraphic Unit 2) from both above and below in the southeastern and northwestern portions of the study area.

- *Out of* the intermediate interval (into the shallower and deeper portions of the till complex, Unit 1 and Units 3-4, respectively) in the north-central portion of the study area.

#### **Overall Groundwater Flow Patterns**

The lateral and vertical hydraulic relationships outlined above reflect the *driving forces* for potential groundwater movement. The actual rates and direction(s) of groundwater flow (and hence contaminant migration) at any given location will be determined by these force(s), coupled with the local distribution of vertical and horizontal hydraulic conductivity. The combined data and observations obtained in the 2010-2011 investigation indicate that the rates of groundwater movement are generally quite low throughout the till sequence, but they might be influenced locally by the fine-scale lithologic heterogeneity identified in each stratigraphic unit.

In this context, Figure 4.18 indicates little or no vertical hydraulic head difference among the upper, intermediate, and lower intervals near and immediately northwest of the remaining rectangular foundations. This localized area corresponds to the northwestward extension of the groundwater high identified in the intermediate and lower intervals (Figures 4.13, 4.14, 4.16, and 4.17). Although no unique lithologic characteristics were identified in this area (Figures 4.3 and 4.5), the observed groundwater level relationships empirically suggest the possible existence of relatively greater vertical hydraulic communication locally, resulting in more effective (vertical) equilibration of the heads within the local till sequence.

#### **4.2.3 Preliminary Conceptual Hydrologic Model**

The results outlined in Sections 4.2.1 and 4.2.2 provide a basis for the development of a preliminary conceptual hydrogeologic model for the Montgomery City site. The principal features of this working conceptual model are as follows:

- The unconsolidated stratigraphic sequence in the study area (above the limits of CPT refusal) is dominated by fine-grained and poorly sorted deposits, interpreted as glacial till, that contain relatively little coarser-grained material. No laterally continuous coarse-grained intervals were identified in the till sequence; observed deposits of relatively clean silt or fine-to-medium sand

- were generally limited to occasional small pods, lenses, or thin bands, or to rare, discontinuous, thicker (up to approximately 1-2 ft) lenses encased within the surrounding till. Subtle variations in lithologic characteristics, however, suggest the presence of vertical layering in the till sequence that is traceable across the study area and is interpreted to reflect four stratigraphic units.
- Saturated conditions were indicated in the till sequence to shallow depths (variably at approximately 1-8 ft BGL) throughout most, if not all, of the study area. The observed distribution of groundwater levels suggests that vertical and lateral hydraulic communication also exists to varying degrees throughout the investigation area; however, the resulting apparent hydraulic gradients that control potential groundwater movement are relatively complex.
  - Lateral groundwater flow across the study area appears to be driven by a relative groundwater high near the southern margin of the area, promoting groundwater movement predominantly to the north-northwest in the upper portion of the till sequence. The influence of the southern high becomes progressively more localized with depth, resulting in a more semi-radial pattern of lateral hydraulic gradients deeper in the till sequence. This is particularly true in the southern portion of the study area, near the remaining rectangular foundations.
  - The apparent local driving force(s) for vertical groundwater flow vary across the site and may locally be upward, downward, or a combination of these (with potential groundwater flow away from or toward the intermediate interval in both directions). Alternatively, little to no vertical hydraulic gradient might exist locally.
  - Very slow rates of groundwater recharge to monitoring wells were demonstrated at most locations across the investigation area. Together with the fine-grained nature of the tills and the areally varying range and directions of hydraulic gradients observed, these results suggest that the potential rates of groundwater movement through the fine-grained sediments are also limited. No determinations of horizontal hydraulic conductivity were conducted;

however, limited laboratory data indicate that vertical hydraulic conductivities are generally very low throughout the till sequence.

- The observed physical characteristics of the tills suggest that minor fine-scale variations in the lithologic properties of these materials might play a role in the detailed occurrence and relative effectiveness of groundwater (and contaminant) migration pathways in these deposits. The data presently available suggest that an area of more effective vertical hydraulic communication in the till sequence exists locally near and immediately to the northwest of the remaining rectangular foundations.

### **4.3 Distribution of Carbon Tetrachloride Contamination in the Unconsolidated Soils beneath the Former CCC/USDA Facility**

The conceptual hydrogeologic model developed in Section 4.2 represents the interpreted subsurface framework influencing the distribution of groundwater and carbon tetrachloride contamination in soils and groundwater. As outlined in Section 4.2.3, the key elements of this model include (1) a predominance of fine-grained and poorly sorted deposits (till) having limited capacity to transmit groundwater and (2) the apparent presence of saturated conditions throughout much, if not all, of the unconsolidated till complex, to relatively shallow depths (approximately 1-8 ft BGL).

In this section, the distributions of carbon tetrachloride and chloroform contamination in soils and groundwater are examined in the context of the working model.

#### **4.3.1 Contamination in Soils**

In keeping with the recommendations in Section 6.4.2 of the MRBCA guidance (MDNR 2006), a sequential program of shallow and deeper soil sampling for VOCs analyses was conducted. The purpose was to identify likely locations for carbon tetrachloride contamination in soils, and then to determine the extent of contamination that might be associated with the former CCC/USDA grain storage activities.

#### 4.3.1.1 Shallow Soils

With the approval of the MDNR, VOCs data for shallow soils were initially obtained with a headspace analysis method. The headspace analytical results were examined semi-quantitatively in the field for distribution patterns. The results are discussed in detail in Section 3.2.1 and are not discussed further here.

Shallow soils (to 16-20 ft BGL) were ultimately collected at 46 locations in the vicinity of the former CCC/USDA grain storage facility for VOCs analyses by the purge-and-trap method (Section 3.2.2). The results of these analyses are in Table 3.3. The highest concentrations of carbon tetrachloride identified in the shallow soils at all locations, to a maximum depth of 20 ft BGL, are illustrated in Figure 3.3.

No carbon tetrachloride concentrations exceeding the DTL (79.6  $\mu\text{g}/\text{kg}$ ) for this contaminant were identified in soils shallower than 8 ft BGL, and with only one exception (11  $\mu\text{g}/\text{kg}$ ; at SB09), no carbon tetrachloride levels greater than the purge-and-trap method quantitation limit of 10  $\mu\text{g}/\text{kg}$  were detected at 4 ft BGL. The soil analyses therefore strongly suggest that no unacceptable concentrations of carbon tetrachloride are present in either “surficial soils” (from 0 ft to 3 ft BGL, or to the top of groundwater if it occurs at < 3 ft BGL) or the “subsurface soil” (vadose) zone as defined by the MDNR (2006).

The available hydrogeologic data further indicate that the subsurface soil zone is relatively thin ( $\leq 5\text{ft}$ ) or absent across much of the investigation area. This observation suggests that concentrations of carbon tetrachloride detected in the soils deeper than approximately 8 ft BGL might reflect contamination that is (1) adsorbed to solid soil particles, (2) dissolved in the pore water in the soils, or (3) in a combination of these physical states. The inference is therefore that the distribution of carbon tetrachloride identified in the deeper (presumably saturated) portion of the soil column might in part reflect the influences of both vertical and lateral contaminant (and groundwater) migration.

Figure 3.3 indicates that low levels of carbon tetrachloride were identified at depths of 8-20 ft BGL at most of the sampled locations associated with the footprint of the former CCC/USDA grain storage facility. Concentrations in shallow soils exceeding the DTL, however, are restricted primarily to two “hot-spot” areas. First, carbon tetrachloride concentrations of 121–2,412  $\mu\text{g}/\text{kg}$  were identified by the purge-and-trap method in 10 borings (SB01, SB02,

SB08, SB09, SB32, SB41, SB42, SB46, SB47, SB48) adjacent to or immediately northwest of the remaining rectangular foundations. Second, levels of 126  $\mu\text{g}/\text{kg}$  and 376  $\mu\text{g}/\text{kg}$  were detected at borings SB17 and SB25, respectively, in association with the former southern round grain bins.

No detectable carbon tetrachloride (at a purge-and-trap detection limit of 1.0  $\mu\text{g}/\text{kg}$ ) or only low values (below the purge-and-trap quantitation limit of 10  $\mu\text{g}/\text{kg}$ ) were identified in the shallow ( $\leq 20$  ft BGL) soils at 17 borings that are marginal to the former CCC/USDA grain storage facility (SB05-SB07, SB14, SB19-SB24, SB29-SB30, SB36, SB40, SB49, SB50, and SB54; Figure 3.3). These results effectively constrain the areal distribution of the contamination in shallow soils to the immediate vicinity of the former facility.

#### 4.3.1.2 Deeper Soils

Carbon tetrachloride levels were determined in deeper ( $> 20$  ft BGL) soil samples collected at 19 borings on and near the former CCC/USDA facility. The results are in Table 3.4. The maximum concentrations identified in the deeper soils are illustrated in Figure 3.4. The vertical distribution of carbon tetrachloride in soils is illustrated in Figures 4.19-4.22 along the lines of section identified in Figure 4.2.

The areal distribution of carbon tetrachloride identified in the deeper soils (Figure 3.4) closely mirrors (with one exception) the pattern detected in the shallower soils. Carbon tetrachloride levels above the DTL were again detected in two hot-spot areas associated with the former CCC/USDA facility, immediately northwest of the rectangular foundations (around SB01) and in the southern portion of the area formerly occupied by the round grain bins (near SB25 and SB17). The maximum concentrations identified in these areas ranged from 79  $\mu\text{g}/\text{kg}$  to 1,522  $\mu\text{g}/\text{kg}$  — roughly comparable to the concentrations in the associated shallower soils (8-20 ft BGL). The analyses also indicate, however, the presence of elevated levels of carbon tetrachloride (up to 596  $\mu\text{g}/\text{kg}$ ) in the deeper soils at boring SB50, approximately 70 ft east-northeast of the rectangular foundations. Tables 3.3 and 3.4 and Figure 3.3 indicate that the shallower soils at location SB50 are free of carbon tetrachloride contamination (at an instrument detection limit of 1.0  $\mu\text{g}/\text{kg}$ ) to a depth of 28 ft BGL.

No carbon tetrachloride was detected (at a purge-and-trap method detection limit of 1.0 µg/kg), or only low values were identified (below the purge-and-trap quantitation limit of 10 µg/kg), in deeper soil samples (> 20 ft BGL) collected at 7 borings (SB22, SB27, SB36, SB40, SB44, SB49, and SB54; Figure 3.4). These locations constrain the lateral distribution of the contamination in deeper soils to the north, south, east, and west of the former facility.

#### **4.3.1.3 Vertical Distribution of Contamination in Soils**

Figures 4.19-4.22 show that the elevated levels of carbon tetrachloride identified in soils near the rectangular foundations (at borings SB01, SB08, SB09, SB16, SB41, SB46, SB47, and SB48) and near the former southern circular bins (borings SB17 and SB25) are, with few exceptions, associated primarily with the sediments of stratigraphic Units 2 and 4. The elevated concentrations generally extend through the full vertical thickness of these units at each location. At borings SB01, SB08, SB17, SB25, SB46, and SB48 (Figures 4.19-4.21), the highest carbon tetrachloride concentrations in the Unit 2 soils are generally observed at or near the top of the vertical contaminant profile. At boring SB09, directly between the western and central rectangular foundations, carbon tetrachloride was detected continuously from 4 ft to 36 ft BGL (in Units 1 and 2). These observations qualitatively suggest that the hot-spot areas around location SB01 and near SB17 and SB25 might have represented entry points for the introduction of contamination into the deeper soils. No other consistent correlations of soil contaminant concentrations with depth are apparent at these locations, however, either in Unit 2 or in the stratigraphically deeper Unit 4.

At all locations noted above, the contaminant profiles in the generally finer-grained Unit 3 till display consistently lower levels of carbon tetrachloride (by up to an order of magnitude or more), or the contaminant is absent. Together with the hydrogeologic relationships outlined in Section 4.2, the observed contaminant distribution in Unit 3 suggests that this interval might be less amenable to groundwater and contaminant migration than are Unit 2 and Unit 4. The presence of detectable carbon tetrachloride contamination through the full thickness of Unit 3 at several locations (SB01, SB08, SB17, and SB48 [Figures 4.19 and 4.21] and SB50 [Table 3.4]) further suggests, however, that Unit 3 does not completely prohibit vertical communication between Units 2 and 4, at least locally.



#### 4.3.2 Evaluation of Carbon Tetrachloride Contamination in Groundwater

Groundwater was encountered in sufficient quantity for immediate sampling for VOCs analysis at only one location during the 2010-2011 investigation: during coring of the shallow soils at location SB24 (Figure 2.3 and Section 3.4). At all other locations, the installation of screens and risers was required to obtain groundwater samples for VOCs analyses. As the field program progressed, the array of temporary and permanent groundwater monitoring points was progressively modified and expanded to permit groundwater sampling in the upper, intermediate, and lower monitoring intervals (Section 3.3).

Monitoring points in the upper interval were completed in stratigraphic Unit 1 and/or the uppermost portion of Unit 2 of the till sequence. In the intermediate interval, monitoring points exclusively penetrate Unit 2, except at SB45. The lower monitoring points were completed directly above the (CPT) refusal depth at each location; they represent stratigraphic Unit 4. No groundwater monitoring points were constructed in Unit 3 of the till sequence, because of the lithologic characteristics and relative lack of carbon tetrachloride contamination identified in soil cores in this interval as the field studies progressed. The depth interval (upper, intermediate, or lower) represented by each temporary or permanent groundwater monitoring point sampled for VOCs is indicated in Table 3.7.

As discussed in Section 2.4.4, very slow rates of groundwater accumulation at many monitoring points precluded sampling with standard methods (volume purge or low flow). Consequently, an initial groundwater sample for VOCs analysis was collected without purging from each monitoring point during the first field visit when this was physically possible. In April 2011, groundwater samples were collected from all 53 of the temporary monitoring points present at that time. This event provided a coincident set of VOCs analyses prior to the abandonment of 21 of the temporary points in May 2011. The April 2011 event was also conducted without purging because of the slow water level responses. The results of the VOCs analyses for groundwater samples collected throughout the 2010-2011 investigations are summarized in Tables 3.5 and 3.6.

Table 3.6 demonstrates no consistent pattern of increases or decreases in carbon tetrachloride levels between the “initial” analyses (Figures 3.7-3.9) and the April 2011 results (Figures 3.10-3.12) that could be related to sample depth, location, or other factors. Consequently, as a conservative measure, the maximum carbon tetrachloride level detected at

each groundwater sampling point is used as the basis for the evaluation here. The maximum values are illustrated for the upper, intermediate, and lower monitoring intervals, respectively, in Figures 4.23-4.25. The vertical distribution of the maximum carbon tetrachloride concentrations in groundwater is illustrated in Figures 4.19-4.22 along the lines of section identified in Figure 4.2.

Figure 4.23 demonstrates that the areal distribution of carbon tetrachloride in the upper monitoring interval (in stratigraphic Unit 1 and the upper portion of Unit 2) is inferred to correspond fairly closely to the contaminant distribution in the shallow soils ( $\leq 20$  ft BGL; Figure 3.3), although the northeastern and northwestern limits of the distribution in groundwater in this interval are somewhat less tightly constrained by points having no detectable contamination than in the southern portion of the plume. Maximum carbon tetrachloride concentrations above the DTL and maximum contaminant level (MCL) values for this contaminant ( $5.0 \mu\text{g/L}$ ) were detected at most of the locations sampled within the footprint of the former CCC/USDA facility or immediately northwest of the rectangular foundations, with concentrations ranging from  $6.5 \mu\text{g/L}$  at SB34 to  $2,796 \mu\text{g/L}$  at SB01S (Figure 4.23).

The carbon tetrachloride distributions in the intermediate and lower monitoring intervals (Figures 4.24 and 4.25, respectively) also show a close association with the footprint of the former CCC/USDA facility.

In the intermediate interval (Figure 4.24), carbon tetrachloride concentrations above the DTL and MCL were identified at 13 locations. Concentrations exceeding  $1,000 \mu\text{g/L}$  were detected in 6 wells immediately west and northwest of the rectangular foundations (SB01M, SB08S, SB41M, SB42S, SB47S, and SB48S), with maximum levels at wells SB01M ( $10,616 \mu\text{g/L}$ ) and SB41M ( $6,226 \mu\text{g/L}$ ). The contaminant levels decreased rapidly, however, in all directions from this localized hot spot.

In the lower monitoring interval (stratigraphic Unit 4; Figure 4.25), a general pattern of rapid concentration decrease away from a similarly located hot spot west and northwest of the rectangular foundations was also observed (with one exception). The maximum concentrations were lower by as much as nearly an order of magnitude in the lower interval (from  $535 \mu\text{g/L}$  at SB01D to  $1,508 \mu\text{g/L}$  at SB46D) than in the overlying intermediate interval (Unit 2). The exception is a carbon tetrachloride concentration of  $1,310 \mu\text{g/L}$  in the lower interval at well SB17D (Figure 4.25), which suggests a second, isolated hot spot in association with the location

of the former southern circular grain bins at the CCC/USDA facility — where a hot spot was also identified in soils (Section 4.3.1).

Figures 4.24 and 4.25 suggest that the distribution of carbon tetrachloride in groundwater widens to the northeast in the intermediate interval (in Unit 2) and to both the northeast and southeast in the lower monitoring interval (Unit 4), relative to the footprint of the former CCC/USDA facility and the hot spots around SB01 and at SB17. This observation is discussed further in Section 4.3.4. The results of the groundwater analyses confirm, however, that the areal extent of the carbon tetrachloride contamination in all monitoring intervals is constrained (on the basis of sampling points having no detectable carbon tetrachloride) within 100-250 ft of the footprint of the former CCC/USDA facility. This observation supports the working hydrogeologic interpretation (Section 4.2.3) that the lateral mobility of the groundwater and contamination at Montgomery City is generally limited by the fine-grained and poorly sorted character of the hosting till sequence. The observed lateral extent of the identified carbon tetrachloride distribution, together with the time frame documented for operation of the former CCC/USDA grain storage facility (1949-1966 [Argonne 2010]), suggests maximum long-term-average horizontal contaminant migration rates in the till sequence of 4-6 ft/yr.

The presence of elevated carbon tetrachloride concentrations in stratigraphic Unit 4, at the base of the unconsolidated section penetrated by the direct-push techniques outlined in the approved *Work Plan* (Argonne 2010), suggests a potential for vertical contaminant migration into the deeper unconsolidated or bedrock materials underlying the tills.

#### **4.3.3 Evaluation of Chloroform Contamination and Possible Natural Degradation of Carbon Tetrachloride**

Chloroform represents the initial degradation product of the inorganic or biologically mediated reductive dechlorination of carbon tetrachloride under anaerobic reducing conditions. Dichloromethane (methylene chloride), chloromethane, and methane may be progressively generated as more advanced products of the reductive dechlorination process; however, the removal of each successive chlorine atom becomes more difficult and generally requires the presence of increasingly severe oxygen-depleted and reducing conditions. The presence of relatively elevated levels of chloroform (or higher degradation products) might therefore indicate naturally occurring degradation of carbon tetrachloride in soils or groundwater.

The complete results of VOCs analyses for the soils collected during the 2010-2011 investigations are in Appendix D, Tables D.1 and D.2. Chloroform was detected at 24 of the 46 boring locations sampled for shallow and/or deeper soils, predominantly at low to trace concentrations (below the purge-and-trap method quantitation limit of 10 µg/kg for chloroform). No higher degradation products (methylene chloride or chloromethane) were detected in the soils. With only 2 exceptions, chloroform was consistently detected in association with carbon tetrachloride. Concentrations exceeding the DTL for chloroform in soils (76.6 µg/kg) were identified in only 4 samples, in association with high (generally  $\geq 1,000$  µg/kg) concentrations of carbon tetrachloride in soils at boring locations SB01 and SB32 (northwest of the rectangular foundations; Figures 3.5 and 3.6). With few exceptions, however, the concentration ratios for chloroform to carbon tetrachloride in all soil samples were less than 10%. The low ratios of chloroform to carbon tetrachloride identified from the soil analyses therefore provide little evidence for natural degradation of carbon tetrachloride.

Chloroform concentrations were detected at quantifiable levels (greater than 1.0 µg/L) in most of the groundwater samples tested that also contained carbon tetrachloride (Table 3.6). Concentrations exceeding the DTL for chloroform in groundwater (80 µg/L) were detected at 10 monitoring points (SB01S,M,D, SB08S, SB41M, SB42S, SB46D, SB47S, and SB48S,D) located in the carbon tetrachloride hot spot identified in groundwater immediately west and northwest of the rectangular foundations (Figures 4.23-4.25). Concentration ratios for chloroform to carbon tetrachloride  $> 10\%$ , and in most cases  $> 20\%$ , were identified in most of the groundwater samples analyzed (Table 3.6). These results are evidence for limited natural degradation of the carbon tetrachloride in groundwater throughout the site. The highest chloroform-to-carbon tetrachloride concentration ratios seen in this investigation occurred at several wells (SB01D, SB34, SB36S, and SB41D) in or near the contaminant hot-spot area around SB01; however, little further consistency (e.g., with sample depth or carbon tetrachloride concentration) is apparent among these samples.

Trace to low levels of methylene chloride (below the DTL of 5 µg/L for this compound in groundwater) were also detected in groundwater samples obtained from several of the monitoring points (SB01S, SB01D, SB41S, SB41M, SB42S, SB46D, SB48S, SB48D) in the contaminant hot-spot area around SB01, further suggesting the possible localized occurrence of natural degradation of carbon tetrachloride (and chloroform) in this area. Levels of methylene chloride at or above the DTL were identified in only 3 groundwater samples collected at the SB01 location. The concentrations were 20 µg/L in an initial sample collected at 20-30 ft BGL

and 5.0 µg/L and 5.9 µg/L in samples collected at 52.5-57.5 ft BGL. No methylene chloride was detected, however, in the groundwater collected at 20-30 ft BGL in three subsequent sampling events at this location (Table F.1).

Both laboratory and limited field-scale studies have shown that the degradation of aqueous carbon tetrachloride can occur, under suitable subsurface conditions, via multiple and potentially competing biologically mediated or abiotic reductive dechlorination pathways (Criddle and McCarty 1991; Kriegman-King and Reinhard 1992; Semprini et al. 1992; Dybas et al. 1998; Devlin and Muller 1999; Davis et al. 2003). The relative effectiveness of these mechanisms in any given natural or artificially induced setting is determined by factors including contaminant concentrations; the relative abundance and type(s) of nutrients and electron donor and acceptor species; pH; the presence, relative abundance, and oxidation state of selected trace metals; and (for biodegradative pathways) the specific composition of the microbial community present.

These studies have also demonstrated, however, that significant transformation of carbon tetrachloride can take place only under (1) hypoxic to anoxic and (2) chemically reducing conditions. Generally faster reaction rates occur under increasingly reducing conditions (Criddle and McCarty 1991; Semprini et al. 1992; Jin and Englande 1997). Biological processes requiring anaerobic conditions are generally suppressed at DO concentrations exceeding 0.5-1 mg/L and at positive ORP levels (Jin and Englande 1997; EPA 1998b). The identification of low DO (generally less than 2 mg/L) and low ORP (near zero or ideally negative) values in groundwater can together therefore provide evidence for the possible onset of the oxygen-depleted, chemically reducing conditions that are required for the degradation of carbon tetrachloride.

The results of DO and ORP measurements for the groundwater samples collected in 2010-2011 are in Appendix F, Table F.2. DO levels ranging from approximately 1 mg/L to > 11 mg/L were identified, in conjunction with ORP values of approximately -178 mV to +400 mV. No clear correlation between corresponding DO and ORP values was observed, however, for many of the sample results.

Coupled DO and ORP levels roughly meeting the criteria noted above were identified sporadically at a number of groundwater monitoring points (SB01M,D, SB09D, SB22M,D, SB27S,D, SB36D, SB37S,D, SB40M,D, SB46M, SB51M,S; Table F.2); however, the data

showed variability among readings at single locations over time or among coincident readings at nearby wells.

Considered together, the VOCs, DO, and ORP data generated in the 2010-2011 studies appear to indicate the following:

- Highly oxygen-depleted, chemically reducing conditions favorable to the widespread reductive dechlorination of carbon tetrachloride are not pervasive in the unconsolidated till sequence in the study area.
- Nevertheless, the highly localized and possibly transient occurrence of reduced DO and ORP levels might be promoting limited natural degradation of the carbon tetrachloride in groundwater.

#### **4.3.4 Summary — Contaminant Distributions in Soils and Groundwater**

The key aspects of the contaminant distributions identified in the soils and groundwater at Montgomery City are as follows:

- Contaminant distribution in soils:
  - No carbon tetrachloride concentrations exceeding the DTL (79.6 µg/kg) for this contaminant were detected in soils shallower than 8 ft BGL. Furthermore, with only one exception, no carbon tetrachloride levels above the quantitation limit of 10 µg/kg for the purge-and-trap method were detected at 4 ft BGL. No unacceptable concentrations of carbon tetrachloride were thus identified in the “surficial soil” or “subsurface soil” (vadose) zones defined by the MDNR (2006).
  - The subsurface soil zone is relatively thin ( $\leq 5$  ft) or absent across much of the present investigation area, suggesting that concentrations of carbon tetrachloride detected in the soils deeper than approximately 8 ft BGL might represent contamination that is (1) adsorbed to the solid soil

particles, (2) dissolved in the pore water contained within these soils, or (3) in a combination of these physical states.

- The areal patterns of carbon tetrachloride identified in the shallow and deeper soils are similar. Carbon tetrachloride levels above the DTL for this contaminant occur in two primary hot-spot areas associated with the former CCC/USDA facility: (1) immediately west and northwest of the rectangular foundations and (2) in the southern portion of the area formerly occupied by round grain bins.
  - An apparent third hot spot was identified only in the deeper soils, approximately 70 ft east-northeast of the rectangular foundations (at boring SB50). The shallower soils at SB50 are free of carbon tetrachloride contamination to a depth of 28 ft BGL.
  - The vertical distribution of carbon tetrachloride in soils suggests that the two primary hot spots associated with the footprint of the former CCC/USDA facility (around location SB01 and at locations SB17 and SB25) represent source areas for the introduction of contamination into the deeper soils.
- Contaminant distribution in groundwater:
    - The areal distribution of carbon tetrachloride in groundwater in the upper monitoring interval (in stratigraphic Unit 1 and the upper portion of Unit 2) corresponds fairly closely to the footprint of the former CCC/USDA facility. Maximum carbon tetrachloride concentrations greater than the DTL and MCL values for this contaminant (5.0 µg/L) were detected at most of the locations sampled within this footprint or immediately to the northwest of the rectangular foundations.
    - The carbon tetrachloride distributions in the intermediate (Unit 2) and lower (Unit 4) groundwater monitoring intervals are similar to the distribution in the upper interval; however, the distribution widens to the northeast in the intermediate interval and to both the northeast and



southeast in the lower interval, relative to the footprint of the former CCC/USDA facility and the hot spots around location SB01 and at location SB17.

- The areal extent of carbon tetrachloride in groundwater throughout the unconsolidated till sequence is constrained (on the basis of sampling points having no detectable carbon tetrachloride) within 100-250 ft of the footprint of the former CCC/USDA facility.
- Elevated levels of carbon tetrachloride identified in groundwater and soils at the base of the unconsolidated interval penetrated by direct-push sampling techniques (in Unit 4) suggest a potential for deeper vertical contaminant migration, if permeability in the underlying stratigraphic units is sufficient.
- The VOCs and groundwater parameter data do not indicate pervasive conditions — highly oxygen-depleted and chemically reducing — favorable to the widespread reductive dechlorination of carbon tetrachloride in the till sequence of the study area. Nevertheless, the highly localized and possibly transient occurrence of such conditions might be supporting limited natural degradation of carbon tetrachloride in groundwater.

#### **4.4 Possible Contaminant Migration Pathways and Mechanisms**

##### **4.4.1 Preliminary Interpretation of Migration Pathways and Mechanisms**

The hydrogeologic and soil-groundwater contaminant relationships outlined in Sections 4.2 and 4.3 support a preliminary interpretation of the contaminant migration mechanisms affecting the distribution of carbon tetrachloride at the investigation site. The following are key elements of this working interpretation:

- Apparent saturation of the unconsolidated soil (till) profile was encountered at depths of approximately 1-8 ft BGL. The available analyses provide no

evidence of a residual source of carbon tetrachloride in the thin subsurface (vadose) soils.

- The vertical contaminant profiles suggest that carbon tetrachloride might have entered the shallow and deeper soils primarily in two concentration hot spots associated with the former CCC/USDA facility. These two hot spots are inferred source areas that are located as follows (Figures 3.3 and 3.4):
  - Immediately west and northwest of the rectangular foundations, around location SB01. The relative concentrations suggest that this is the more prominent source area.
  - Beneath and near the southern portion of the former double row of circular grain bins, around location SB17.
- At an apparent third hot spot identified only in the deeper soils at boring SB50, the shallower soils are free of carbon tetrachloride contamination. This location does not have the characteristics of a source area.
- Downward contaminant migration is interpreted to have occurred preferentially in the hot spots around SB01 and SB17 as a result of locally enhanced vertical hydraulic communication associated with subtle heterogeneity in the lithologies (and inferred vertical permeability) of the till materials in these areas, which has permitted more effective vertical equilibration of the local hydraulic heads.
- In the upper portion of the till sequence (Unit 1 and the upper portion of Unit 2), little or no horizontal contaminant migration has occurred beyond the footprint of the former CCC/USDA facility and the two primary hot-spot areas around SB01 and SB17, as indicated by the distribution of carbon tetrachloride in groundwater. The shallow groundwater flow direction is predominantly to the north-northwest across the investigation site in this interval (Figures 4.23 and 4.15).

- Relative to the upper interval (Figure 4.23), the distribution of carbon tetrachloride in groundwater widens to the northeast in the intermediate interval (Unit 2; Figure 4.24) and to both the northeast and southeast in the lower interval (Unit 4; Figure 4.25). These observations correspond with the increasingly semi-radial pattern of lateral groundwater flow identified with depth, as well as with the broadening of the interpreted groundwater contours in the suggested directions of contaminant migration (Figures 4.15-4.17).
- Together, the observed contaminant distributions and water level patterns suggest preferred groundwater (and contaminant) migration to the northeast in the intermediate interval and to the northeast and southeast in the lower interval, possibly reflecting influences of localized variations in the horizontal hydraulic conductivities of Units 2 and 4.
- The identified carbon tetrachloride concentrations in both groundwater and soils along the suggested preferred migration pathways in Units 2 and 4 are illustrated in Figure 4.19 (to the northeast) and Figure 4.21 (to the southeast).
- In intervening hydrostratigraphic Unit 3, little to no horizontal contaminant migration is indicated (on the basis of soil analyses). This is because of the more uniform, generally finer-grained character of the interval. The available data indicate, however, that Unit 3 does not, at least locally, preclude vertical groundwater and contaminant migration between Units 2 and 4.
- Despite the inference of preferred horizontal migration pathways, the maximum lateral extent of the carbon tetrachloride contamination identified in groundwater to date is within 100-250 ft of the footprint of the former CCC/USDA facility and the two primary hot spots around SB01 and SB17.
- Notwithstanding the limited areal extent of the contamination, the identification of elevated carbon tetrachloride levels in Unit 4 suggests a potential for contaminant migration into the deeper (unconsolidated or bedrock) materials beneath the investigation area, if vertical and/or horizontal hydraulic conductivity is sufficient at greater depths. See also Section 4.5.

#### 4.4.2 Evaluation of Dense Non-Aqueous Phase Liquid and Its Possible Effect on Migration

As noted in Section 4.2.2, the apparent hydraulic gradients affecting vertical groundwater flow (and hence inferred advective vertical transport of contaminants carried by the groundwater) vary in a complex fashion across the investigation site. Figure 4.18 suggests, however, that there is presently little hydraulic driving force for downward movement of carbon tetrachloride through the saturated soil column in the two primary hot-spot source areas near SB01 and SB17. Therefore, localized migration driven by the density of the contaminant might, in part, represent a plausible mechanism for the vertical migration of carbon tetrachloride in these areas.

No visual evidence of dense non-aqueous phase liquid (DNAPL) was observed in the groundwater or soil samples recovered in the 2010-2011 investigations. The data were therefore evaluated in accord with interpretive methods and criteria developed by the EPA for the indirect assessment of the possible occurrence of DNAPL (Kueper and Davies 2009; in Appendix H).

Considered individually, most of the specific evaluation criteria outlined in Appendix H (Section 4.0, parameters A-H) do not conclusively identify DNAPL but rather rely on a “weight of evidence” approach to infer the presence of residual or pooled DNAPL contaminants.

For parameters B and C of the guidance (Appendix H), calculated threshold values for the levels of contamination that would be indicative of the presence of DNAPL in the local soils are clearly not met. These values are 23,183 mg/kg (23,183,000 µg/L) and 1,082 mg/kg (1,082,000 µg/L), respectively (Appendix H), as determined on the basis of the site-specific physical parameter data in Appendix D, Table D.3.

Selected features of the identified contaminant distribution are, however, consistent with several of the DNAPL assessment guidelines, as follows:

- *Site Use/Site History — Guidance Parameter D.* The probable use of carbon tetrachloride by the CCC/USDA as a grain fumigant is inferred, on the basis of the documented use of this chemical by the CCC/USDA at numerous former grain storage facilities in Nebraska and Kansas.

- *Magnitude of Groundwater Concentrations— Guidance Parameter G1.* The EPA has proposed that sampled groundwater concentrations in excess of 1% of the effective solubility of a compound (790-800 mg/L [790,000-800,000 µg/L] for carbon tetrachloride) indicate that the sampled groundwater might have come in contact with DNAPL. Table 3.6 indicates that this criterion has been consistently met at only one groundwater monitoring well (SB01M; Figures 3.8, 3.11, and 4.24). Well SB01M is located in the identified concentration hot spot northwest of the rectangular foundations. Moreover, a maximum combined concentration for carbon tetrachloride and chloroform (reflecting a possible degradation product of carbon tetrachloride) representing 0.9% of saturation was also identified in the initial sampling at nearby well SB41M (Figure 4.24).
- *Groundwater Concentration Trends with Depth — Guidance Parameter G4.* The EPA guidance suggests that abrupt reversals of the contaminant concentration trends in groundwater with depth, or increasing concentrations with depth, can be associated with DNAPL presence. Table 3.6 and Figures 4.19-4.22 show significantly higher levels of carbon tetrachloride in the lower interval (in Unit 4) than in the corresponding intermediate or upper intervals (in Units 1 and/or 2) at locations SB17, SB46, and SB50, all associated with identified hot spots (Section 4.3.4). At locations SB01, SB16, SB41 (in the hot-spot areas), decreasing contaminant concentrations occur both above and below maximum concentrations in the intermediate interval (Unit 2). Similarly, at SB01 carbon tetrachloride concentrations in the lowermost samples from the Unit 4 tills (maximum 535 µg/L; in the 5-ft interval immediately above refusal) were higher than in samples collected over the 10-ft interval above refusal (maximum 22 µg/L).

These limited observations provide no conclusive evidence that DNAPL is currently present in soils or groundwater in the investigation area. The observations suggest, however, that carbon tetrachloride migration in DNAPL form could have contributed previously to the present contaminant distribution.

#### **4.5 Preliminary Consideration of Human Health and Environmental Risks Associated with the Identified Carbon Tetrachloride and Chloroform**

As discussed in the preceding sections, carbon tetrachloride and chloroform were identified in the study area at Montgomery City at levels that exceed the MRBCA DTL concentrations for these contaminants. This section is a preliminary discussion of potential health and environmental risks associated with the contamination.

##### **4.5.1 Location-Specific Considerations**

Location-specific factors that are significant in the consideration of risk in the investigation area are as follows:

- The delineated extent of contamination in soil and groundwater is confined within the limits of the property owned by the Montgomery County Fair Society.
- The areas of highest contamination identified in both soils and groundwater are in the central, fenced portion of the Fair Society property.
- Potential exposure of the public to the contaminated areas is restricted to periods when activities authorized by the Fair Society Board are taking place.
- The Fair Society has owned the contaminated property since the CCC/USDA grain storage operation at the site was discontinued in 1966.
- To the knowledge of the CCC/USDA, the fairgrounds function has been the only use of the property since 1966.

## 4.5.2 Contamination in Soils

### 4.5.2.1 Surficial or Shallow Soils

The results of the analyses demonstrate that the subsurface soil (vadose) zone is relatively thin ( $\leq 5$  ft) or absent across much of the investigation area. Consequently, carbon tetrachloride and chloroform in soils deeper than approximately 8 ft BGL might be (1) adsorbed to the solid soil particles, (2) dissolved in the pore water contained within these soils, or (3) in a combination of these physical states.

No unacceptable human health risks are associated with potential exposure to carbon tetrachloride or chloroform in surficial or subsurface soils (as defined by the MDNR [2006]), as indicated by the following lines of evidence:

- No carbon tetrachloride or chloroform concentrations exceeding the DTL levels (79.6  $\mu\text{g}/\text{kg}$  and 76.6  $\mu\text{g}/\text{kg}$ ) for these contaminants in unsaturated soils<sup>2</sup> were detected at depths of 8 ft BGL or less.
- With only one exception, no carbon tetrachloride or chloroform levels greater than 10  $\mu\text{g}/\text{kg}$  were detected by the purge-and trap method at 4 ft BGL.

### 4.5.2.2 Deeper Soils

Both carbon tetrachloride and chloroform were detected at concentrations above the DTL values for these compounds (79.6  $\mu\text{g}/\text{kg}$  and 76.6  $\mu\text{g}/\text{kg}$ , respectively, as defined for unsaturated soils) in deeper (saturated) soils, primarily in the two prominent hot-spot areas around SB01 and SB17. Carbon tetrachloride concentrations in saturated soils exceeding the DTL were also identified at SB50. The high contaminant levels (up to 2,412  $\mu\text{g}/\text{kg}$ ) identified locally in soils might represent a source for further contamination of the local groundwater, as a result of possible horizontal or vertical migration.

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<sup>2</sup> The DTL for soil reflects the maximum risk-based concentration in unsaturated soils of any lithologic type that is considered acceptable for unrestricted use of a property affected by a contaminant of concern. For carbon tetrachloride in unsaturated soils, the DTL reflects risk associated with the indoor inhalation pathway.

The MDNR (2006) guidance provides no specific criteria for the evaluation of potential health risks that might be associated with possible human exposure to contaminated saturated soils. Possible health risks that might be linked to contaminated groundwater in the saturated zone are addressed in Sections 4.5.3 and 4.5.4.

#### 4.5.3 Contamination in Groundwater

No local residents are presently at risk of exposure to groundwater impacted by carbon tetrachloride contamination that might be associated with the former CCC/USDA facility. In addition, little potential for future risk is anticipated in association with this pathway, as indicated by the following lines of evidence:

- Carbon tetrachloride and chloroform levels in groundwater exceeding the DTL values (5.0 µg/L and 80 µg/L, respectively)<sup>3</sup> were identified only within 100-250 ft of the footprint of the former CCC/USDA facility.
- The fairgrounds and all private and commercial properties surrounding the identified area of contamination are served by the Montgomery City public water supply.
- The tills hosting the carbon tetrachloride are further recognized, on the basis of the current site-specific data and more regionally in the area south of Audrain County (including Montgomery City), as having little capacity to produce groundwater (Miller and Vandike 1997). Hence, the tills are unlikely to be tapped as a future source of groundwater for domestic or other purposes.
- No private or public wells are located in the identified area or depth interval of groundwater contamination.
- Sampling of selected private and public wells within approximately 1.5 mi of the former facility demonstrated that these wells are free of carbon tetrachloride contamination.

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<sup>3</sup> The groundwater DTL values for carbon tetrachloride and chloroform reflect risk associated with the potential use of groundwater for domestic purposes, including consumption.



Although the highest levels of carbon tetrachloride contamination identified at the former CCC/USDA facility occur at intermediate depths, elevated or locally increasing carbon tetrachloride concentrations were found at and near the base of the unconsolidated section penetrated with the CPT. Thus, a potential exists for the occurrence of carbon tetrachloride at greater depths.

The shallowest regionally recognized aquifer unit (fractured and cherty limestones of the Mississippian Burlington and Keokuk Formations) can reach a thickness of roughly 200 ft locally, but it reportedly yields only modest quantities of water to wells (Argonne 2010). The expected depth of the top of the unit is 65-120 ft BGL in the investigation area (see Section 2.5).

Available information indicates that the minimum casing depth for a known active private well in the vicinity of the former CCC/USDA facility is 126 ft BGL (the Jorgesen well; used for livestock watering only; see Section 3.1 and Figure 4.1). The reported casing depth for the nearest private well known to be used for drinking water purposes (the Hemeyer well, approximately 1 mi northeast of the former facility) is 211 ft BGL. The minimum indicated completion depth for the active private wells identified in 2010 is 455 ft (Section 3.1), suggesting that these wells primarily tap the deeper and more prolific Ordovician St. Peter Sandstone.

The three active Montgomery City public water supply wells are cased to a minimum depth of 350 ft BGL and are completed at depths  $\geq$  1,100 ft BGL, in the lower, predominantly dolomitic units of the regional Cambrian-Ordovician aquifer.

Sampling of the Montgomery City public water supply wells, the Hemeyer domestic well, and two additional private wells (Subway and K. Cobb) located within 0.5 mi of the former CCC/USDA facility demonstrated that the groundwater recovered at these locations in 2010 is free of carbon tetrachloride contamination. These results, together with the depth and areal extent of the regional Ordovician and Cambrian aquifer units, suggest that the wells are at minimal risk of contamination from the carbon tetrachloride associated with the former CCC/USDA facility.

#### **4.5.4 Possible Contaminant Vapor Intrusion to Indoor Air**

The identified presence of carbon tetrachloride and chloroform in soils and groundwater suggests that these volatile contaminants might pose current or potential future risks to human

health via vapor intrusion to the indoor air of habitable structures in the vicinity of the former CCC/USDA grain storage facility. On the recommendation of the MDNR (2012), draft guidance provided by the EPA (2002) for the consideration of vapor intrusion has therefore been used as the basis for a preliminary evaluation of this potential pathway at the Montgomery City site.

The EPA (2002) guidance presents a tiered approach, based on the quantity and quality of site-specific data available, for the identification of a potentially complete vapor intrusion pathway and for the initial identification of potentially unacceptable risks associated with this pathway. As outlined in the guidance, site-specific factors that are to be considered in evaluation of the potential vapor intrusion pathway and associated risks include the following:

- The volatility and toxicity of the chemicals of interest.
- The concentrations of the targeted contaminants in (1) the unsaturated soils and/or uppermost saturated soils, (2) soil gas, and/or (3) the uppermost portions of the groundwater or capillary fringe zones, at or near the water table.
- The occurrence of existing groundwater plumes as they are currently defined (e.g., on the basis of MCLs, state standards, or risk-based concentrations).
- The presence (or potential future occurrence) of habitable buildings — within 100 ft vertically or horizontally of the contaminated media noted above — that might be affected by vapor intrusion.

The guidance provides conservative target, media-specific concentrations reflecting individual incremental lifetime cancer risk levels ranging from  $10^{-4}$  to  $10^{-6}$  and a hazard quotient of 1 for non-cancer risks, but it notes that adjustments to the recommendations provided in the guidance might be appropriate to reflect nonresidential exposure durations, building-specific air volumes and exchange rates, and other relevant factors applicable to nonresidential buildings where the general public may be present. For these situations, the EPA (2002) recommends that appropriate environmental (public health protection) screening levels be applied.

In the context of these criteria, the results of the Phase I investigations suggest that only limited potential risk is associated with the vapor intrusion pathway at the Montgomery City site, as indicated by the following lines of evidence:

- As noted in Section 4.5.2.1, no carbon tetrachloride or chloroform concentrations exceeding the DTL levels for these contaminants in unsaturated soils were detected in either unsaturated or saturated soils at depths of 8 ft BGL or less at any location at the site. The DTL values of 79.6  $\mu\text{g}/\text{kg}$  for carbon tetrachloride and 76.6  $\mu\text{g}/\text{kg}$  for chloroform reflect concentrations considered acceptable for unrestricted use of an area. The unsaturated and shallow saturated soils therefore pose no risk as a source of potential vapor intrusion.
- The maximum concentrations of carbon tetrachloride in groundwater in the shallowest zone penetrated by monitoring wells (< 20 ft BGL) are shown in Figure 4.26. This figure illustrates that no enclosed, habitable structures presently exist within 100 ft vertically of the identified groundwater contamination, and only two such structures — the Merchant's Building and the 4-H Building — fall within 100 ft laterally of the shallow contaminated groundwater.
- No concentrations of chloroform exceeding the DTL for this contaminant in groundwater (80  $\mu\text{g}/\text{L}$ ) have been detected in the shallow groundwater within 100 ft laterally of any enclosed structures at the site.
- Figures 4.12-4.17 indicate that the Merchant's Building and the 4-H Building lie upgradient of the identified contamination in groundwater, and thus they are unlikely to be impacted by any increases in the areal extent or concentrations of contamination in this medium over time.
- The Merchant's Building and the 4-H Building are large, open steel structures constructed with at-grade concrete slab floors. The walls and ceiling of the Merchant's Building have been finished, while the 4-H Building remains unfinished inside. Both structures are used only for activities sanctioned by the Montgomery County Fair Society and are occupied only intermittently.

- Representatives of the Fair Society Board indicated that the 4-H Building is used primarily, through most of each year, for the storage of fairgrounds equipment, vehicles, and supplies. During the annual County Fair (held in July), the building hosts 4-H-related exhibits and demonstrations; during these events, the building is open to air circulation via large garage-type doors located at the north end of the building; pedestrian access doors on the east, west, and south sides of the building; and several ceiling exhaust fans.
- The Merchant's Building is used more frequently, for public and private events such as weddings, private parties, school dances, trade shows, group meetings, and activities associated with the annual County Fair. The individual occupancy times associated with these events vary but are typically 8 hr or less. During use, ventilation of the building is provided, as necessary, via multiple garage and pedestrian access doors on all four sides of the building.
- Discussions with representatives of the Fair Board and historic aerial photos of the fairgrounds property indicate that the area overlying the identified carbon tetrachloride contamination in soils and groundwater has been used as open space for the presentation of outdoor exhibits and events, for at least the past 40 yr (following termination of the CCC/USDA grain storage operations). The most reasonable anticipated future use of this area is therefore for similar, occasional outdoor events.

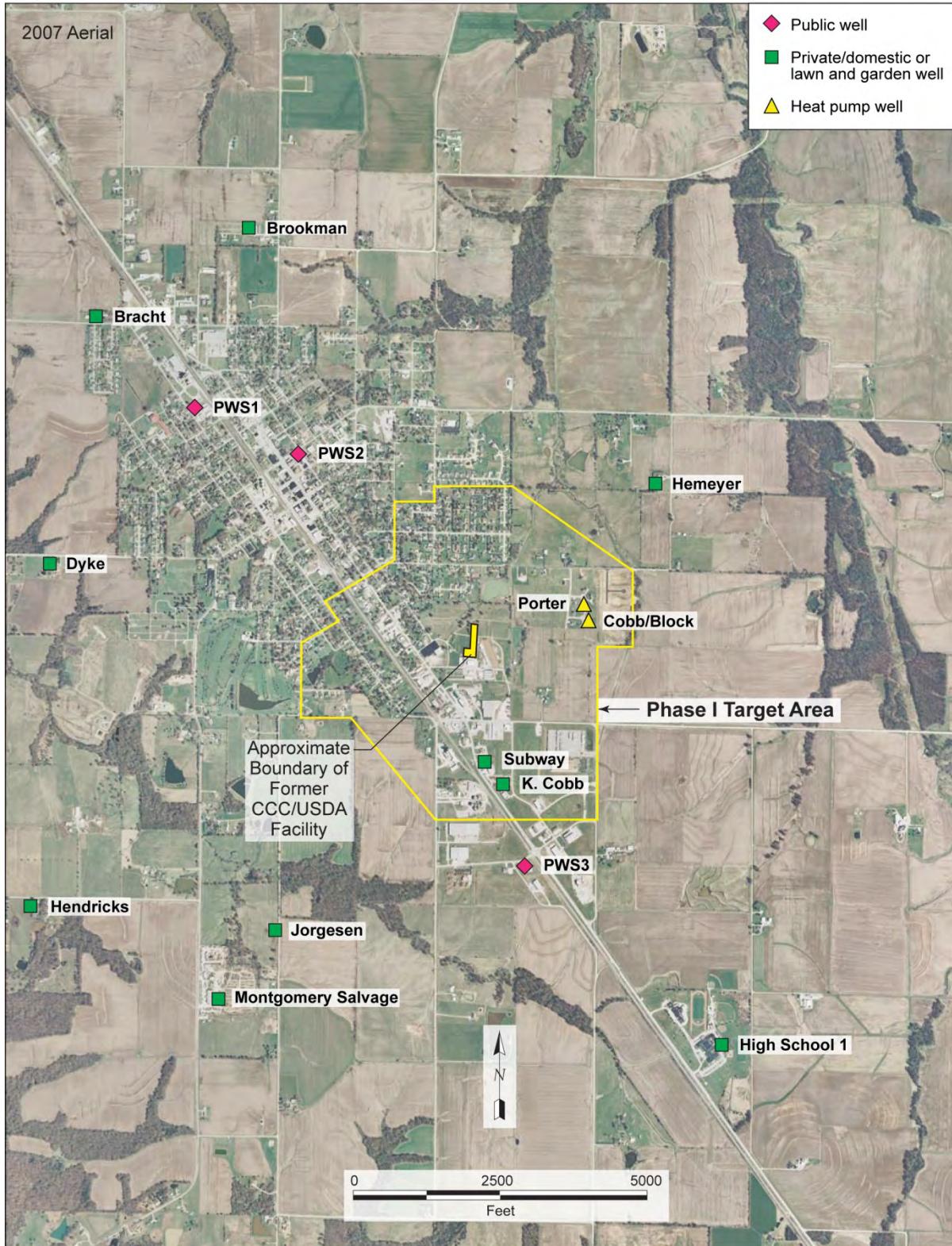


FIGURE 4.1 Target investigation area near the former CCC/USDA grain storage facility and the inventory of private and public wells investigated in 2010-2011. The Phase I target area includes the properties within approximately 0.5 mi of the former CCC/USDA facility. Source of photograph: NAIP (2007).



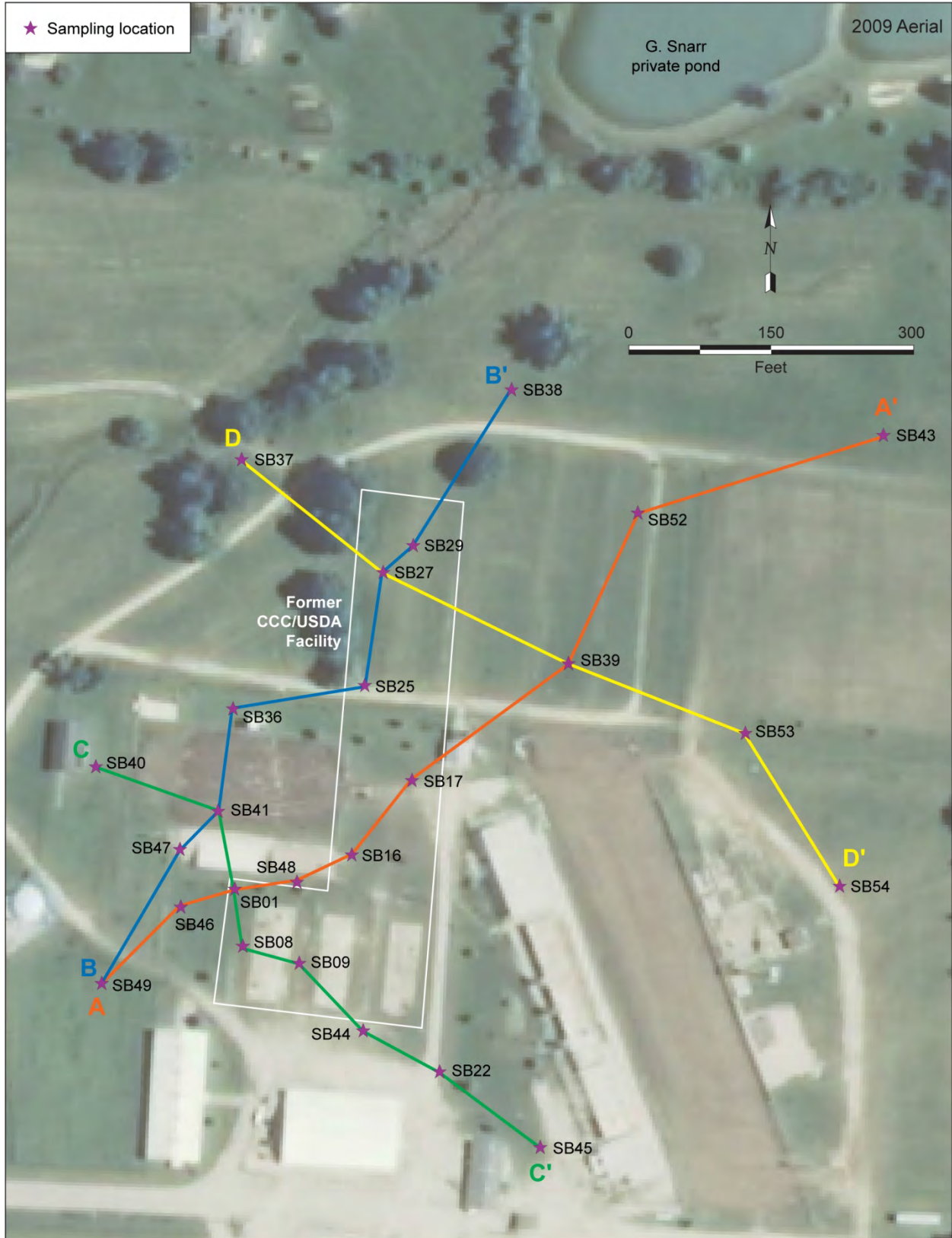


FIGURE 4.2 Locations of hydrogeologic cross sections A-A', B-B', C-C', and D-D'. Source of photograph: NAIP (2009).



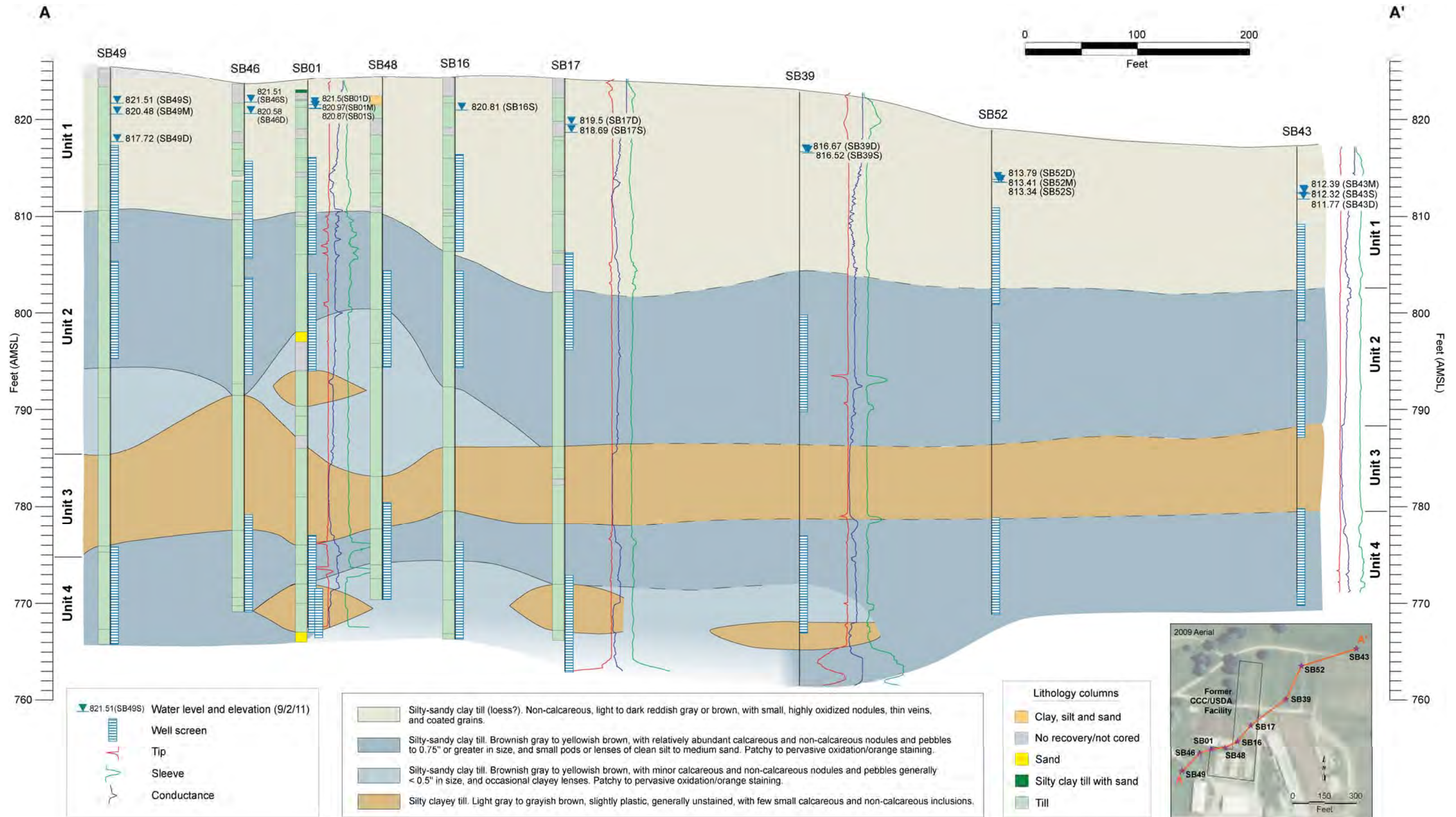


FIGURE 4.3 Southwest-to-northeast hydrogeologic cross section A-A' (vertically exaggerated), showing the distribution of groundwater levels identified in the upper, intermediate, and lower portions of the unconsolidated sedimentary section.



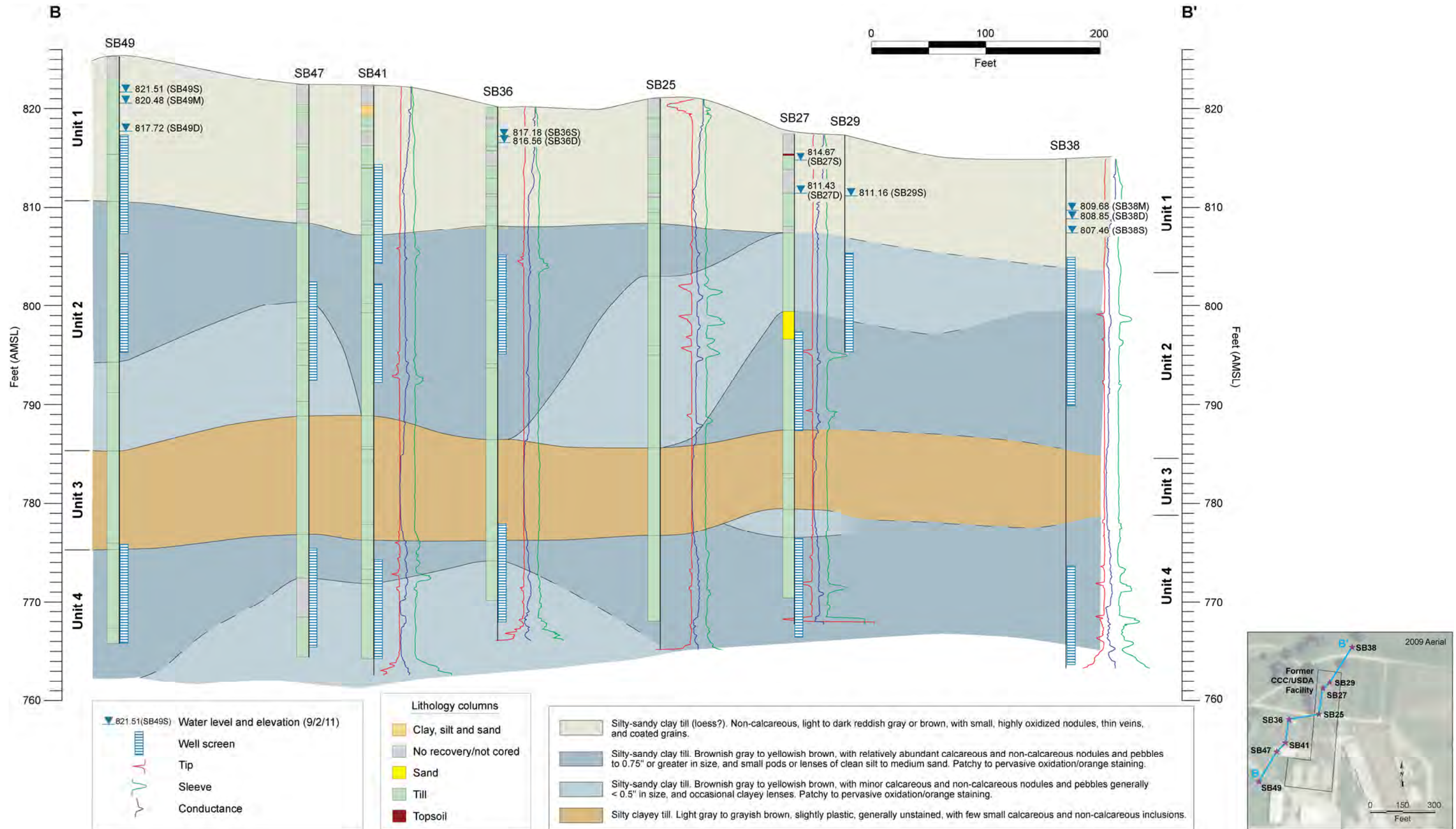


FIGURE 4.4 Southwest-to-northeast hydrogeologic cross section B-B' (vertically exaggerated), showing the distribution of groundwater levels identified in the upper, intermediate, and lower portions of the unconsolidated sedimentary section.



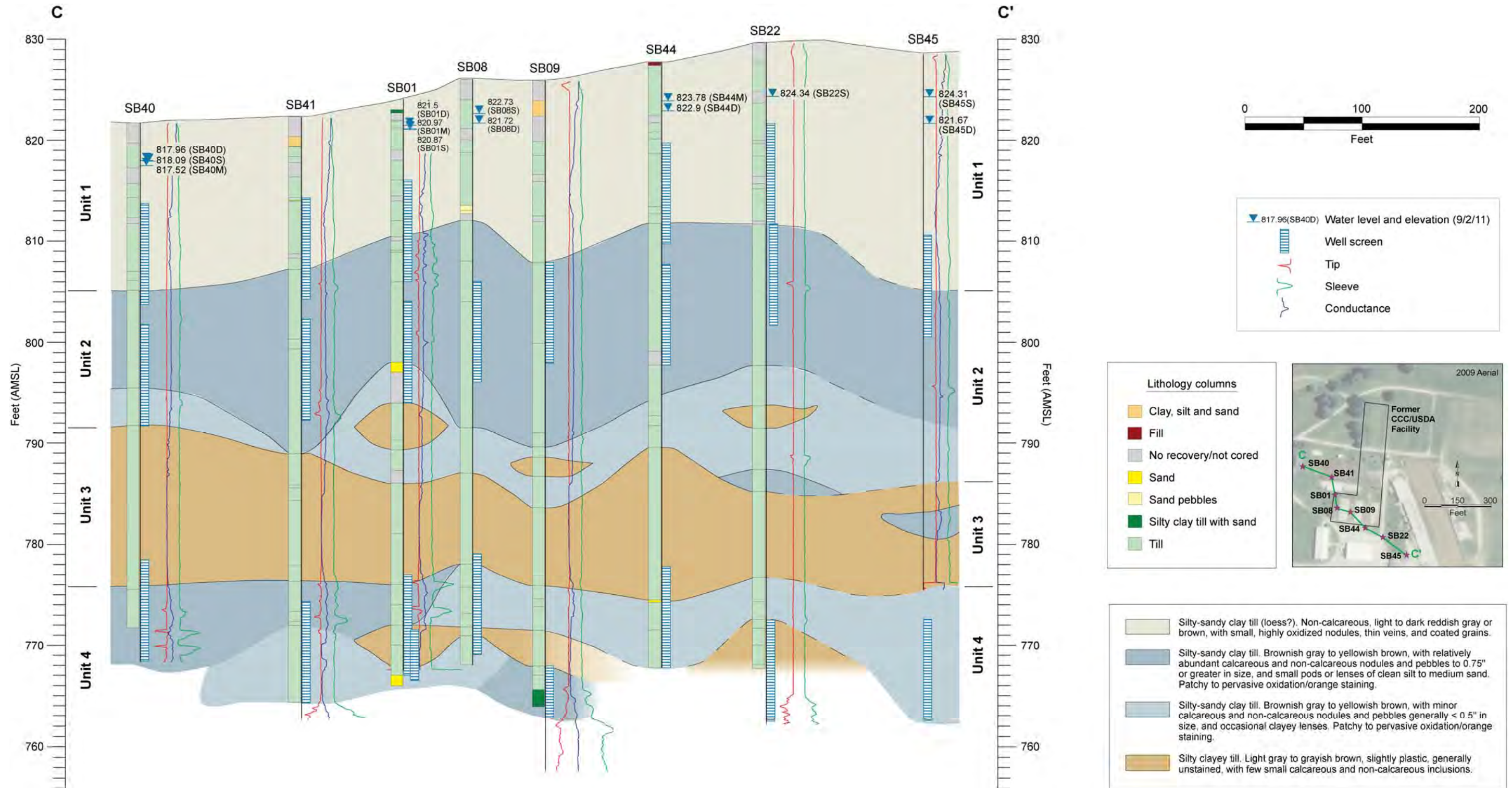


FIGURE 4.5 Northwest-to-southeast hydrogeologic cross section C-C' (vertically exaggerated), showing the distribution of groundwater levels identified in the upper, intermediate, and lower portions of the unconsolidated sedimentary section.



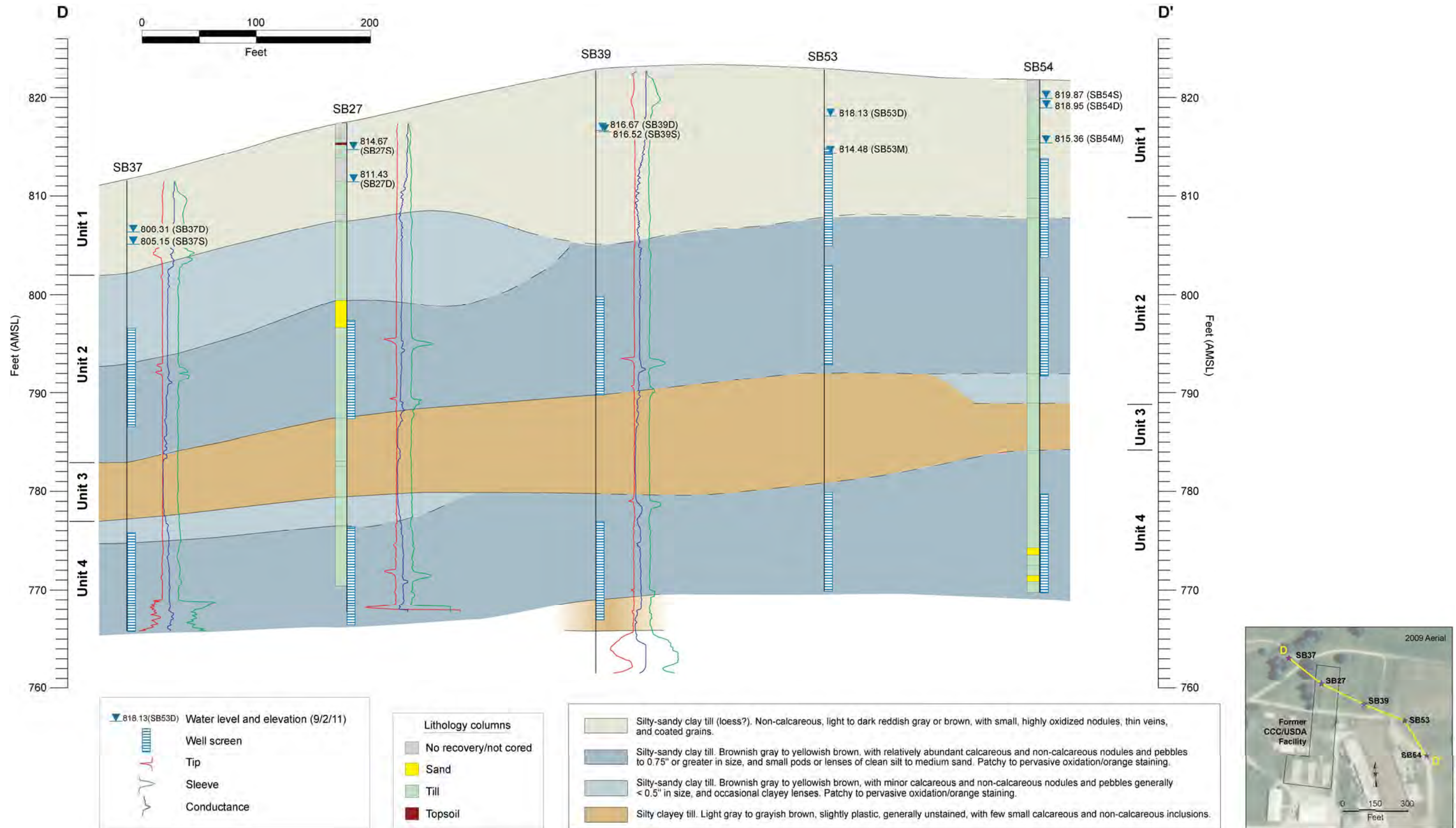


FIGURE 4.6 Northwest-to-southeast hydrogeologic cross section D-D' (vertically exaggerated), showing the distribution of groundwater levels identified in the upper, intermediate, and lower portions of the unconsolidated sedimentary section.

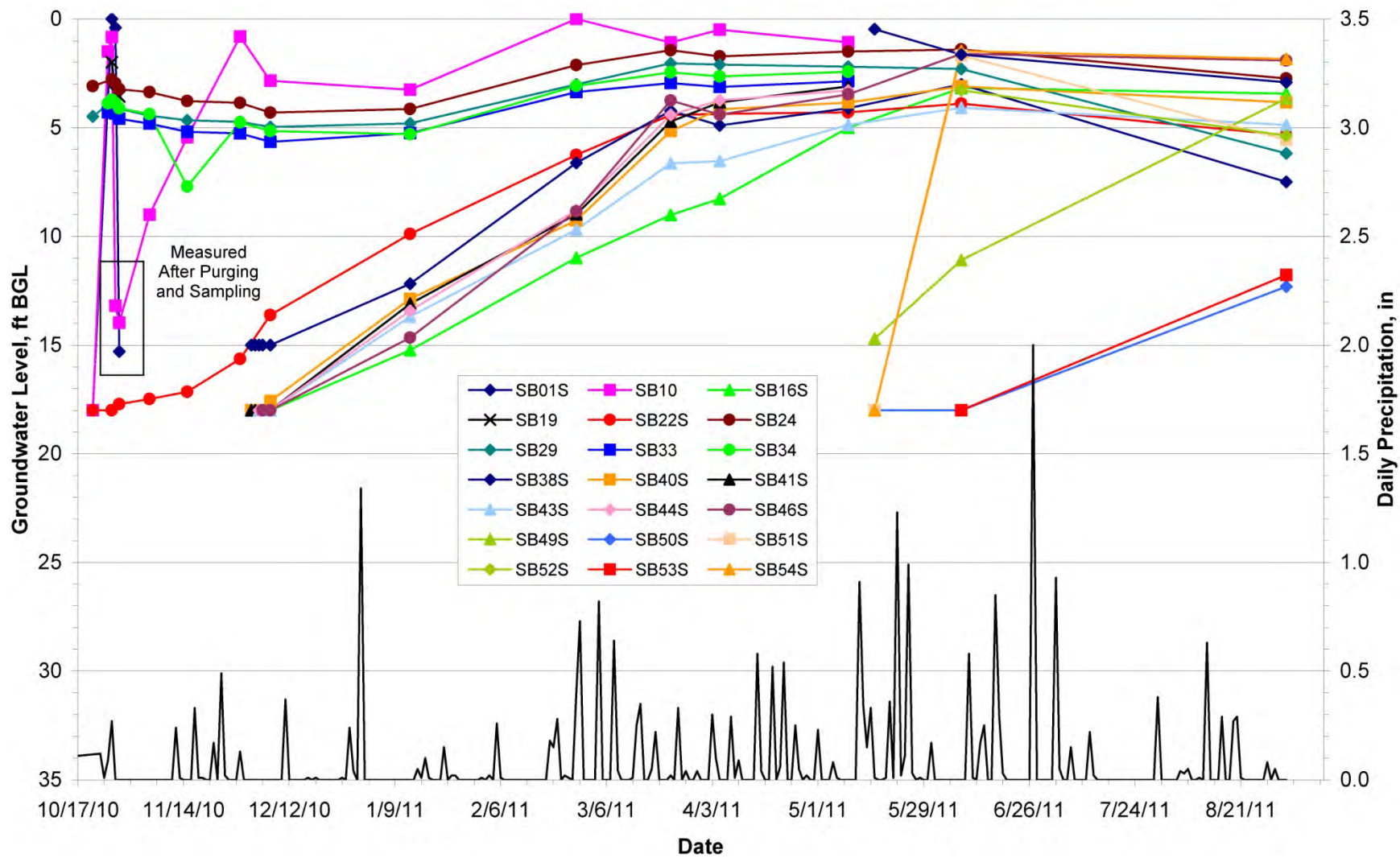


FIGURE 4.7 Groundwater levels measured by hand in temporary and permanent monitoring wells completed in the upper sampling interval, October 2010 to September 2011.



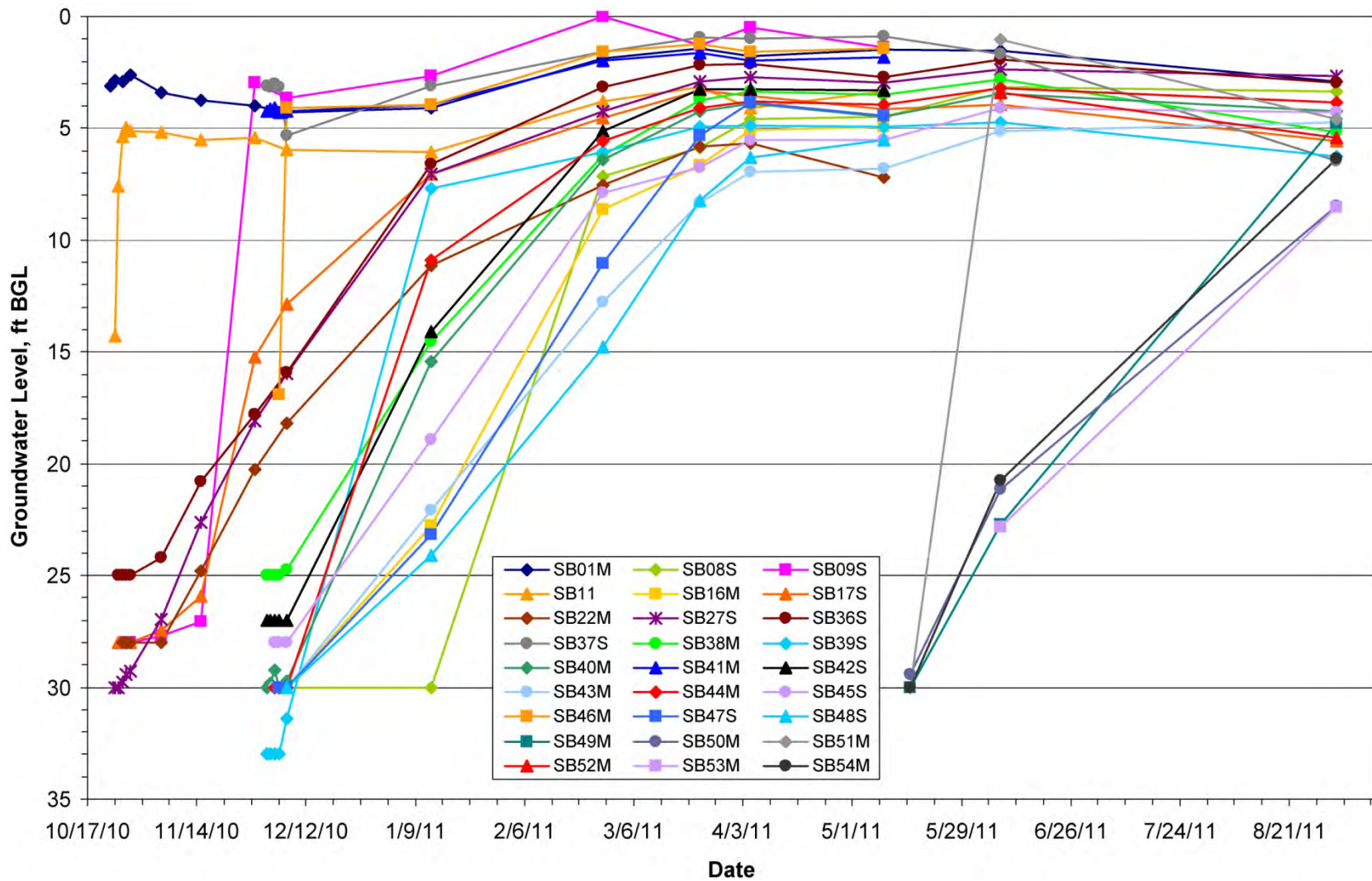


FIGURE 4.8 Groundwater levels measured by hand in temporary and permanent monitoring wells completed in the intermediate sampling interval, October 2010 to September 2011.

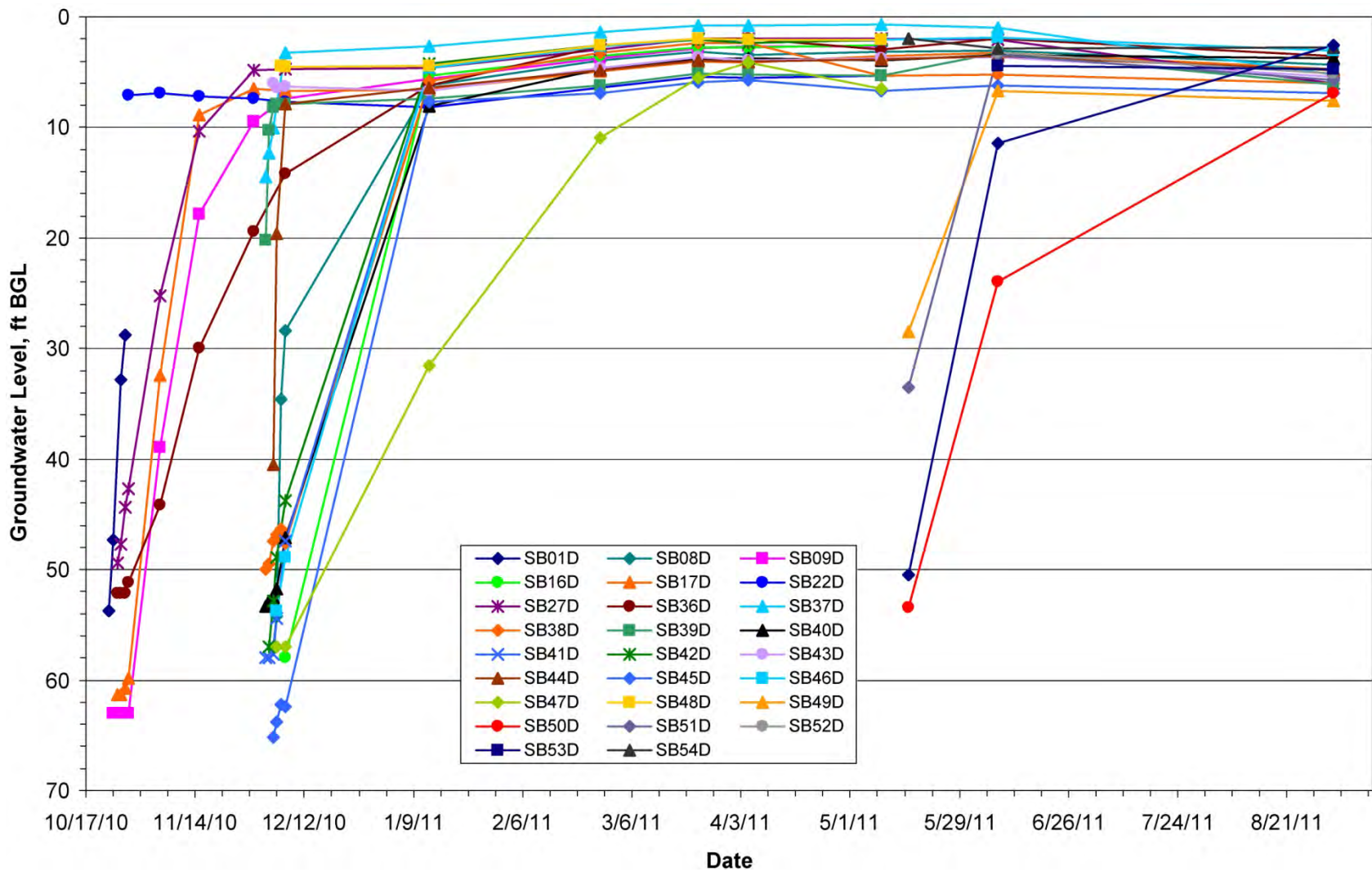


FIGURE 4.9 Groundwater levels measured by hand in temporary and permanent monitoring wells completed in the lower sampling interval, October 2010 to September 2011.

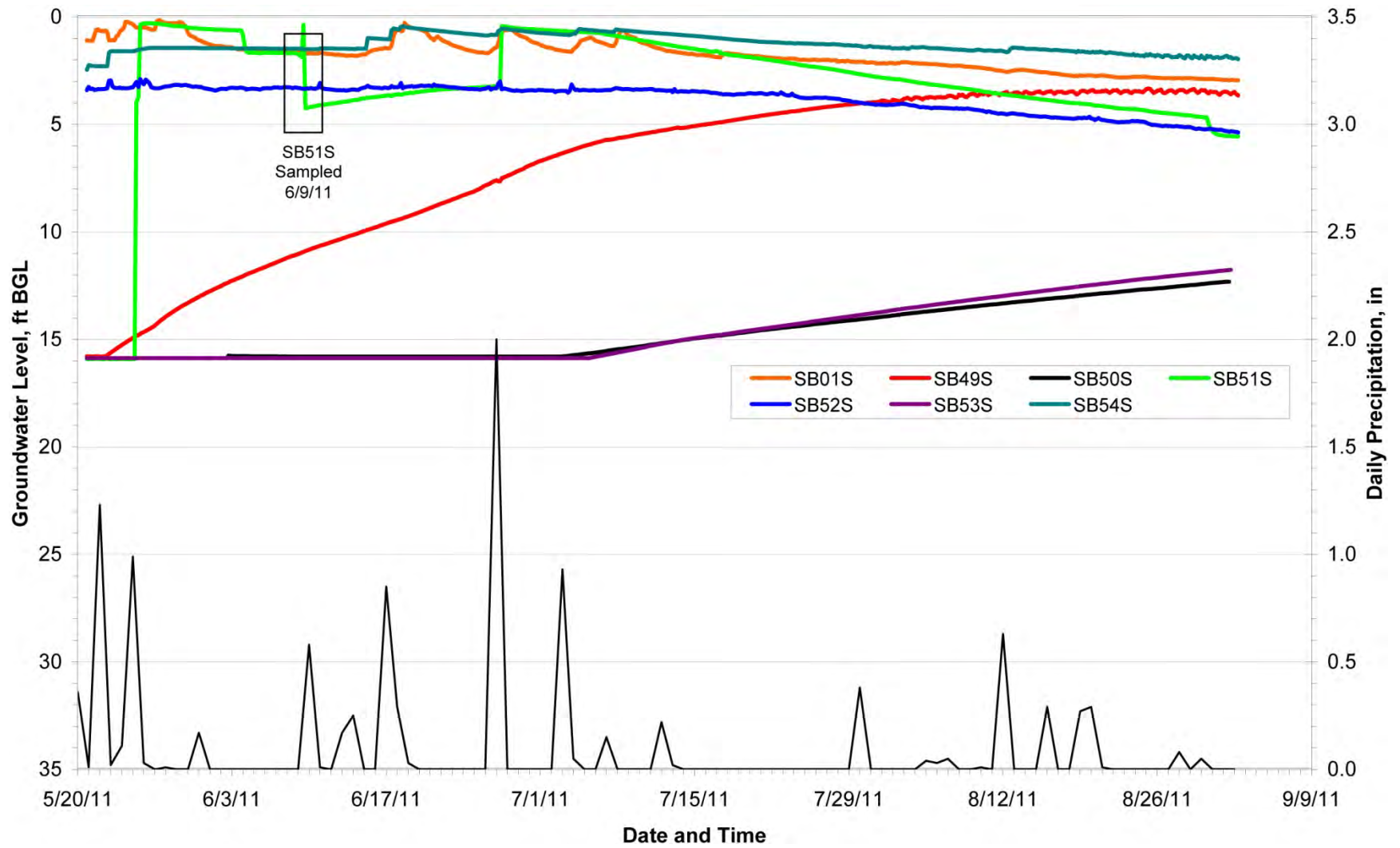


FIGURE 4.10 Groundwater levels measured automatically in permanent monitoring wells completed in the upper sampling interval, May 2011 to September 2011.

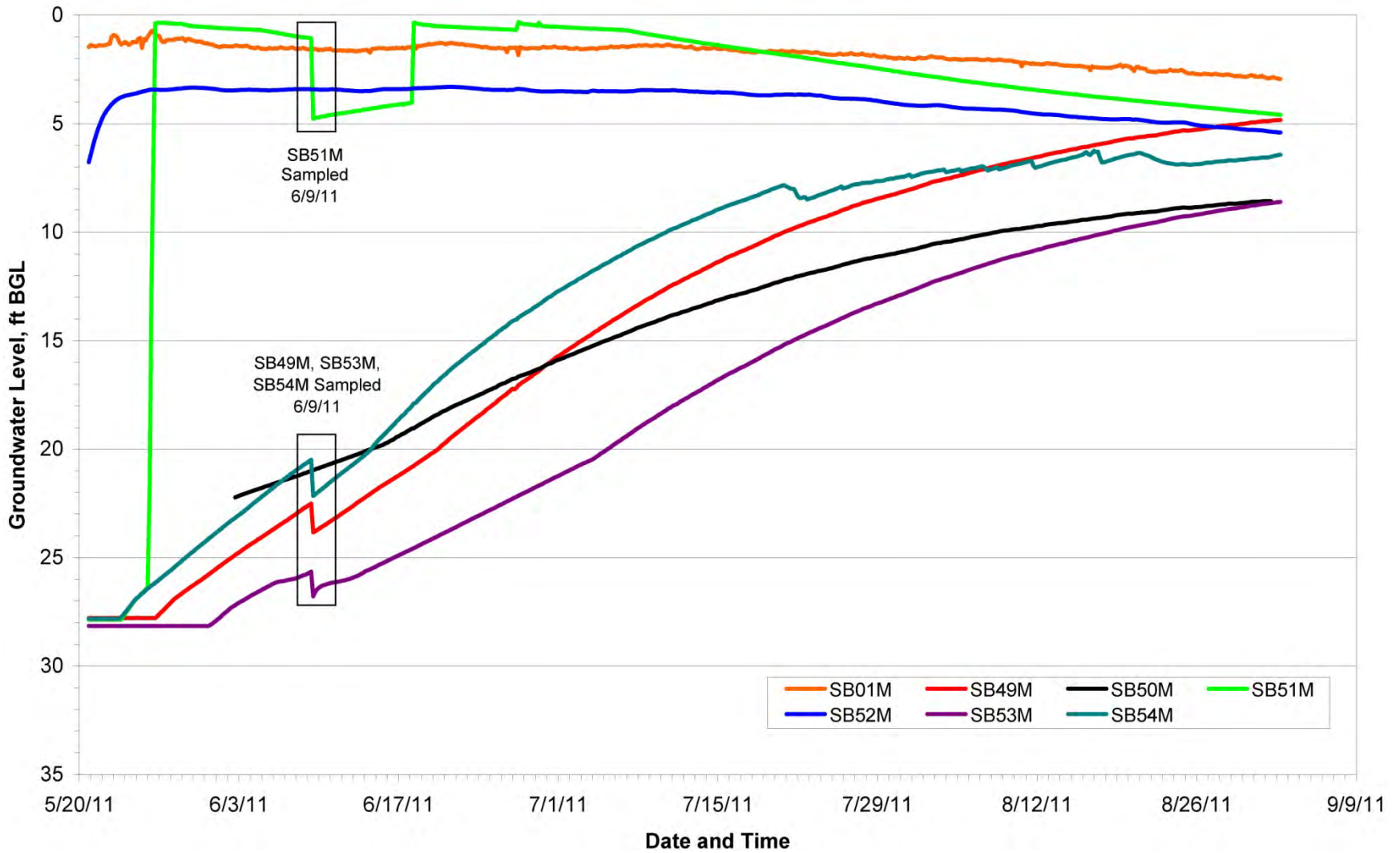


FIGURE 4.11 Groundwater levels measured automatically in permanent monitoring wells completed in the intermediate sampling interval, May 2011 to September 2011.





FIGURE 4.12 Interpreted potentiometric surface based on groundwater levels measured by hand in monitoring wells completed in the upper sampling interval on May 9, 2011. Source of photograph: NAIP (2009).

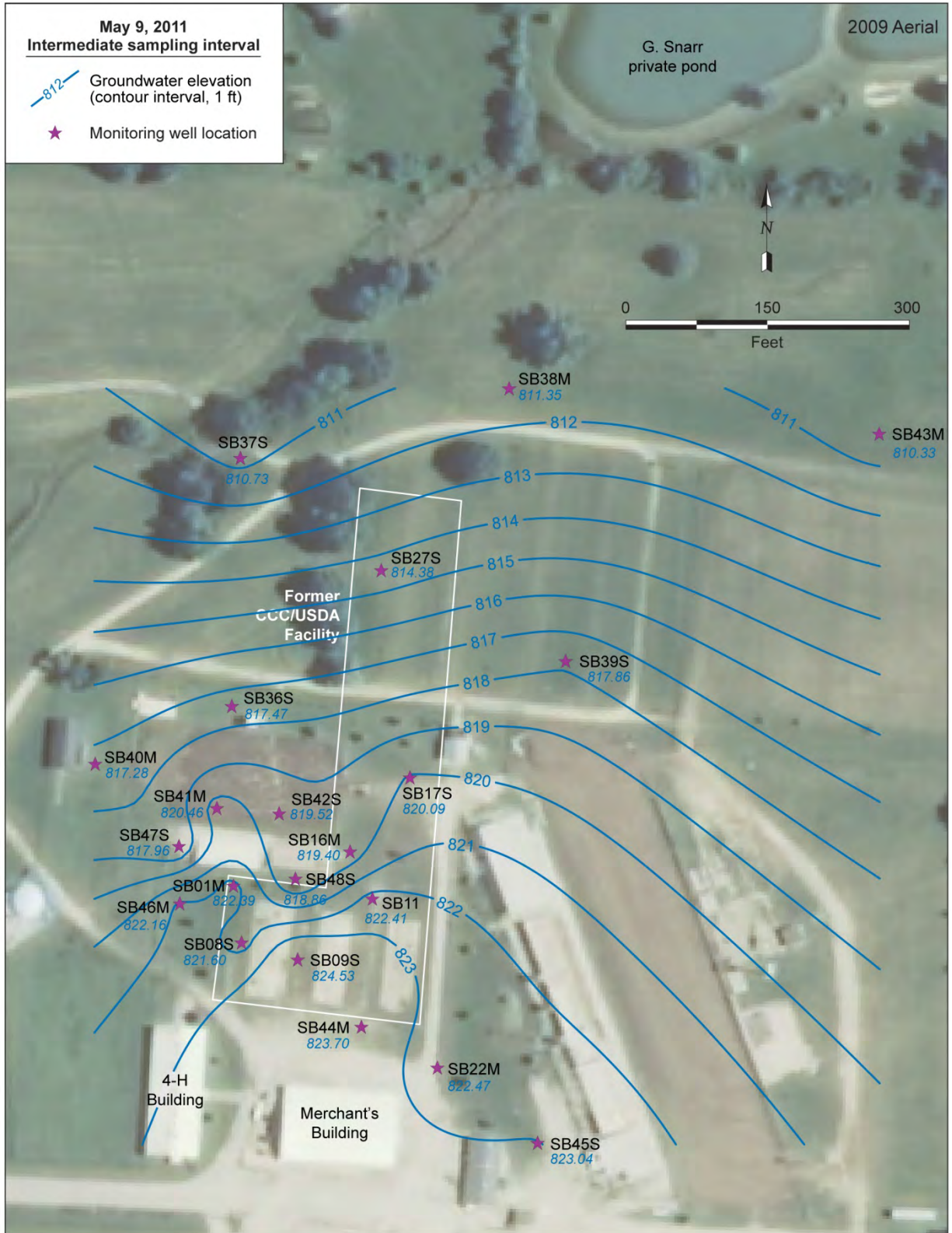


FIGURE 4.13 Interpreted potentiometric surface based on groundwater levels measured by hand in monitoring wells completed in the intermediate sampling interval on May 9, 2011. Source of photograph: NAIP (2009).



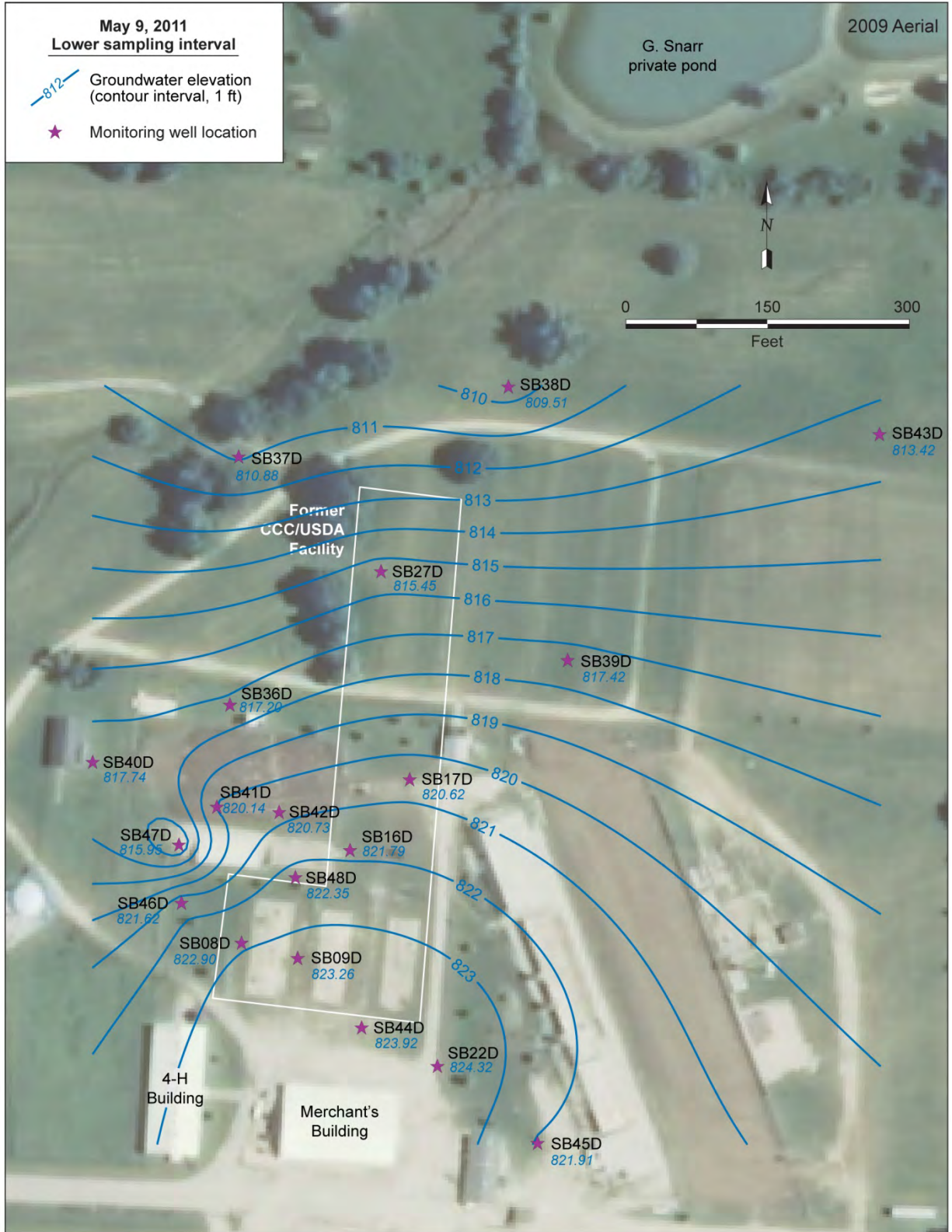


FIGURE 4.14 Interpreted potentiometric surface based on groundwater levels measured by hand in monitoring wells completed in the lower sampling interval on May 9, 2011. Source of photograph: NAIP (2009).

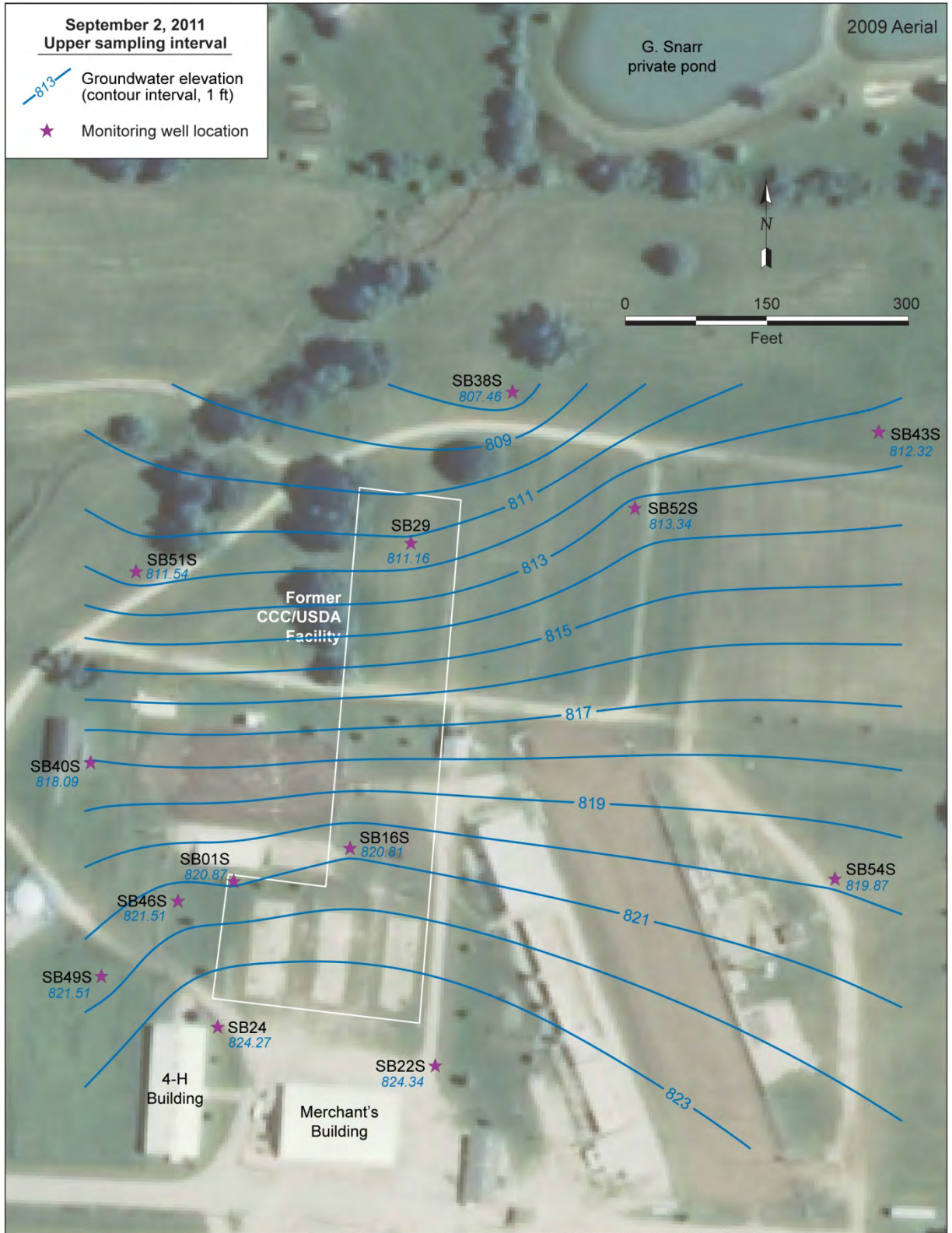


FIGURE 4.15 Interpreted potentiometric surface based on groundwater levels measured by hand in monitoring wells completed in the upper sampling interval on September 2, 2011. Source of photograph: NAIP (2009).



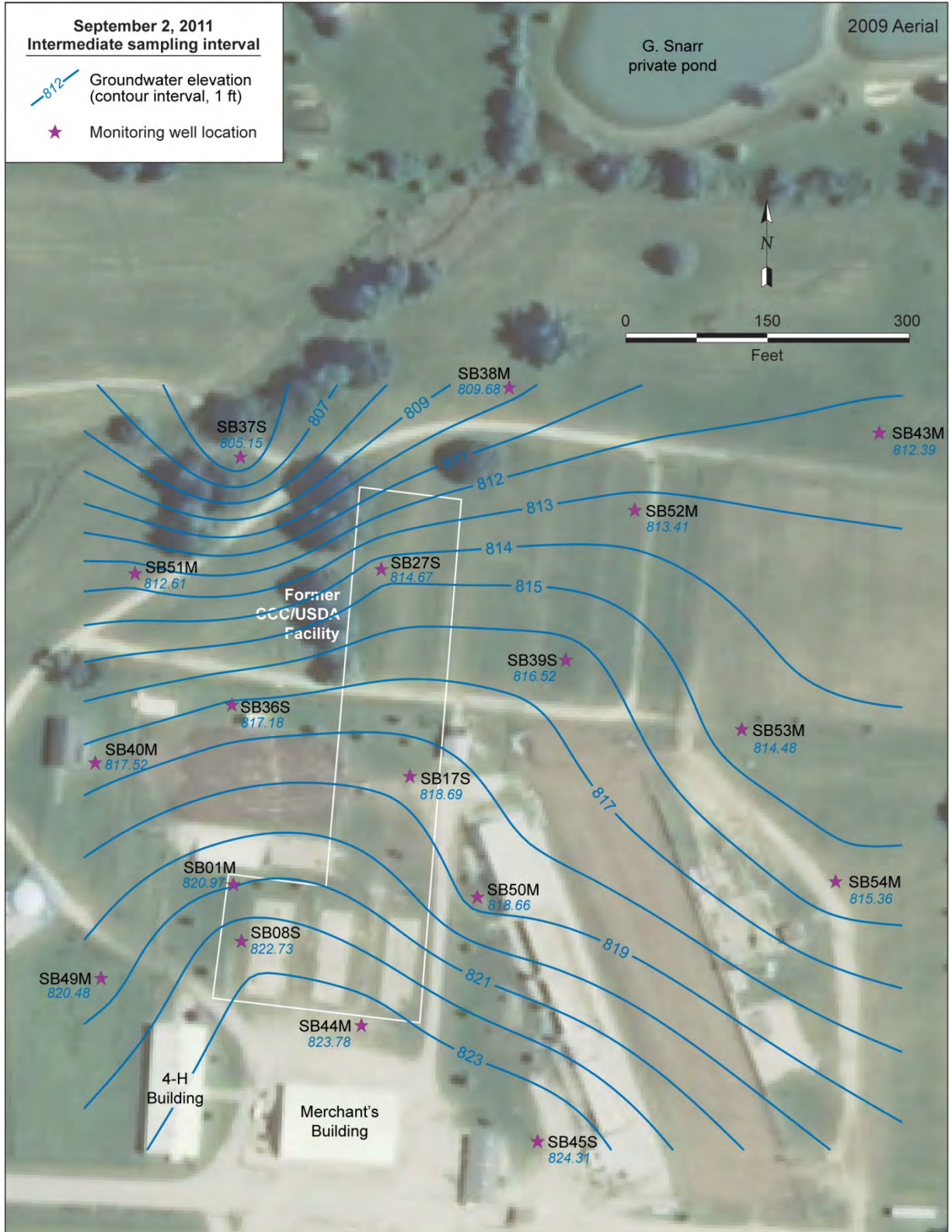


FIGURE 4.16 Interpreted potentiometric surface based on groundwater levels measured by hand in monitoring wells completed in the intermediate sampling interval on September 2, 2011. Source of photograph: NAIP (2009).

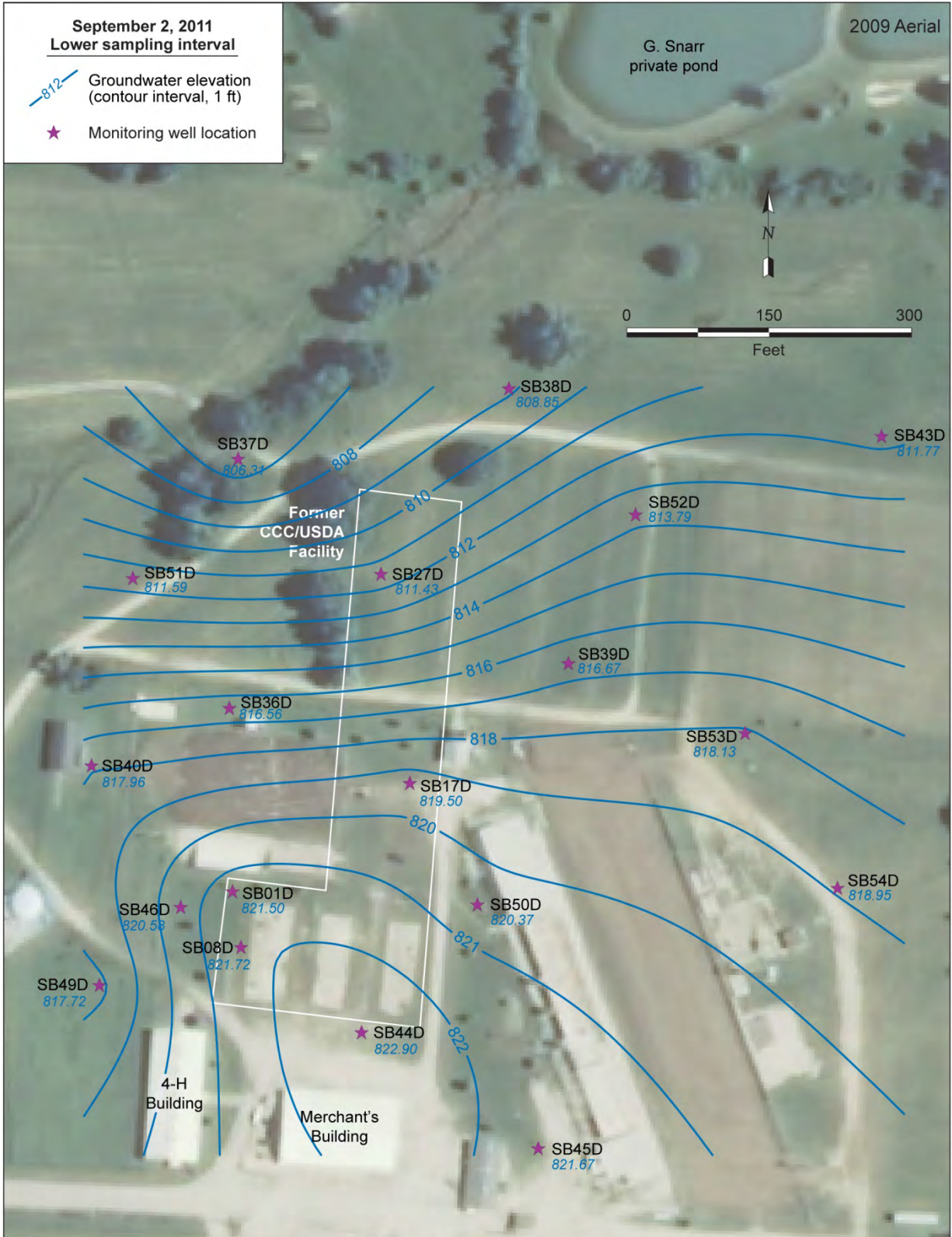


FIGURE 4.17 Interpreted potentiometric surface based on groundwater levels measured by hand in monitoring wells completed in the lower sampling interval on September 2, 2011. Source of photograph: NAIP (2009).



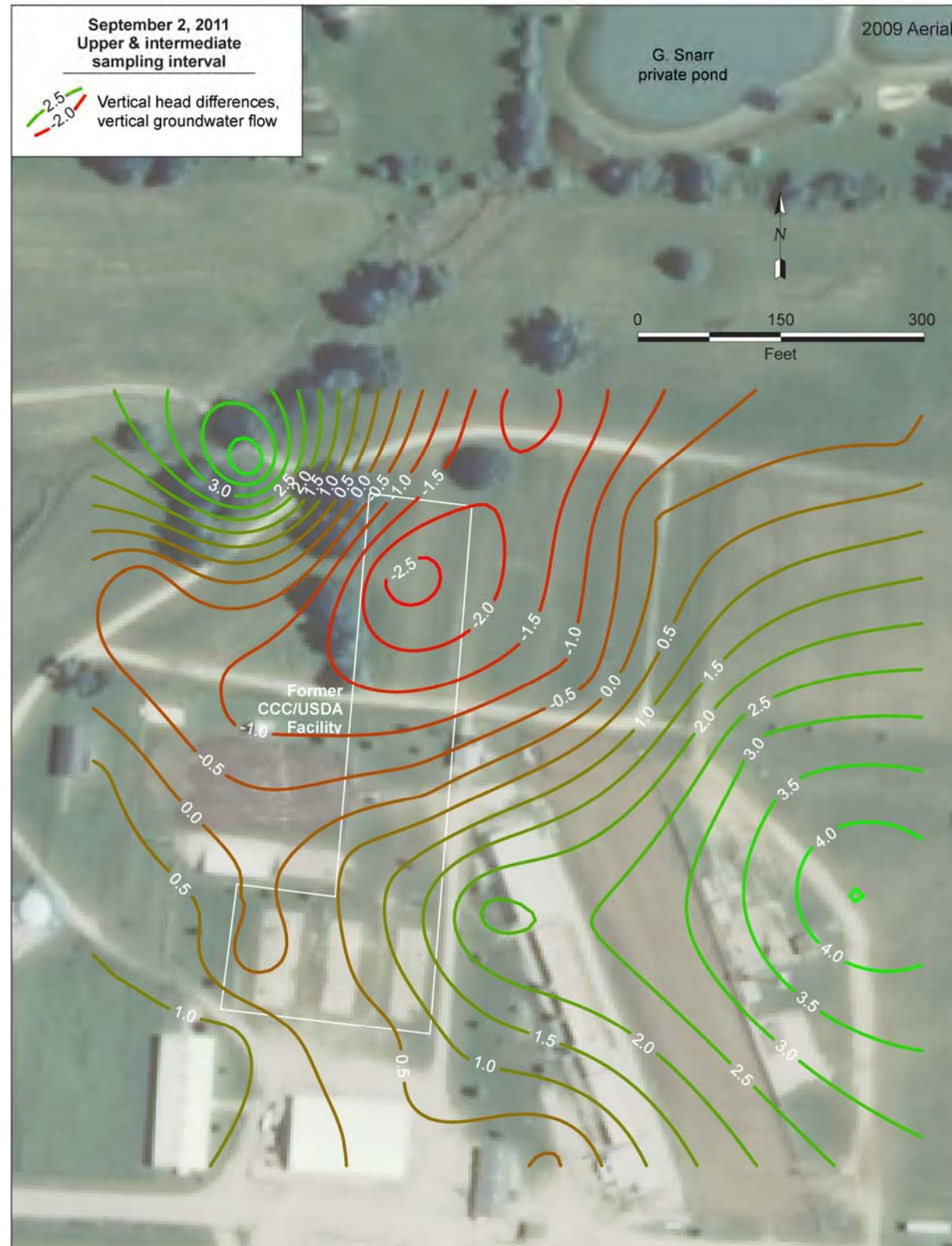


FIGURE 4.18 Interpreted magnitude of the vertical head differences and the apparent direction of vertical groundwater flow between the upper and intermediate sampling intervals (left) and between the intermediate and lower sampling intervals (right), based on groundwater levels measured by hand on September 2, 2011. Positive values (green contours) indicate downward flow; negative values (red contours) indicate upward flow. Source of photograph: NAIP (2009).



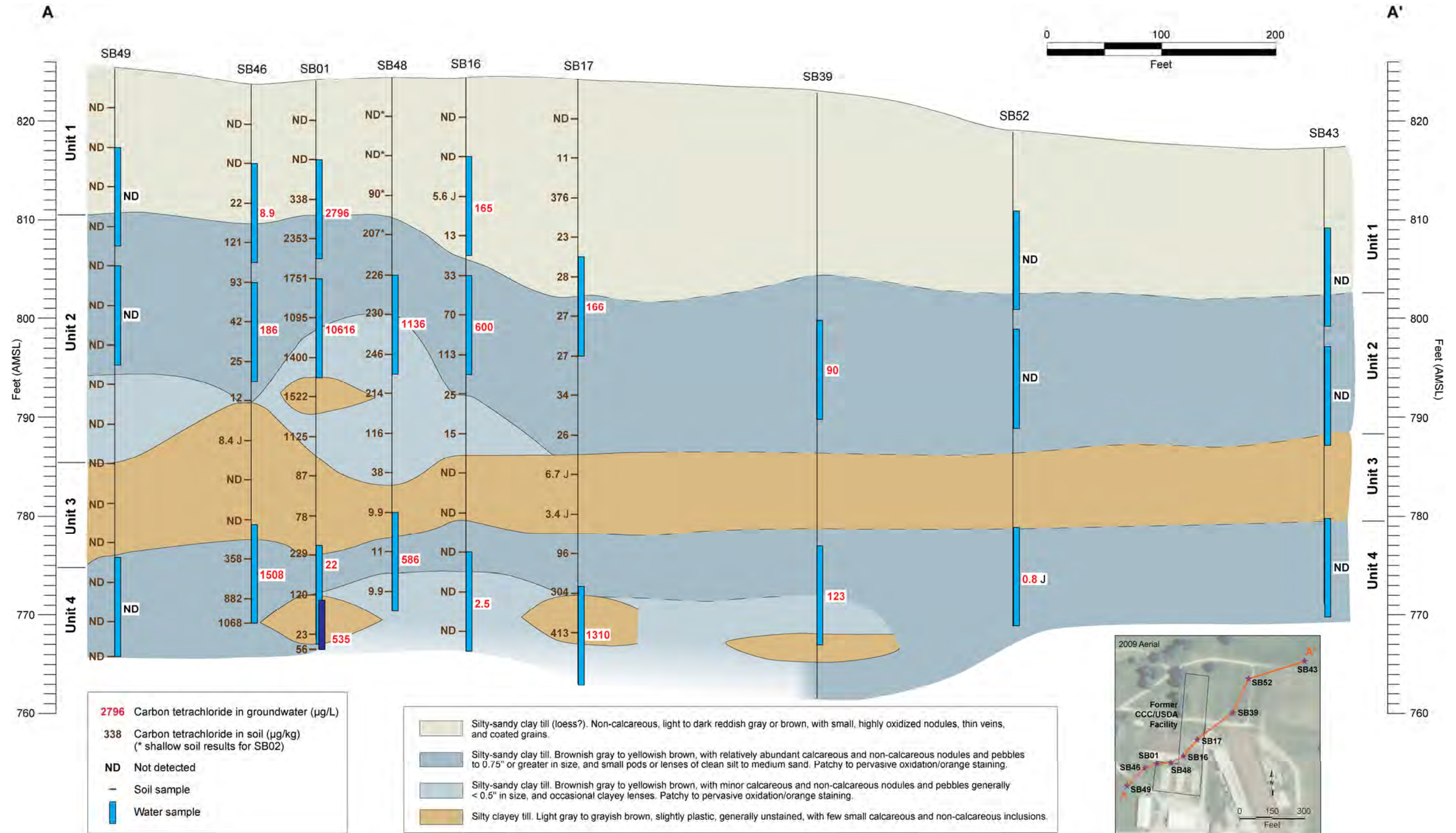


FIGURE 4.19 Southwest-to-northeast hydrogeologic cross section A-A' (vertically exaggerated), showing the distribution of maximum carbon tetrachloride concentrations identified in soils and groundwater.



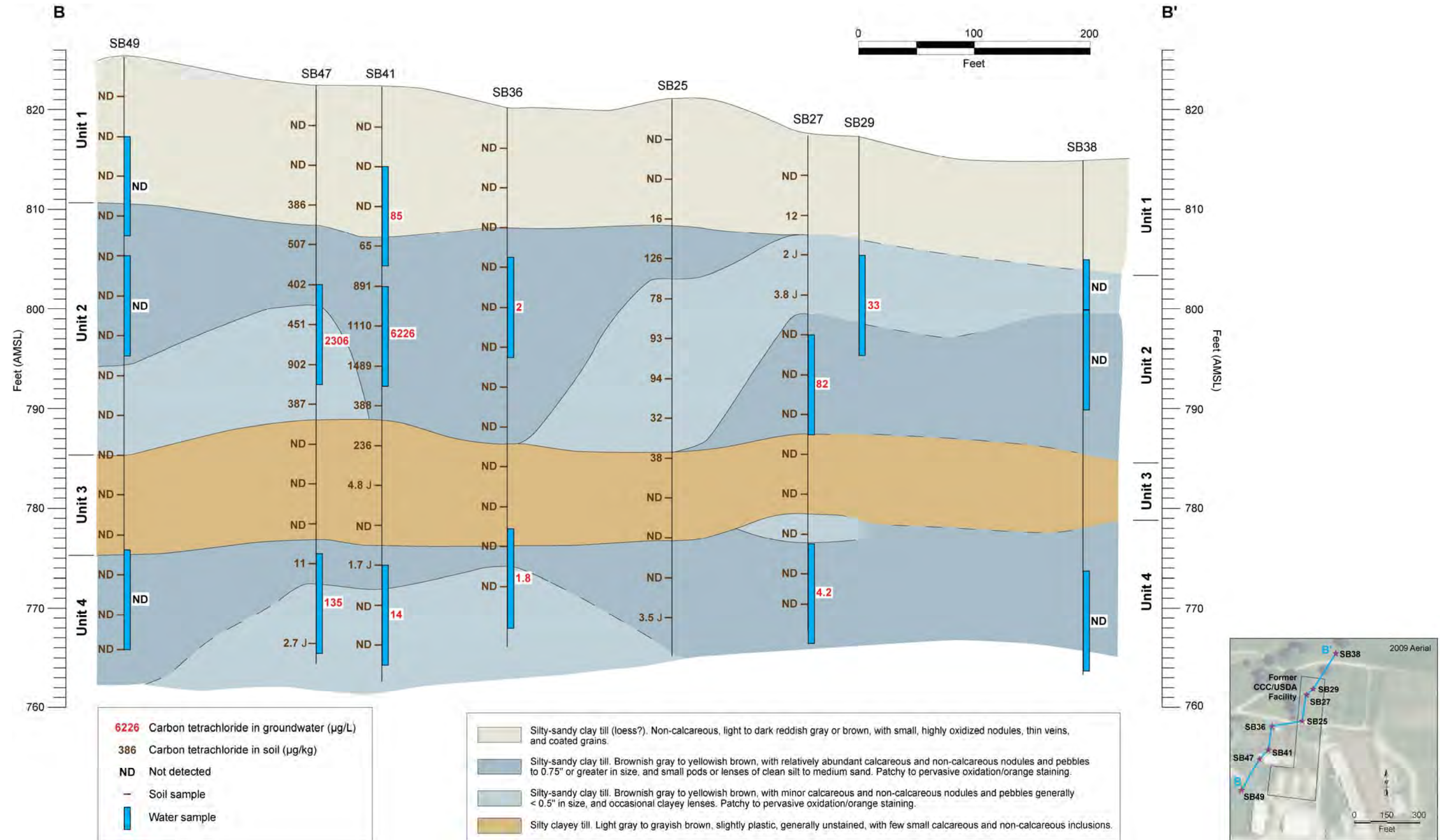


FIGURE 4.20 Southwest-to-northeast hydrogeologic cross section B-B' (vertically exaggerated), showing the distribution of maximum carbon tetrachloride concentrations identified in soils and groundwater.



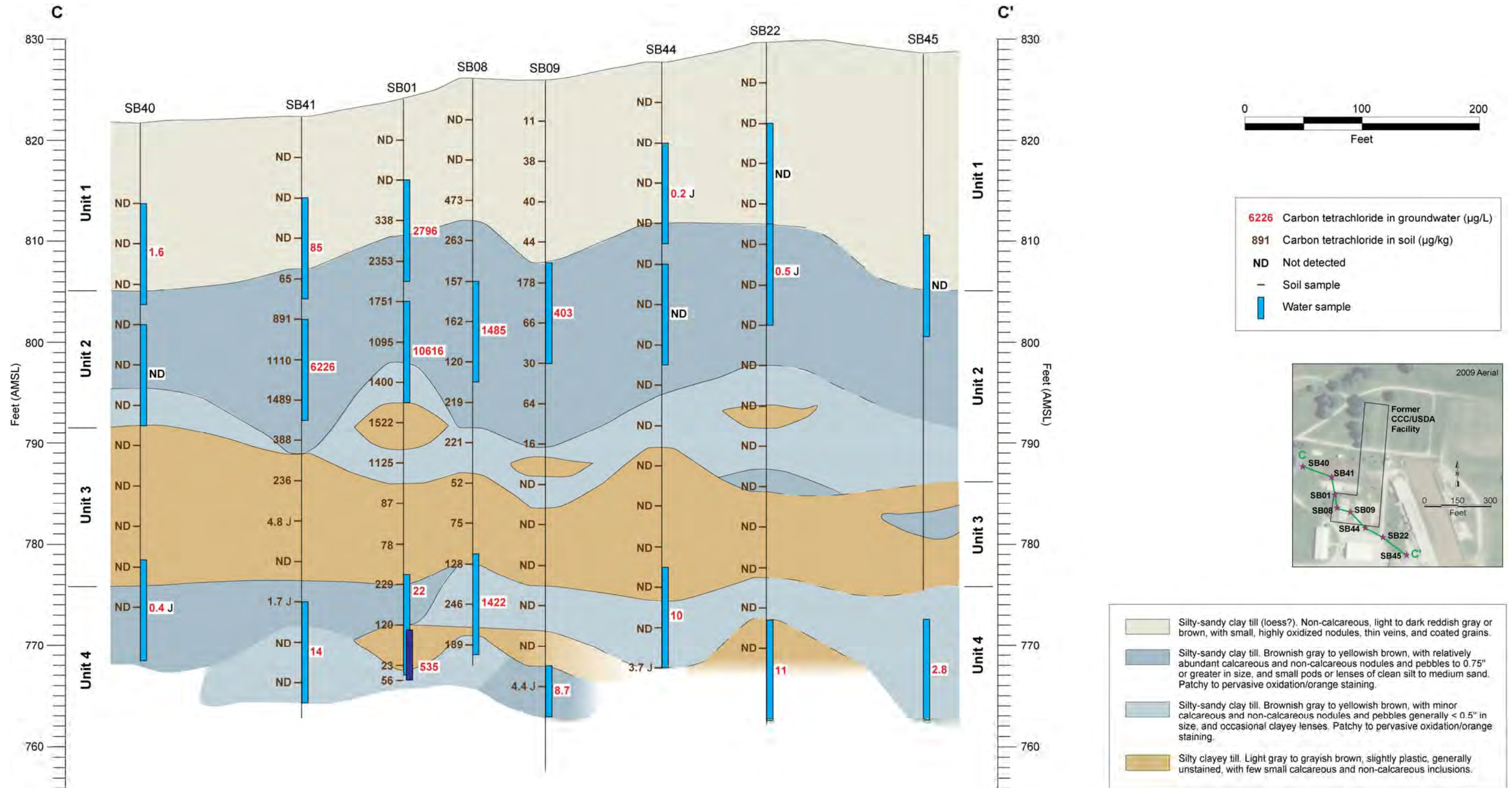


FIGURE 4.21 Northwest-to-southeast hydrogeologic cross section C-C' (vertically exaggerated), showing the distribution of maximum carbon tetrachloride concentrations identified in soils and groundwater.



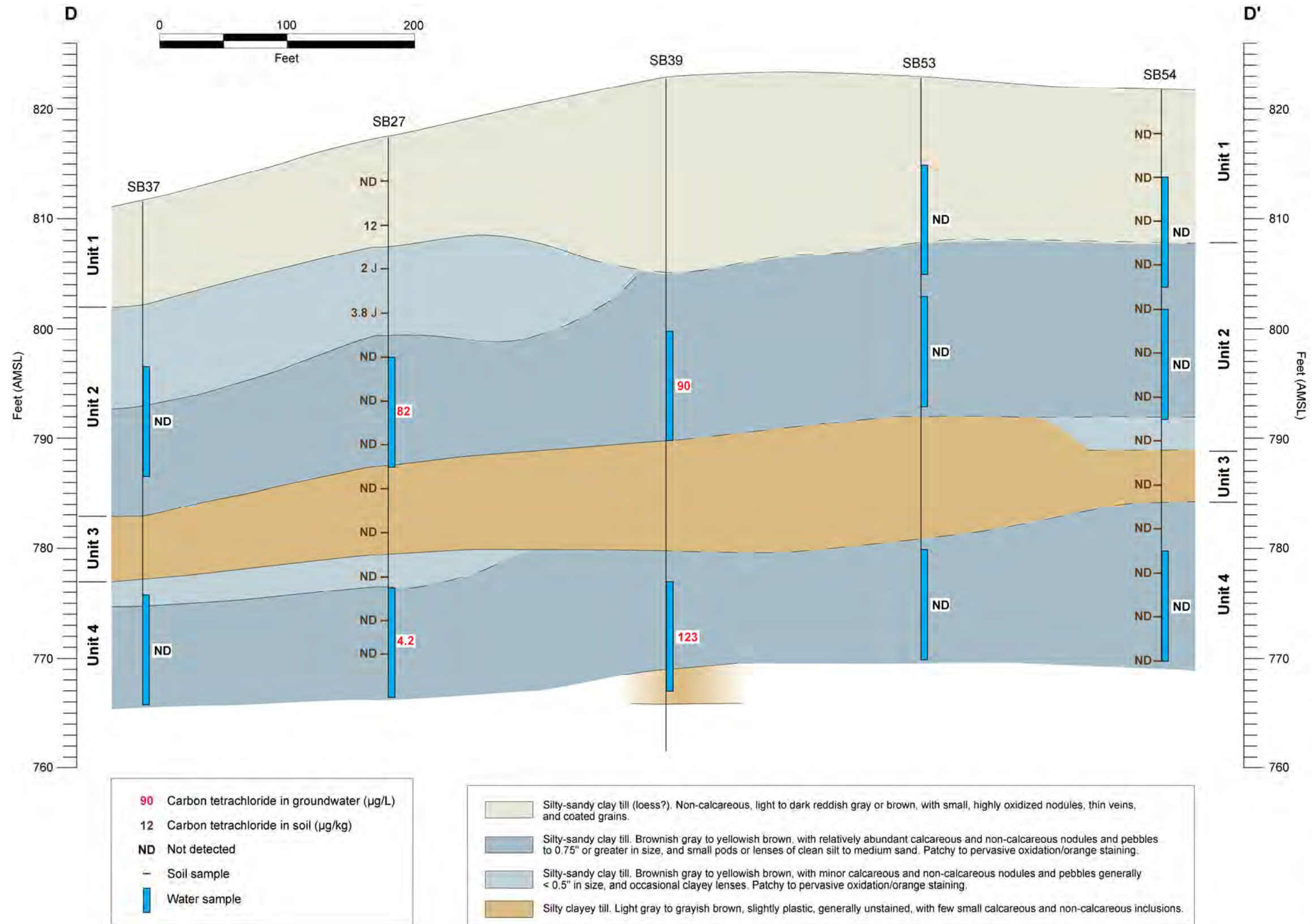


FIGURE 4.22 Northwest-to-southeast hydrogeologic cross section D-D' (vertically exaggerated), showing the distribution of maximum carbon tetrachloride concentrations identified in soils and groundwater.

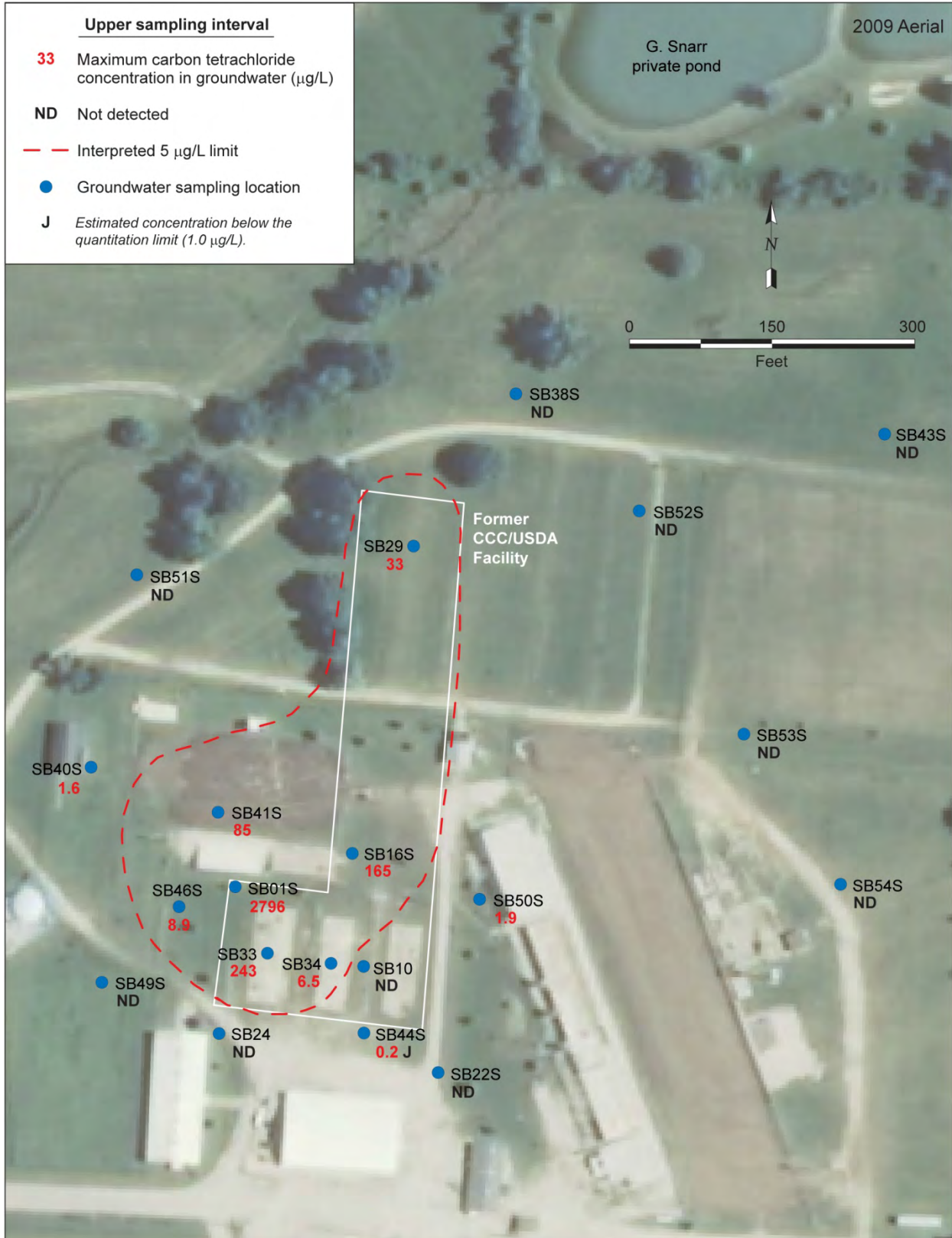


FIGURE 4.23 Maximum carbon tetrachloride concentrations detected in groundwater in the upper monitoring interval (< 20 ft BGL). Source of photograph: NAIP (2009).



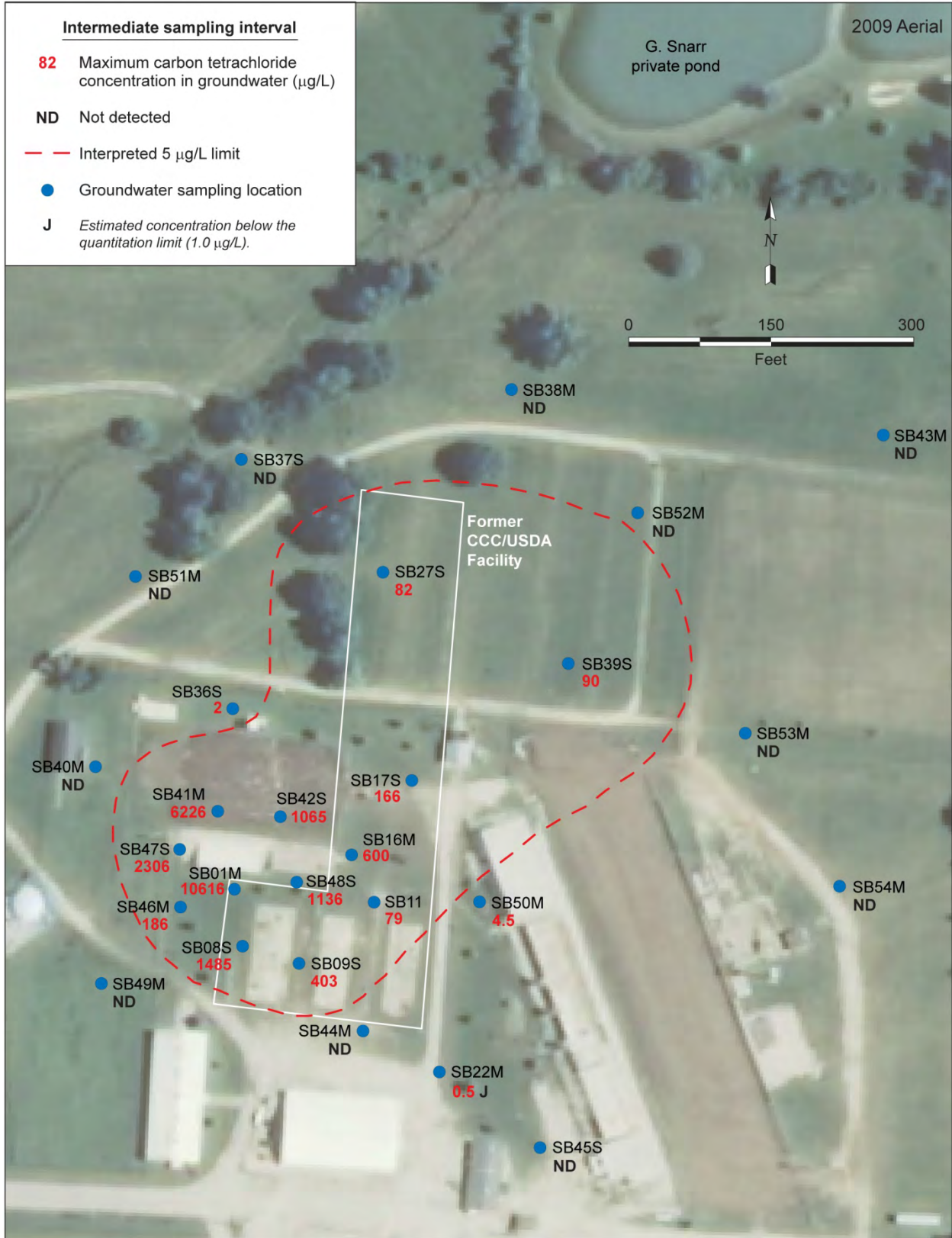


FIGURE 4.24 Maximum carbon tetrachloride concentrations detected in groundwater in the intermediate monitoring interval (20-30 ft BGL). Source of photograph: NAIP (2009).



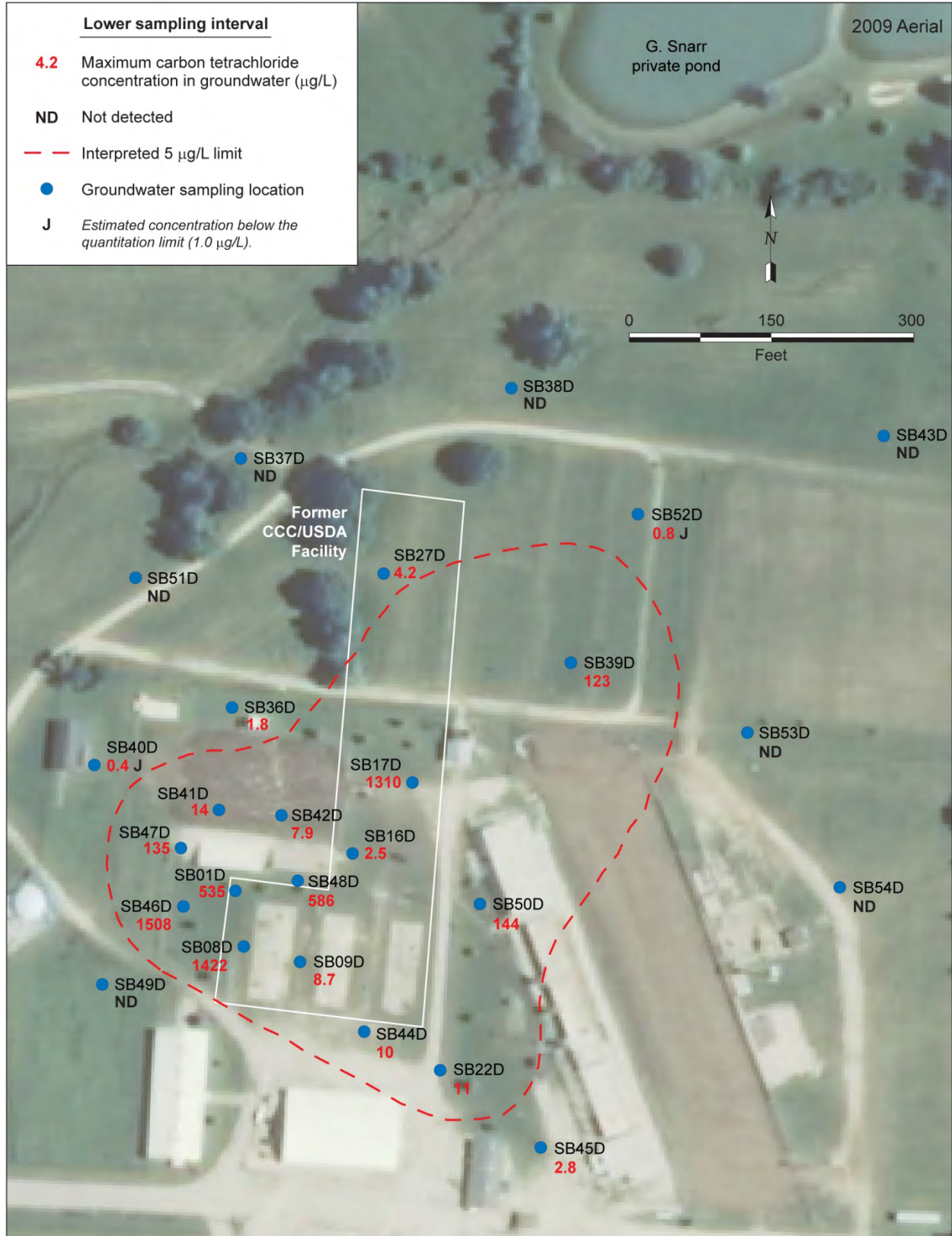


FIGURE 4.25 Maximum carbon tetrachloride concentrations detected in groundwater in the lower monitoring interval (> 40 ft BGL). Source of photograph: NAIP (2009).

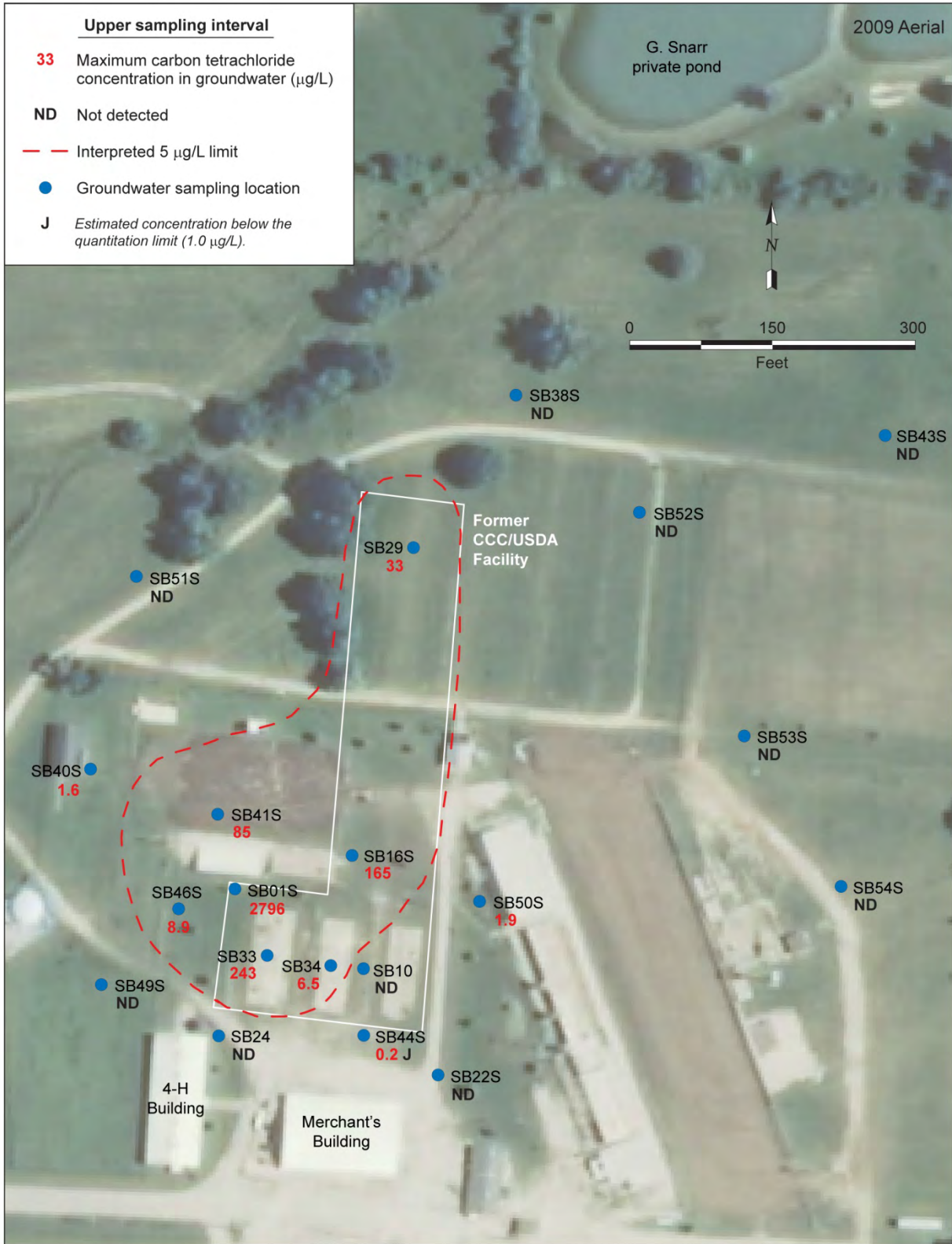


FIGURE 4.26 Maximum carbon tetrachloride concentrations detected in groundwater in the upper monitoring interval (< 20 ft BGL), with locations of the nearest enclosed, habitable structures. Source of photograph: NAIP (2009).

## 5 Conclusions and Recommendations

### 5.1 Conclusions

The site-specific information obtained during the expanded 2010-2011 investigations at the former CCC/USDA grain storage facility in Montgomery City forms the basis for a preliminary interpretation of the distribution of carbon tetrachloride contamination at the site and the hydrogeologic factors controlling the migration of the contamination. The key findings regarding the study area are as follows:

- The unconsolidated stratigraphic sequence (above CPT refusal) is dominated by fine-grained, poorly sorted deposits interpreted as glacial till, containing relatively little coarser-grained material. No laterally continuous coarse-grained intervals were identified. Deposits of relatively clean silt or fine-medium sand appeared as occasional small pods, lenses, or thin bands, or rare, discontinuous thicker (up to approximately 1-2 ft) lenses in the till. Subtle lithologic variations, however, suggest vertical layering that is traceable across the area and is interpreted to represent four stratigraphic units.
- Saturated conditions were apparent in the till sequence up to approximately 1-8 ft BGL. The distribution of groundwater levels suggests that vertical and lateral hydraulic communication also exists throughout the area. Relatively complex apparent hydraulic gradients control the groundwater movement.
- Lateral groundwater flow appears to be driven by a relative groundwater high near the southern margin of the area, promoting groundwater movement predominantly to the north-northwest in the upper portion of the till sequence. The influence of the high becomes progressively more localized with depth, resulting in an increasingly semi-radial pattern of lateral hydraulic gradients in the deeper tills, particularly near the remaining rectangular foundations.
- The apparent driving forces for vertical groundwater flow vary across the site and might locally be upward or downward. Alternatively, little to no vertical hydraulic gradient might exist locally.

- Rates of groundwater recharge to monitoring wells were very slow at most locations. These rates, the fine-grained character of the tills, and the varying hydraulic gradients suggest that the potential rates of groundwater movement and contaminant migration are limited. Limited laboratory data indicate that vertical hydraulic conductivities are generally very low; no determinations of horizontal hydraulic conductivity were made.
- The surficial soil and subsurface soil (vadose) zones as defined by the MDNR (2006) are together relatively thin ( $\leq 8$  ft) or absent. Thus, carbon tetrachloride detected in the soils  $> 8$  ft BGL might be associated with both solid soil particles and pore water. With only one exception, no carbon tetrachloride levels above the quantitation limit of  $10 \mu\text{g}/\text{kg}$  were detected at 4 ft BGL. No carbon tetrachloride concentrations exceeding the DTL of  $79.6 \mu\text{g}/\text{kg}$  were detected in soils in the uppermost 8 ft of the soil column.
- Carbon tetrachloride levels above the DTL occurred primarily at depths  $> 8$  ft BGL in the following hot-spot areas:
  - The most prominent hot spot, immediately west and northwest of the rectangular foundations (around SB01). This hot spot has the vertical profile of a source area for contamination in groundwater.
  - A hot spot in the southern portion of the former array of round grain bins (around SB17) that also has the vertical profile characteristics of a source area.
  - An apparent third hot spot identified only in soils  $> 28$  ft BGL, approximately 70 ft east-northeast of the rectangular foundations (at boring SB50). This hot spot lacks the vertical profile of a source area.
- The distribution of carbon tetrachloride in groundwater in the upper portion of the till sequence (stratigraphic Unit 1 and the upper portion of Unit 2) generally coincides with the footprint of the former CCC/USDA facility. Maximum carbon tetrachloride concentrations above the DTL and MCL

values (5.0 µg/L) were detected at most of the locations sampled within this footprint or immediately northwest of the rectangular foundations.

- The carbon tetrachloride distributions in the intermediate (Unit 2) and lower (Unit 4) portions of the till are similar to that in the upper interval; however, the distribution widens to the northeast at intermediate depths and to both the northeast and southeast in the lowermost interval.
- The highest concentrations of carbon tetrachloride in groundwater, 6,226-10,616 µg/L, were identified in the hot-spot area around SB01, in stratigraphic Unit 2.
- Soil analyses indicated little to no horizontal contaminant migration in hydrostratigraphic Unit 3, because of its more uniform, generally finer-grained character. At least locally, however, Unit 3 does not preclude vertical groundwater and contaminant migration between Units 2 and 4.
- The physical characteristics of the tills suggest that minor, fine-scale lithologic variations play a role in groundwater and contaminant migration.
  - More effective vertical hydraulic communication might exist in the hot-spot area around SB01.
  - Trends in carbon tetrachloride concentrations and groundwater levels suggest preferred migration pathways to the northeast in the intermediate interval and to the northeast and southeast in the lower interval, in possible association with local variations in the horizontal hydraulic conductivities of Units 2 and 4.
- No conclusive evidence of the presence of DNAPL was identified in groundwater or soil samples. The vertical distribution and concentrations of carbon tetrachloride in the tills suggest, however, that earlier carbon tetrachloride migration in DNAPL form could have contributed to the identified contaminant distribution.



- Pervasive, highly oxygen-depleted, chemically reducing conditions favorable to the widespread reductive dechlorination of carbon tetrachloride are not indicated in the till sequence. Locally, however, such conditions might at times support limited natural degradation of carbon tetrachloride in groundwater.
- Despite the inference of preferred horizontal migration pathways, the maximum lateral extent of carbon tetrachloride in groundwater and soils is within 100-250 ft of the footprint of the former CCC/USDA facility and the associated hot spots. The observed contaminant distribution suggests low long-term lateral contaminant migration rates of approximately 4-6 ft/yr. The areas of contamination are confined to the property owned by the Montgomery County Fair Society. Public access to the contaminated areas is restricted to activities authorized by the Fair Society Board.
- Carbon tetrachloride and chloroform were identified in the soils and groundwater at levels exceeding the respective DTL concentrations.
  - The DTL values for soils reflect risk possibly associated with the residential indoor inhalation pathway.
    - o The area of impacted soils has been used only for non-residential purposes since the CCC/USDA grain storage operations ended in 1966.
    - o No enclosed structures of any type directly overlie this area.
    - o No carbon tetrachloride or chloroform concentrations exceeding the respective DTL levels were detected in the surficial soils, subsurface (unsaturated) soils, or saturated soils at depths of 8 ft BGL or less, at any location at the site. These soils therefore pose no risk as a potential source of vapor intrusion.
  - The DTL values for groundwater reflect risk associated with the use of contaminated groundwater for domestic purposes, including consumption.

- o No private or public wells are located in the identified area or depth interval of groundwater contamination, and hence no risk is presently associated with the potential domestic use of this groundwater.
  - o The fairgrounds and all private and commercial properties surrounding the identified area of contamination are served by the Montgomery City public water supply.
  - o The saturated tills hosting the carbon tetrachloride contamination have little apparent capacity to produce groundwater and are unlikely to be tapped as a future source of groundwater for domestic or other purposes.
  - o The carbon tetrachloride contamination identified in the shallowest groundwater might pose a possible risk of vapor intrusion to the indoor air at two enclosed, habitable structures — the Merchant’s Building and the 4-H Building — located within approximately 100 ft of the southern (and hence upgradient) margin of the contaminant distribution. These buildings are used intermittently to host both public and private events under the supervision of the Montgomery County Fair Society.
- Elevated levels of carbon tetrachloride were identified in soils and groundwater at and near the base of the unconsolidated section (in Unit 4) penetrated by the CPT, to a maximum depth of 68 ft BGL. The results suggest a potential for deeper contaminant migration, if permeability is sufficient in the immediately underlying stratigraphic units.
  - The fractured and cherty limestones of the Mississippian Burlington and Keokuk Formations represent the shallowest recognized aquifer unit in the area. These intervals typically yield relatively low quantities of water. The available data suggest that the tops of these units might lie at 65-120 ft BGL beneath the former CCC/USDA facility.

- Available information indicates that the identified active wells near the former CCC/USDA facility primarily tap the deeper and more prolific water-bearing intervals in the regional Cambrian-Ordovician aquifer. Because of their depth and areal extent, these regional aquifer units would be at minimal risk of potential contamination from the carbon tetrachloride associated with the former CCC/USDA facility.
- Sampling of the Montgomery City municipal supply wells, several private wells within 0.5 mi of the former CCC/USDA facility, and the only identified private drinking water well within approximately 1 mi of the former facility (Hemeyer) identified no carbon tetrachloride contamination in groundwater.

## 5.2 Recommendations

The results of the 2010-2011 studies at Montgomery City suggest that additional characterization activities might be warranted to determine the vertical extent of the carbon tetrachloride contamination in groundwater associated with the former CCC/USDA facility. The scope and technical direction of any potential further work should be developed via consultation among the CCC/USDA, MDNR, and Argonne project managers. Technical objectives and further investigative activities identified in such discussions should be presented, if necessary, in a separate work plan.

At the request of the MDNR, the results of any additional site characterization studies conducted at Montgomery City will be presented in a format that is consistent with the requirements for a remedial investigation, as defined by the National Contingency Plan, to facilitate the consideration of remedial options, if warranted, in the context of a subsequent feasibility study. This effort will include the development of a baseline risk assessment and a conceptual site model, as outlined in relevant National Contingency Plan and EPA guidance documents.

Continuation of the automated measurement of the groundwater levels in selected monitoring wells initiated during Phase I, with periodic (approximately quarterly) manual measurement of the groundwater levels at all monitoring points, is recommended for a minimum

additional period of 1 yr, to investigate potential seasonal or longer-term influences on the hydraulic head relationships at the site.

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**Appendix A:**

***Update on the Investigation of the Former CCC/USDA Grain Storage Facility in  
Montgomery City, Missouri, and Recommendations for Additional Activities,  
March 29, 2011***

Montgomery City Update and Recommendations  
March 29, 2011

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## **Update on the Investigation of the Former CCC/USDA Grain Storage Facility in Montgomery City, Missouri, and Recommendations for Additional Activities**

### **Introduction**

On March 1, 2011, a conference call was held among representatives of the MDNR, the CCC/USDA, and Argonne to discuss the status of the site investigation studies being conducted at the former CCC/USDA grain storage facility in Montgomery City, Missouri. This document provides a brief overview of the primary issues addressed during the March 1 discussions, as well as recommendations for continuation of the investigation activities in the context of these issues.

As noted during the March 1 meeting, a key factor affecting the progress of the Montgomery City studies has been the generally very slow rates of groundwater accumulation observed in the investigative borings advanced during the two main field sessions conducted to date, in mid-to-late October 2010 and late November to early December 2010. As a result of these slow rates, a network consisting of 53 small-diameter (0.5-in. or 1-in. inner diameter) temporary piezometers has been installed at selected locations, in an attempt to recover sufficient groundwater for (1) the determination of stabilized groundwater levels, and hence potential groundwater flow and contaminant migration directions, and (2) the collection of samples for analyses for volatile organic compounds (VOCs).

The existing temporary piezometers are distributed to permit groundwater sampling and monitoring at three general depth ranges in the subsurface, identified on the basis of continuous soil coring and logging conducted with the Argonne track-mounted cone penetrometer (CPT) direct-push vehicle during the above-noted field sessions. For the purposes of this review, the three depth ranges are termed "shallow," "intermediate," and "deep." The designations, areal distribution, and depths of the present temporary piezometers are summarized in Table 1 and Figure 1. All of the temporary piezometers were constructed with a sand pack surrounding the screened interval, dry grout to the surface, and a temporary protective "stick-up" housing at the surface.

### **Status of the Groundwater Level Monitoring Efforts**

Figures 2-4 illustrate the groundwater level responses observed, respectively, in the shallow, intermediate, and deep temporary piezometers. As shown, the groundwater levels in most of the temporary piezometers have taken from approximately 1 month to more than 4 months to approach possibly stabilized levels, with the longest recovery times generally observed for the intermediate-range and some shallow-range piezometers. The most recent measurements of groundwater levels were obtained on February 26, 2011. As of that date, the levels in many of the shallow and intermediate temporary piezometers (Figures 2 and 3) still appeared to be rising steadily. Thus, these presently available levels do not support an evaluation of potential groundwater flow direction(s).

In contrast, Figure 4 suggests that the deep-range groundwater levels had stabilized at most of the temporary piezometer locations (with the possible exception of SB47D) by February 2011. The deep temporary piezometers are generally screened across the 10-ft depth interval directly above the refusal depth encountered by the CPT at each location. A *preliminary* interpretation of the potentiometric surface for this depth interval, based on the February 2011 data, is illustrated in Figure 5. The results suggest a relatively complex, semi-radial pattern of groundwater flow (at this depth interval) across the study area toward the northwest, north, and northeast from a localized “high” near the southeast corner of the former (rectangular) storage building foundations.

### **Status of the Groundwater Sampling Efforts**

The very slow rates of groundwater accumulation observed in most of the temporary piezometers have precluded their sampling by the use of standard (volume-purge or low-flow) methods. Consequently, upon accumulation of sufficient groundwater in the temporary casing at each location, groundwater sampling for VOCs analyses has been attempted with a bailer. In conjunction with the main field sessions noted above, additional brief visits to the site were made in mid November 2010 and mid January to late February 2011, to determine groundwater levels and collect samples as possible. The results of the VOCs analyses to date (as of February 27, 2011) are summarized in Table 2 and Figures 6-8. These results were discussed previously with the CCC/USDA and MDNR project managers. As of this writing, except for shallow locations SB16, SB38, SB43, and SB46 (marked “NS” in Figure 6), all of the temporary piezometers have been sampled at least once, on the dates indicated in Table 2. It has not been possible, however, to conduct a single, coincident sampling event for all locations.

The currently available data indicate the presence of elevated concentrations of carbon tetrachloride (up to approximately 10,600 µg/L) in the groundwater in the vicinity of the former CCC/USDA grain storage structures, with the highest contaminant levels (at all depths) occurring primarily in a relatively localized area near the northwest corner of the former rectangular storage building foundations and the adjacent (to the northwest) “mud pit” (Figures 6-8). Figures 6-8 generally suggest that the identified concentrations of carbon tetrachloride in each depth interval decrease rapidly away from the identified “hot spot,” with the possible exception of the relatively elevated levels (85 µg/L and 123 µg/L, respectively, in the intermediate and deep zones) detected just north of the main grandstand area (Figures 7 and 8), which suggest possible contaminant migration toward the east-northeast from the former grain storage locations and the hot-spot area. Figures 6-8 suggest that the areal distribution of the carbon tetrachloride contamination at each depth interval is relatively well constrained laterally, except possibly in an east-northeasterly direction, on the basis of existing sampling points having either no detectable carbon tetrachloride (ND values) or very low (< 5 µg/L) carbon tetrachloride levels.



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### **Considerations and Recommendations for Continuation of the Montgomery City Investigation**

The *preliminary* data outlined above indicate that continued monitoring of the groundwater levels and contaminant concentrations at Montgomery City, at multiple depths and locations within the saturated zone, will be critical to determining both the lateral and vertical patterns of groundwater flow and carbon tetrachloride migration at this site, as well as the possible seasonal or longer-term influences on groundwater levels that might affect these patterns. The presently available data demonstrate, however, that the potential three-dimensional migration of groundwater (and carbon tetrachloride) is likely to be complex; hence, a relatively dense network of monitoring points will be required for further understanding of the relationships at this site.

In previous informal discussions, the MDNR had suggested that it might be possible to maintain the existing temporary piezometer network installed at Montgomery City for up to 1 year (by requesting a variance in accord with MDNR policy), to facilitate the identification of observation locations that might be the most critical for subsequent retention as permanent monitoring points. In the more recent discussions (March 1, 2011), however, the MDNR indicated that the granting of an extended variance of this type is unlikely under MDNR regulations and that more timely action will be required to establish a permanent monitoring network.

In light of these developments, the CCC/USDA and Argonne make the following requests and recommendations:

1. *The CCC/USDA and Argonne request permission to retain, if possible, the existing network of temporary piezometers until one complete groundwater sampling event can be conducted in April 2011.*

On behalf of the CCC/USDA, Argonne has contacted representatives of the Montgomery County Fair Society (owners of the investigation site). We tentatively believe (subject to further confirmation) that access for the proposed sampling event will be feasible in early-to-mid April 2011. Currently observed trends (Figures 2-4) suggest that stabilization of the groundwater levels in most of the existing temporary piezometers could be approached by the April time frame. A contemporaneous sampling event of all available locations at that time would provide an initial indication of the potential groundwater flow directions for each of the depth intervals under investigation. The MDNR will be notified of exact sampling dates when they are available.

2. *Subject to MDNR approval, the CCC/USDA and Argonne further recommend the subsequent abandonment (in accord with MDNR requirements) of the 21 existing temporary piezometers identified in the attached Table 3, along with completion and certification of the 32 remaining (existing) piezometers as permanent monitoring wells in April 2011.*

The network of points to be retained (illustrated in Figures 9-11) was selected on the basis of all currently available data, in order to provide a representative distribution of sampling and groundwater level monitoring points at each depth interval across the investigation site. Because the existing piezometers were installed by using direct-push

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techniques, Argonne will request a variance, subject to MDNR approval, to allow their retention as permanent monitoring wells. At the request of the Fair Society, Argonne will also seek MDNR approval for the use of flush-mount well completions at all locations, to minimize the potential for disruption of future activities on the Fairgrounds property.

This work would be completed in the April time frame, after the sampling proposed in Item 1 is completed. The MDNR will be notified of the exact dates when they are available.

3. *Finally, on the basis of presently available data, the CCC/USDA and Argonne further recommend the investigation of 5 additional locations, by using the direct-push capability of the Argonne CPT vehicle in May 2011.*

The proposed additional locations are shown in Figures 5-8, in relation to the currently identified contaminant distribution and potential groundwater flow directions. The recommended locations have been selected to explore further and potentially confirm the inferred areal limits of the carbon tetrachloride distribution to the east-northeast, northwest, and southwest of the former grain bin locations and the presently identified hot spot. At each additional location, we anticipate that the installation of shallow, intermediate, and deep piezometers will be required to obtain groundwater for sampling and for the monitoring of groundwater levels. Subject to the approval of the MDNR, we recommend that these be constructed as 1-in. (inner diameter) permanent monitoring wells, so that they can be employed for water level measurements by programmable downhole level sensors and data loggers. The continuous monitoring data to be obtained from these points will provide a detailed picture of any potential short-term or seasonal fluctuations in water levels that might affect contaminant distribution and migration at the site.

The recommended installation of shallow and deep permanent monitoring wells at the SB01 location is also indicated in Figures 5-8; temporary screens and risers installed previously to sample the groundwater at this location (at additional depths) were removed. The associated borings were abandoned, as documented in a well registration form submitted previously to the MDNR for review. At present, only the intermediate-depth piezometer, SB01S (Tables 1 and 3), remains at that location. The recommended shallow and deep wells would complete the depth profile.

The additional investigation proposed here would involve selective coring and installation of 17 1-in.-diameter piezometers (to be completed as monitoring wells) with the CPT (at 3 depths at each of 5 new locations and at 2 additional depths at the SB01 location). The work would occur in the May 2011 time frame, after the sampling proposed in Item 1 and the well abandonments and completions proposed in Item 2 are complete. Discussions with the Fair Society about the timing of this additional investigation in May are in progress. The MDNR will be notified of the exact dates when they are available.

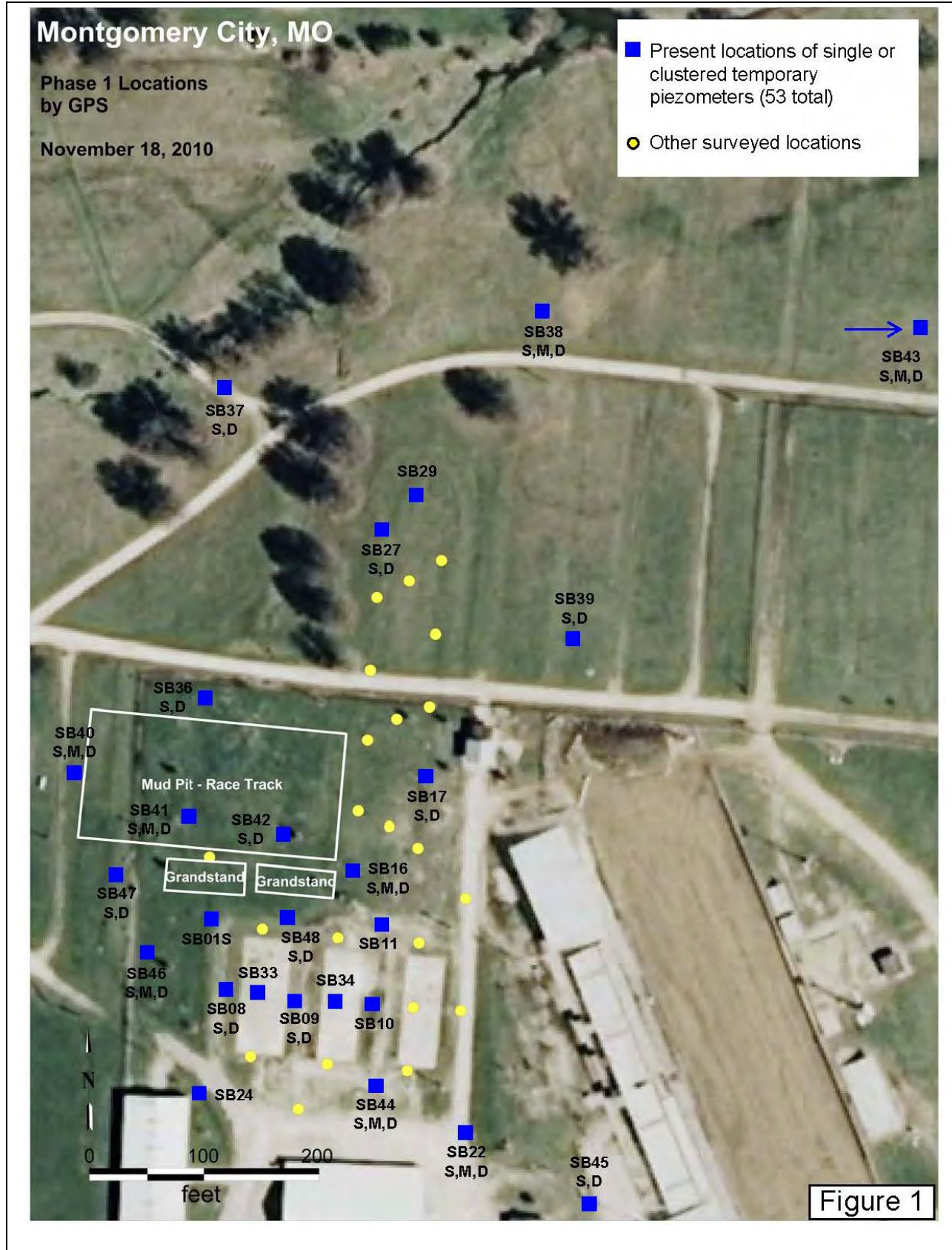
Table 1 Montgomery City Temporary Piezometers

<b>Boring</b>	<b>Date Installed</b>	<b>Nominal Diameter in</b>	<b>Screened Interval ft bgl</b>	<b>Depth Category</b>
SB01S	10/27/10	1	20-30	Intermed.
SB08D	12/4/10	0.5	47-57	Deep
SB08S	12/4/10	0.5	20-30	Intermed.
SB09D	10/24/10	0.5	58-63	Deep
SB09S	10/26/10	0.5	18-28	Intermed.
SB10	10/19/10	1	8-18	Shallow
SB11	10/23/10	0.5	15-25	Shallow
SB16D	12/6/10	0.5	48-58	Deep
SB16M	12/6/10	0.5	20-30	Intermed.
SB16S	12/6/10	0.5	8-18	Shallow
SB17D	10/25/10	0.5	51.3-61.3	Deep
SB17S	10/25/10	0.5	18-28	Intermed.
SB22D	10/26/10	0.5	57.2-67.2	Deep
SB22M	10/26/10	0.5	18-28	Intermed.
SB22S	10/19/10	1	8-18	Shallow
SB24	10/20/10	1	8-18	Shallow
SB27D	10/24/10	0.5	41-51	Deep
SB27S	10/24/10	0.5	20-30	Intermed.
SB29	10/20/10	1	12-22	Shallow
SB33	10/21/10	1	12-22	Shallow
SB34	10/21/10	0.5	17-22	Shallow
SB36D	10/25/10	0.5	42.2-52.2	Deep
SB36S	10/25/10	0.5	15-25	Intermed.
SB37D	11/30/10	0.5	35.8-45.8	Deep
SB37S	11/30/10	0.5	15-25	Intermed.
SB38D	11/30/10	0.5	41.2-51.2	Deep
SB38M	11/30/10	0.5	15-25	Intermed.
SB38S	11/30/10	0.5	10-15	Shallow
SB39D	11/30/10	0.5	45.8-55.8	Deep
SB39S	11/30/10	0.5	23-33	Intermed.

Table 1 Montgomery City Temporary Piezometers

<b>Boring</b>	<b>Date Installed</b>	<b>Nominal Diameter in</b>	<b>Screened Interval ft bgl</b>	<b>Depth Category</b>
SB40D	12/1/10	0.5	43.3-53.3	Deep
SB40M	12/1/10	0.5	20-30	Intermed.
SB40S	12/1/10	0.5	8-18	Shallow
SB41D	12/2/10	0.5	48-58	Deep
SB41M	12/2/10	0.5	20-30	Intermed.
SB41S	12/2/10	0.5	8-18	Shallow
SB42D	12/2/10	0.5	47-57	Deep
SB42S	12/2/10	0.5	17-27	Intermed.
SB43D	12/3/10	0.5	37.4-47.4	Deep
SB43M	12/3/10	0.5	20-30	Intermed.
SB43S	12/3/10	0.5	8-18	Shallow
SB44D	12/3/10	0.5	50-60	Deep
SB44M	12/3/10	0.5	20-30	Intermed.
SB44S	12/4/10	0.5	8-18	Shallow
SB45D	12/3/10	0.5	56-66	Deep
SB45S	12/3/10	0.5	18-28	Intermed.
SB46D	12/4/10	0.5	44.5-54.5	Deep
SB46M	12/5/10	0.5	20-30	Intermed.
SB46S	12/5/10	0.5	8-18	Shallow
SB47D	12/5/10	0.5	47-57	Deep
SB47S	12/5/10	0.5	20-30	Intermed.
SB48D	12/5/10	0.5	44-54	Deep
SB48S	12/6/10	0.5	20-30	Intermed.





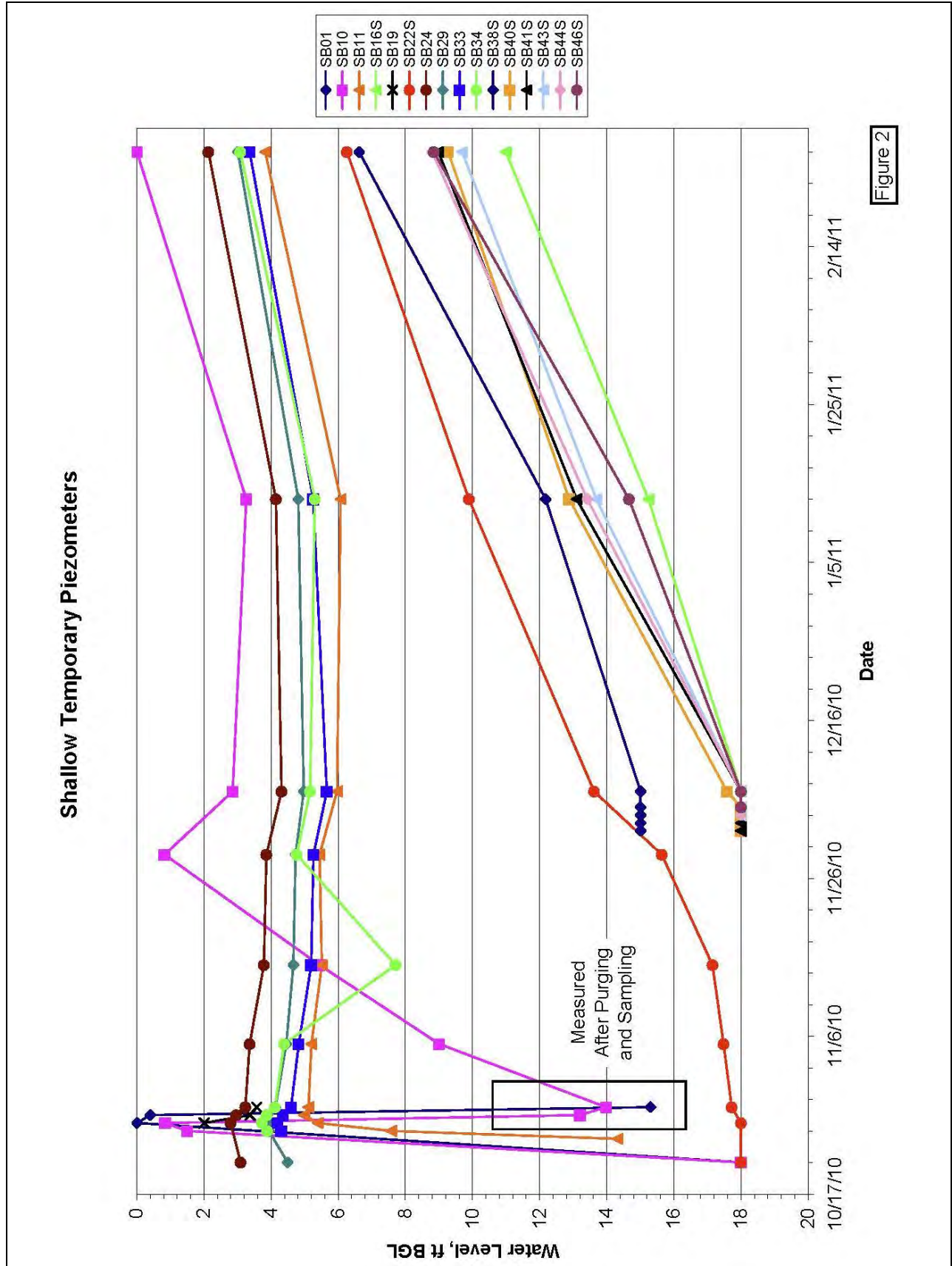


Figure 2



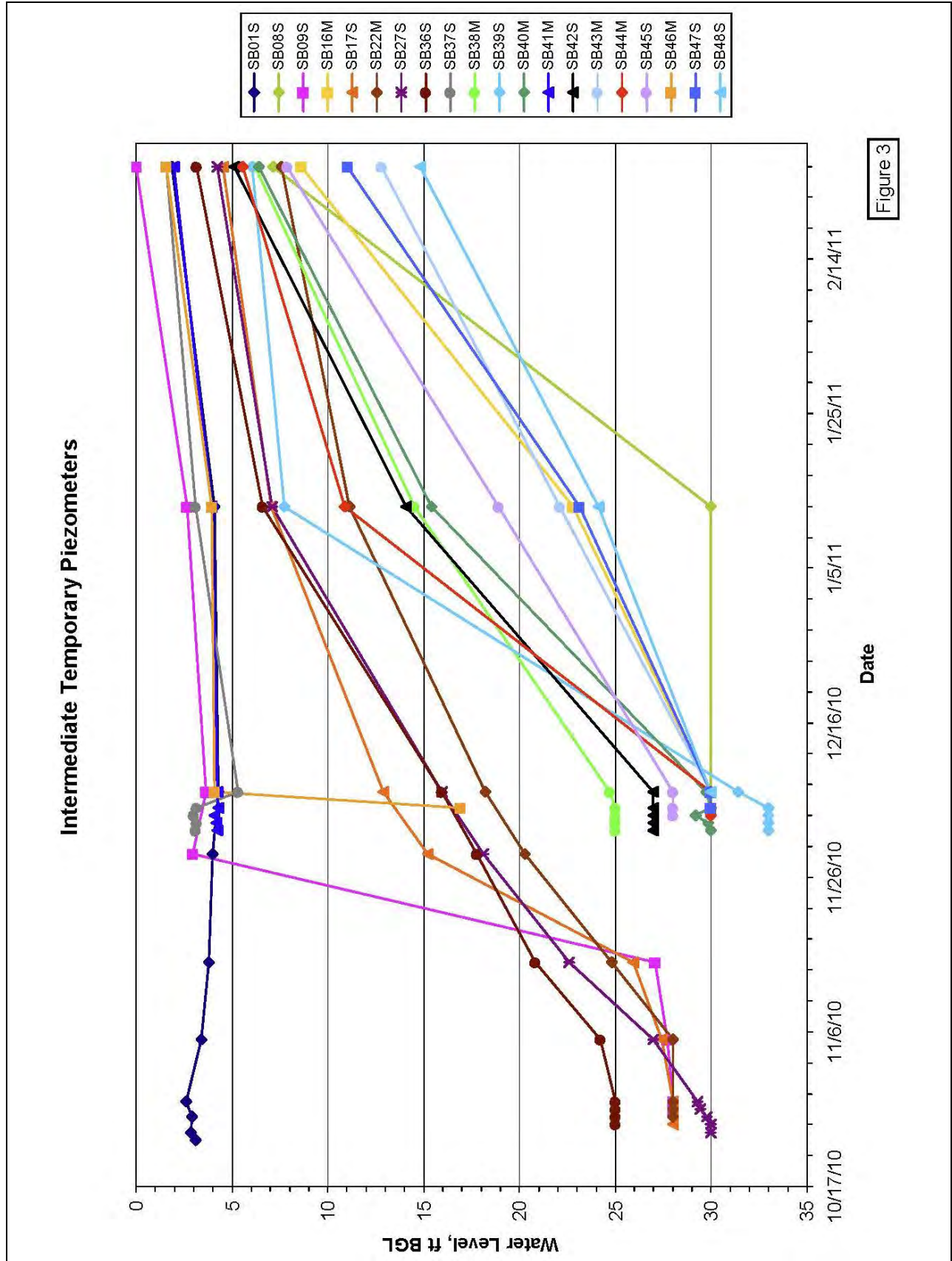


Figure 3

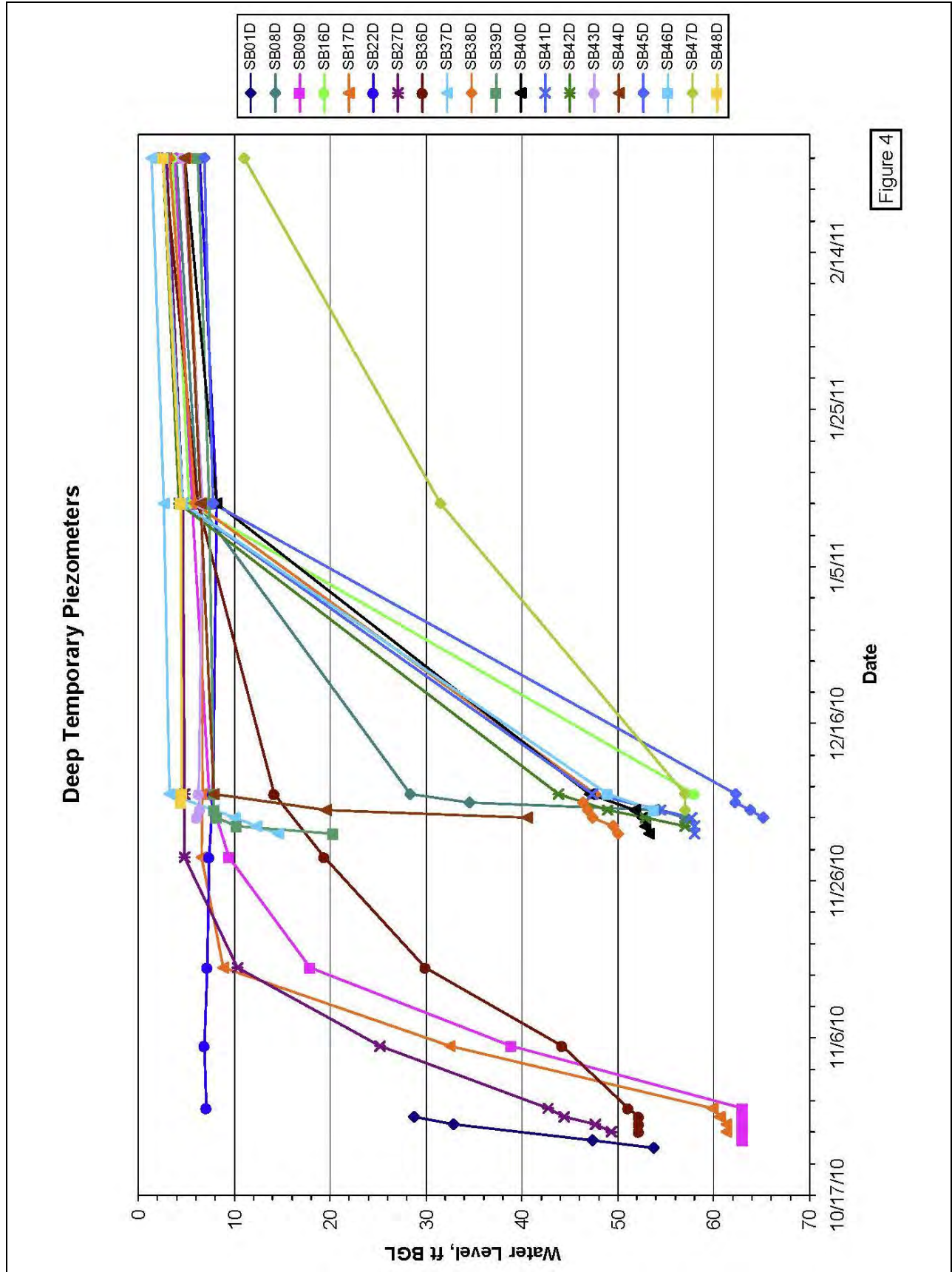
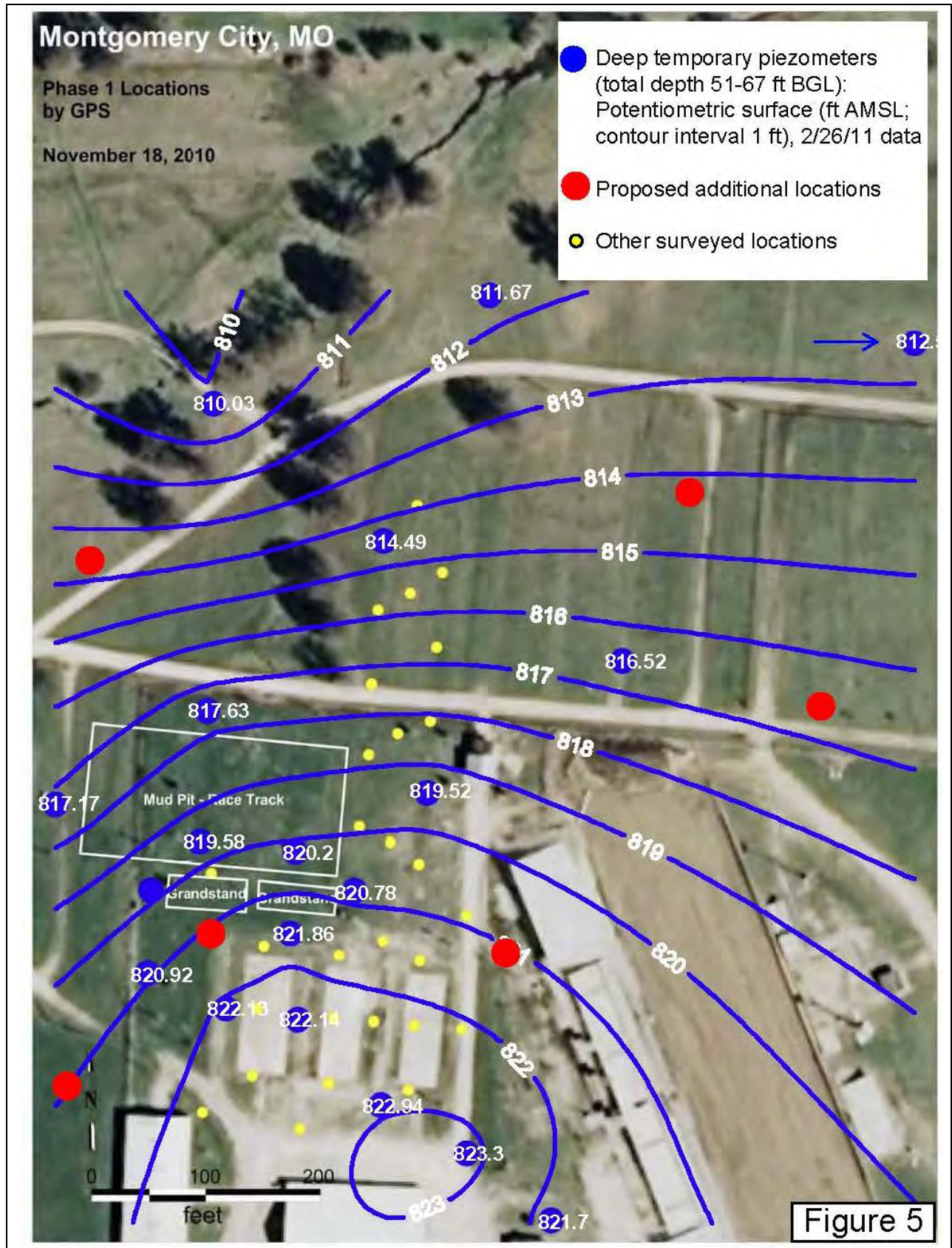


Figure 4





**Table 2 Results from AGEM Laboratory for groundwater sampling at Montgomery City in 2010 to Feb 2011**

Location	Sample ID	sample_date	Depth from (ft bgl)	Depth to (ft bgl)	Carbon Tetrachloride (µg/L)	Chloroform (µg/L)
<b>First Main Field Event</b>						
SB01	MCSB01-W-32410	10/28/10	8	18	1581	213
SB01	MCSB01-W-32646	10/23/10	20	30	10616	2084
SB01	MCSB01-W-32330	10/23/10	52.5	57.5	535	498
SB01S	MCSB01S-W-32411	10/28/10	20	30	10414	2036
SB01D	MCSB0157-W-32415	10/29/10	52.5	57.5	448	240
SB10	MCSB10-W-32405	10/27/10	8	18	ND	ND
SB11	MCSB11-W-32638	10/25/10	15	25	70	15
SB22D	MCSB22-W-32409	10/28/10	57.2	67.2	11	0.7 J
SB24	MCSB24-W-32643	10/21/10	8.3	18.3	ND	ND
SB24	MCSB24-W-32651	10/20/10	20	20	ND	ND
SB24	MCSB24-W-32651DUP	10/20/10	20	20	ND	ND
SB27	MCSB27-W-32406	10/27/10	41	51	4.2	1
SB29	MCSB29-W-32649	10/21/10	11.4	21.4	33	7.5
SB33	MCSB33-W-32636	10/25/10	12	22	233	24
SB34	MCSB34-W-32637	10/25/10	17	22	6.5	4.7
CREEK	MCCREEK-W-32408	10/27/10	--	--	ND	ND
HEMEYER	MICHEMEYER-W-32633	10/22/10	--	--	ND	ND
KEN COBB	MCKCOBB-W-32635	10/22/10	--	--	ND	ND
SUBWAY	MCSUBWAY-W-32413	10/28/10	--	--	ND	ND
PWS1	MCPWS1-W-32630	10/22/10	--	--	ND	ND
PWS2	MCPWS2-W-32631	10/22/10	--	--	ND	ND
PWS3	MCPWS3-W-32632	10/22/10	--	--	ND	ND
CITY WATER TREAT	MCTREAT-W-32634	10/22/10	--	--	ND	ND
<b>November 15 Sampling and Second Main Field Event</b>						
SB08D	MCSB08D-W-32508	12/6/10	46	56	1422	42
SB09S	MCSB09S-W-32430	11/30/10	18	28	105	5.2
SB09D	MCSB09D-W-32424	11/15/10	58	63	8.7	0.9 J
SB09D	MCSB09D-W-32425	11/15/10	58	63	7.1	0.8 J
SB17S	MCSB17S-W-32431	11/30/10	18	28	152	19
SB17D	MCSB17D-W-32422	11/15/10	51.3	61.3	1310	35
SB22S	MCSB22S-W-32426	11/15/10	18	28	0.5 J	ND
SB22S	MCSB22S-W-32426DUP	11/15/10	18	28	0.4 J	ND

**Table 2 Results from AGEM Laboratory for groundwater sampling at Montgomery City in 2010 to Feb 2011**

Location	Sample ID	sample_date	Depth from (ft bgl)	Depth to (ft bgl)	Carbon Tetrachloride (µg/L)	Chloroform (µg/L)
SB22D	MCSB22D-W-32427	11/15/10	57.2	67.2	11	0.4 J
SB27S	MCSB27S-W-32428	11/15/10	20	30	82	10
SB27S	MCSB27S-W-32428DUP	11/15/10	20	30	89	11
SB36S	MCSB36S-W-32421	11/15/10	15	25	2	1.3
SB36D	MCSB36D-W-32420	11/15/10	42.2	52.2	1.8	0.3 J
SB37S	MCSB37S-W-32433	11/30/10	15	25	ND	ND
SB37D	MCSB37D-W-32434	12/1/10	35.8	45.8	ND	ND
SB38D	MCSB38D-W-32506	12/6/10	41.2	51.2	1.4	0.7 J
SB38D	MCSB38D-W-32599	12/7/10	41.2	51.2	ND	ND
SB39D	MCSB39D-W-32435	12/1/10	45.8	55.8	123	32
SB40D	MCSB40D-W-32601	12/7/10	43.3	53.3	0.4 J	ND
SB41M	MCSB41M-W-32500	12/2/10	20	30	6226	957
SB41D	MCSB41D-W-32439	12/5/10	48	58	13	76
SB41D	MCSB41D-W-32595	12/7/10	48	58	14	78
SB42D	MCSB42D-W-32502	12/5/10	47	57	7.9	6.2
SB42D	MCSB42D-W-32596	12/7/10	47	57	7.4	1.4
SB43D	MCSB43D-W-32503	12/5/10	37.4	47.4	ND	ND
SB44D	MCSB44D-W-32504	12/5/10	50	60	10	ND
SB45D	MCSB45D-W-32507	12/6/10	56	66	ND	ND
SB45D	MCSB45D-W-32598	12/7/10	56	66	2.8	1.1
SB46M	MCSB46M-W-32505	12/5/10	20	30	75	33
SB46M	MCSB46M-W-32597	12/7/10	20	30	76	33
SB46D	MCSB46D-W-32600	12/7/10	47	57	1341	240
SB48D	MCSB48D-W-32509	12/6/10	44	54	586	252
<b>Sampling in Jan 2011</b>						
SB16D	MCSB16D-W-32606	1/14/11	48	58	2.5	0.5 J
SB16D	MCSB16D-W-32607	1/14/11	48	58	2.8	0.5 J
SB22S	MCSB22S-W-32603	1/13/11	8	18	ND	ND
SB22M	MCSB22M-W-32604	1/13/11	18	28	ND	ND
SB38M	MCSB38M-W-32615	1/14/11	15	25	ND	ND
SB39S	MCSB39S-W-32617	1/14/11	23	33	85	35
SB40S	MCSB40S-W-32613	1/14/11	8	18	1.6	ND

**Table 2 Results from AGEM Laboratory for groundwater sampling at Montgomery City in 2010 to Feb 2011**

Location	Sample ID	sample_date	Depth from (ft bgl)	Depth to (ft bgl)	Carbon Tetrachloride (µg/L)	Chloroform (µg/L)
SB40M	MCSB40M-W-32612	1/14/11	20	30	ND	ND
SB41S	MCSB41S-W-32620	1/15/11	8	18	85	36
SB42S	MCSB42S-W-32611	1/14/11	17	27	1065	141
SB43M	MCSB43M-W-32616	1/14/11	20	30	ND	ND
SB44S	MCSB44S-W-32619	1/15/11	8	18	ND	ND
SB44M	MCSB44M-W-32605	1/14/11	20	30	ND	ND
SB47S	MCSB47S-W-32610	1/14/11	20	30	2306	103
SB47D	MCSB47D-W-32609	1/14/11	47	57	135	6.1
SB48S	MCSB48S-W-32621	1/15/11	20	30	658	137
SB48D	MCSB48D-W-32608	1/14/11	44	54	449	318
<b>Sampling in Feb 2011</b>						
SB08S	MCSB08S-W-32566	2/26/11	20	30	1485	154
SB16M	MCSB16M-W-32568	2/26/11	20	30	491	44
SB45S	MCSB45S-W-32567	2/26/11	18	28	ND	ND

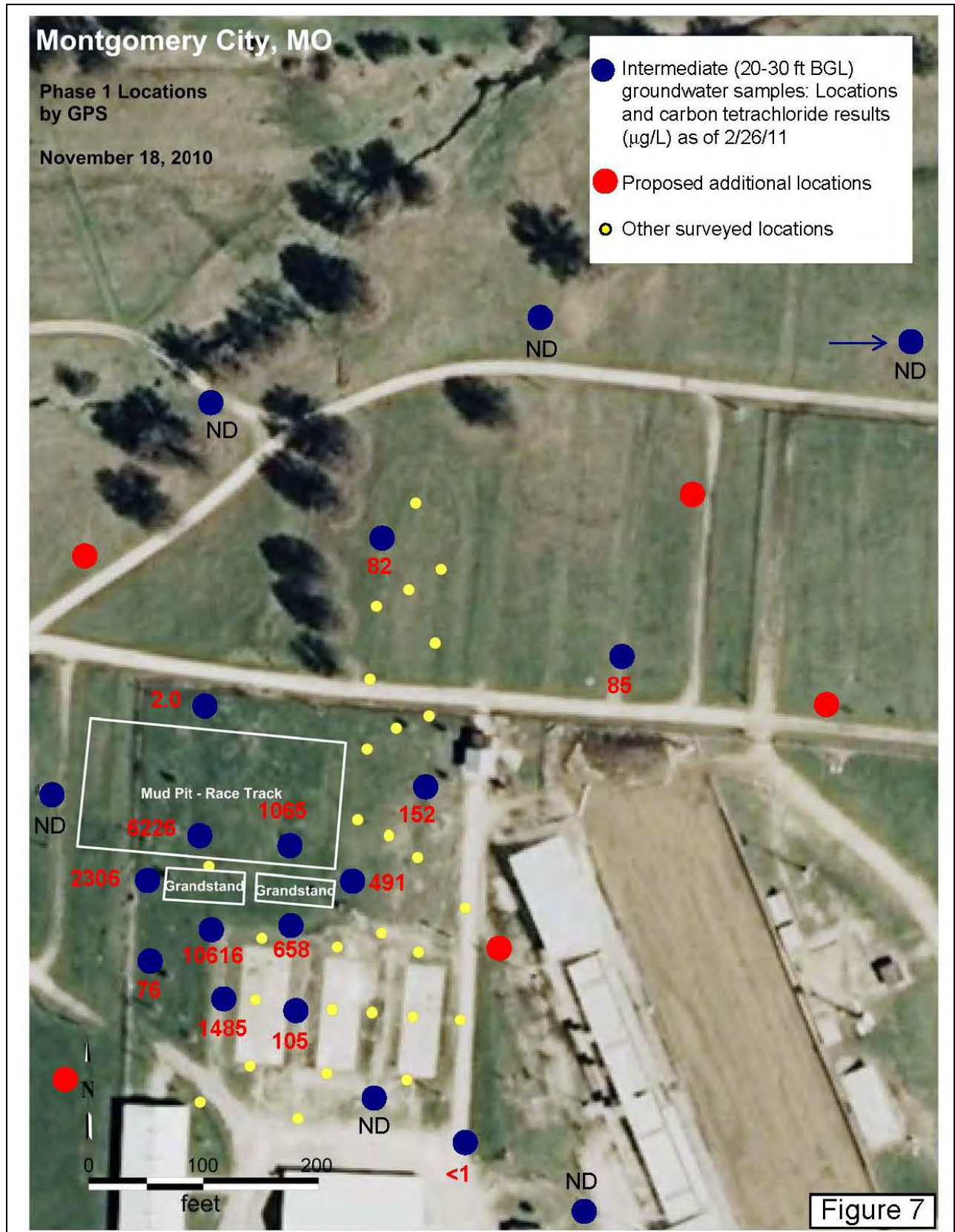
ND, not detected at instrument detection limit of 0.1 µg/L.

J, estimated concentration less than purge and trap method quantitation limit of 1 µg/L.











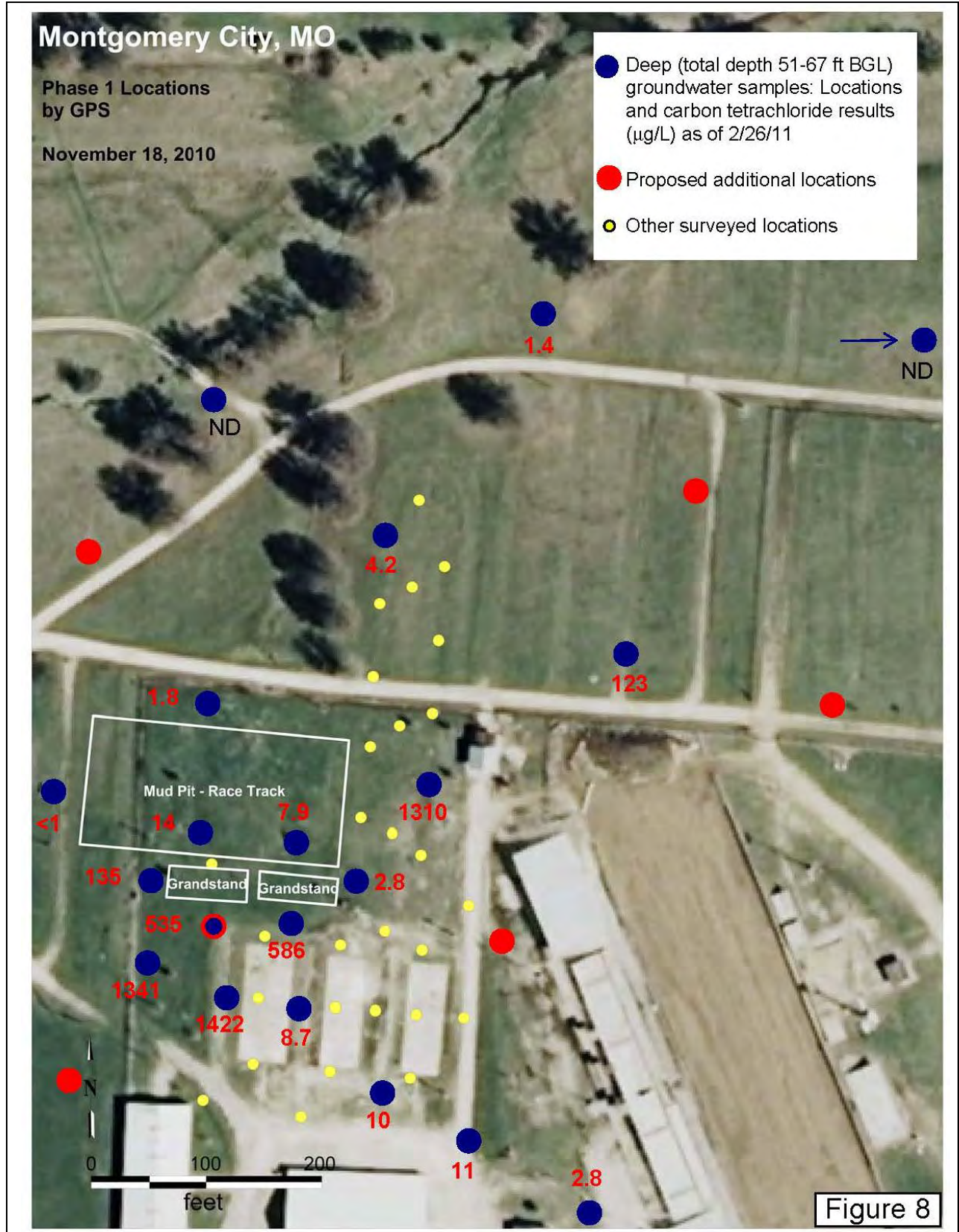


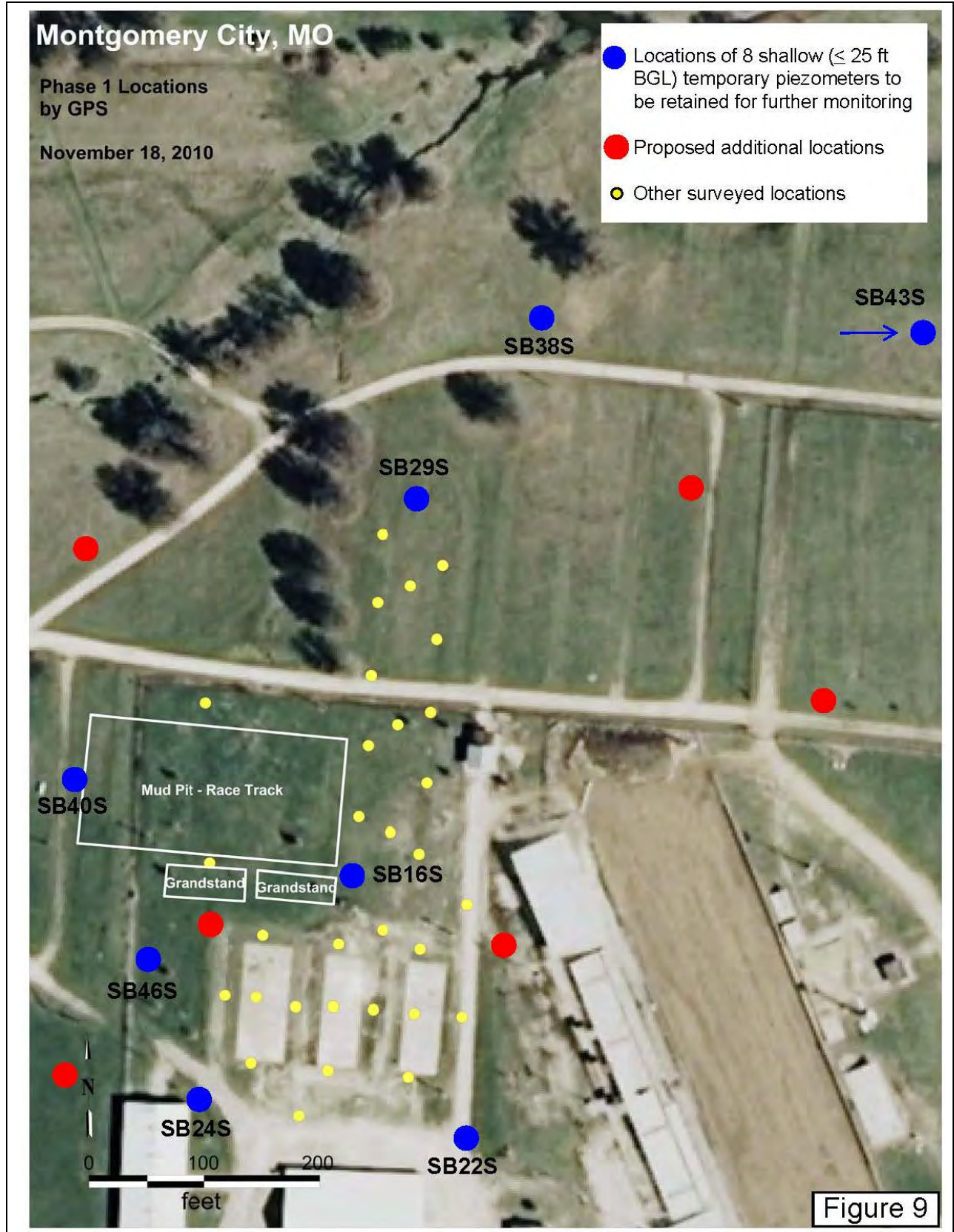
Table 3 List of Temporary Piezometers Presently Installed  
at the Montgomery City, MO CCC/USDA Site

Piezometers in Black are recommended to be certified and retained as permanent monitoring points.

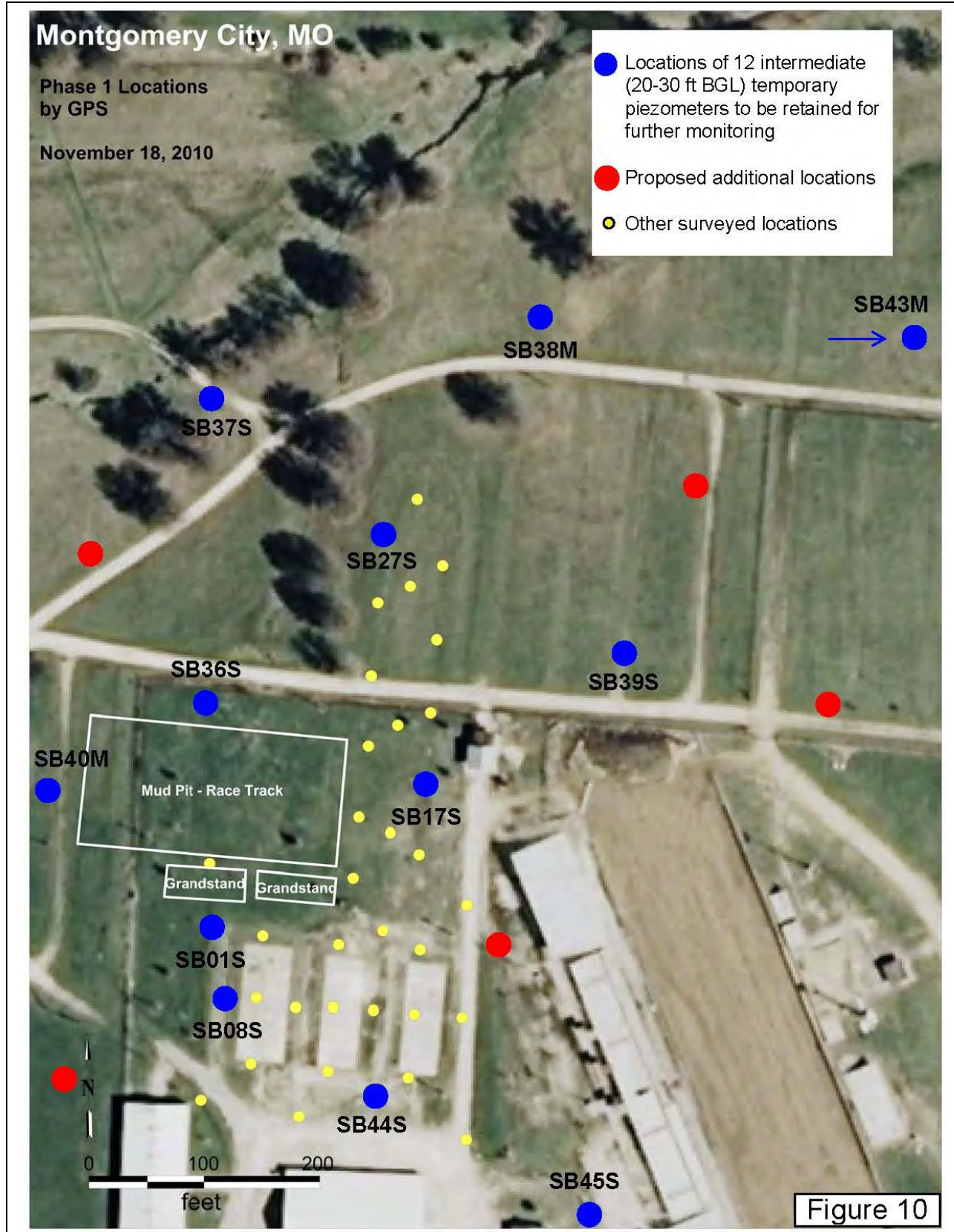
Piezometers in Red could be abandoned, per discussion with the MDNR, to reduce the total number of borings to be certified.

Shallow Piezos	Intermed Piezos	Deep Piezos
<del>SB40</del>	SB01S	SB08D
<del>SB41</del>	SB08S	<del>SB09D</del>
SB16S	<del>SB09S</del>	<del>SB16D</del>
SB22S	<del>SB16M</del>	SB17D
SB24	SB17S	<del>SB22D</del>
SB29	<del>SB22M</del>	SB27D
<del>SB33</del>	SB27S	SB36D
<del>SB34</del>	SB36S	SB37D
SB38S	SB37S	SB38D
SB40S	SB38M	SB39D
<del>SB41S</del>	SB39S	SB40D
SB43S	SB40M	<del>SB41D</del>
<del>SB44S</del>	<del>SB41M</del>	<del>SB42D</del>
SB46S	<del>SB42S</del>	SB43D
	SB43M	SB44D
Abandon	SB44M	SB45D
6 of 14	SB45S	SB46D
	<del>SB46M</del>	<del>SB47D</del>
	<del>SB47S</del>	<del>SB48D</del>
	<del>SB48S</del>	
	Abandon	Abandon
	8 of 20	7 of 19

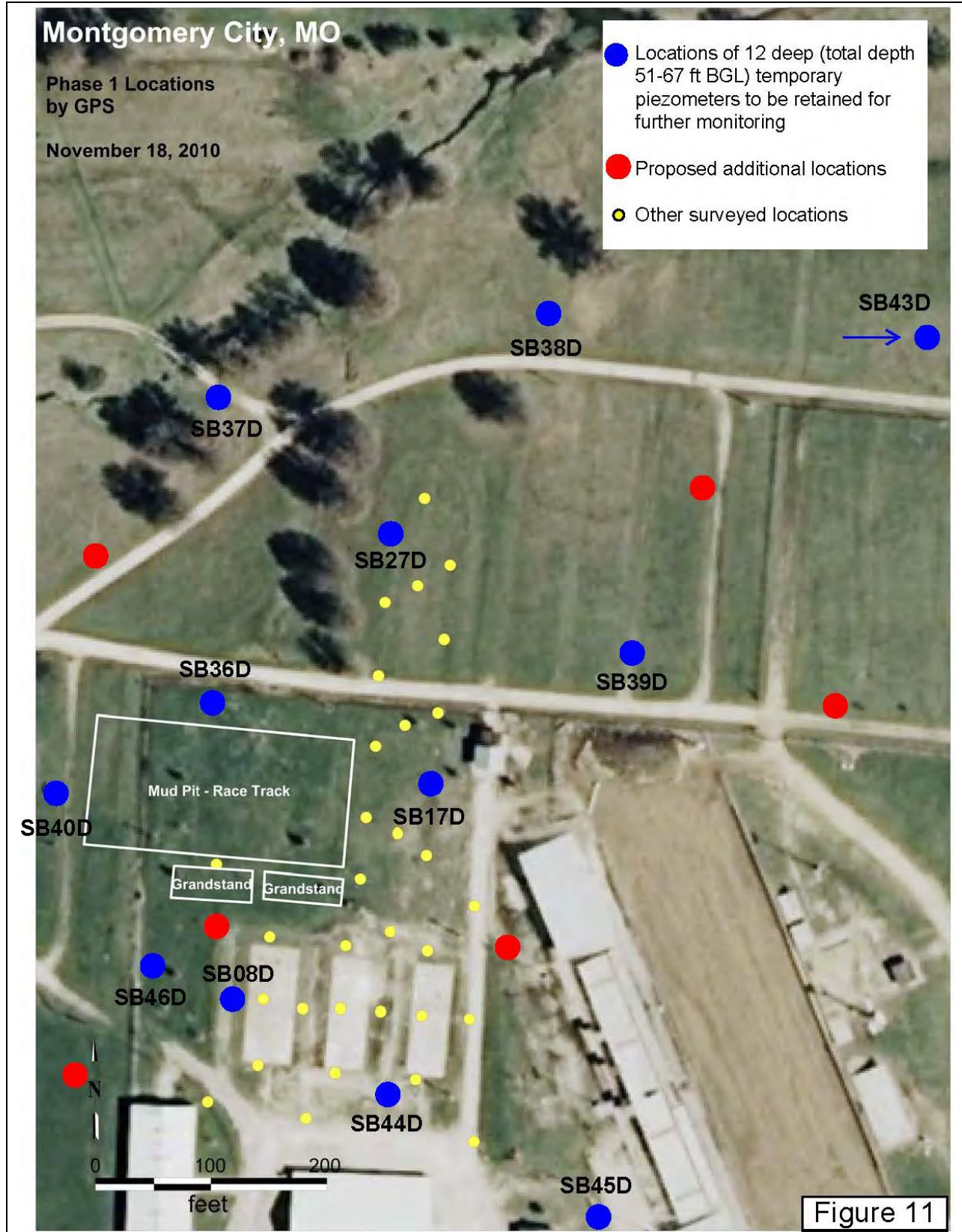












**Appendix B:**

**Well Certification and Variance Forms**



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, 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:** 4952

WELL OWNER INFORMATION									
<b>NAME:</b> US DEPT OF AGRICULTURE/COMMODITY CREDIT CORP., STEVE GILMORE									
<b>ADDRESS:</b> 1400 INDEPENDENCE AVE, SW							<b>FAX:</b>		
<b>CITY:</b> WASHINGTON			<b>STATE:</b> DC		<b>ZIP:</b> 20250		<b>TELEPHONE:</b>		
WELL LOCATION									
<b>COUNTY:</b> MONTGOMERY		<b>LAT.</b> 38 58 11.0			<b>LONG.</b> 91 29 42.0				
1/4		1/4		1/4 SE		SEC. 32		TWN. 49 N RNG. 5W	
CONTRACTOR INFORMATION									
<b>COMPANY NAME:</b> ARGONNE NATIONAL LAB/DELTA ENV				<b>PERMIT NUMBER:</b> 004395					
<b>CONTRACTOR NAME:</b> DAVID SURGNIER									
<b>ADDRESS:</b> 9700 S CASS AVE							<b>FAX:</b> 630-214-9098		
<b>CITY:</b> LEMONT		<b>STATE:</b> IL		<b>ZIP:</b> 60439		<b>TELEPHONE:</b> 630-408-7114			
VARIANCE INFORMATION									
VARIANCE EXPLANATION									
APPROVAL GRANTED TO ALLOW THE CONSTRUCTION OF DIRECT PUSH MONITORING WELLS AT THE ABOVE REFERENCED SITE USING 0.5 TO 1-INCH NOMINAL DIAMETER SCREENS AND RISERS. REQUIRED: A MINIMUM BOREHOLE DIAMETER OF 2.5 INCHES FOR THE 0.5 INCH RISER AND 3.0 INCHES FOR THE 1-INCH RISERS IS REQUIRED. ALL OTHER APPLICABLE MONITORING WELL CONSTRUCTION REQUIREMENTS UNDER THE MISSOURI WELL CONSTRUCTION RULES TO BE ADHERED TO. THE CONTRACTOR MUST PROVIDE NOTIFICATION OF THE REVISED WELL CONSTRUCTION PARAMETERS SET IN THIS VARIANCE TO THE DNR AND/OR EPA SITE MANAGER IF ONE HAS BEEN ASSIGNED TO THIS SITE.									
<b>RULE NUMBER MODIFIED:</b> 10 CSR 23-4.060									
REASON FOR VARIANCE									
CURRENT REGULATIONS DO NOT ADDRESS DIRECT PUSH TECHNOLOGY. MULTIPLE WELLS, LATITUDE AND LONGITUDE A GENERAL LOCATION FOR SITE. STOP 0513, ROOM 4717-S.									
<b>DATE:</b>		04/08/2011			<b>BY:</b>		MATTHEW PARKER, R.G.		
<b>COPY SENT TO OWNER (DATE):</b>					<b>BY:</b>				
<b>COPY SENT TO CONTRACTOR (DATE):</b>					<b>BY:</b>				
<b>Cc:</b>					<b>Cc:</b>				





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**

NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore		VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence	CITY Washington	STATE DC	ZIP CODE 20250
SITE NAME Montgomery City	WELL NUMBER SB01S	COUNTY Montgomery	
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 2.92	

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE		LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>1</u> FT. DIAMETER <u>12</u> IN.	DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>24</u> IN. LENGTH <u>2</u> FT.	SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____	LOCATION OF WELL (D/M/S FORMAT ONLY) LAT <u>38</u> ° <u>58</u> ' <u>12.925</u> " LONG <u>91</u> ° <u>29</u> ' <u>44.77</u> "
ANNULAR SEAL LENGTH <u>2</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>0.5</u> % OF BENTONITE USED _____ WATER USED/BAG <u>3</u> GAL				SURFACE COMPLETION <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC	SMALLEST _____ LARGEST _____ SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST
SECONDARY FILTER PACK LENGTH <u>2</u> FT.		RISER RISER PIPE DIAMETER <u>1</u> IN. RISER PIPE LENGTH <u>8</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>sc40</u>		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCS <input type="checkbox"/> PESTICIDES/HERBICIDES	PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH
DEPTH TO TOP OF PRIMARY FILTER PACK <u>6</u> FT.		BENTONITE SEAL LENGTH <u>2</u> <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input checked="" type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED		MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____	TO: FROM: FORMATION DESCRIPTION 1 3 top soil 3 8 glacial till 8 18 sandy silt
LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.		SCREEN SCREEN DIAMETER <u>1</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>8</u> FT.		SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____	TOTAL DEPTH: <b>18</b>

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/01/2512	
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.			<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-MD	SIGNATURE (OF APPRENTICE)	APPRENTICE PERMIT NUMBER





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**  
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB01M	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 2.9

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>1</u> FT. DIAMETER <u>12</u> IN.		DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>24</u> IN. LENGTH <u>2</u> FT.	SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____	LOCATION OF WELL (D/M/S FORMAT ONLY) LAT <u>38</u> ° <u>58</u> ' <u>12.888</u> " LONG <u>91</u> ° <u>29</u> ' <u>44.78</u> " SMALLEST _____ LARGEST _____ SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST
<input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE		<b>SURFACE COMPLETION</b> <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCS <input type="checkbox"/> PESTICIDES/HERBICIDES
ELEVATION <u>823.87</u> FT. <b>ANNULAR SEAL</b> LENGTH <u>14</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>0.5</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL.		<b>RISER</b> RISER PIPE DIAMETER <u>1</u> IN. RISER PIPE LENGTH <u>20</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>sc40</u>		PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH
SECONDARY FILTER PACK LENGTH <u>2</u> FT.		<b>MATERIAL</b> <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____		DEPTH TO TOP OF PRIMARY FILTER PACK <u>18</u> FT.
LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.		<b>BENTONITE SEAL</b> LENGTH <u>2</u> <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input checked="" type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED		DEPTH TO TOP <u>20</u> FT.
		<b>SCREEN</b> SCREEN DIAMETER <u>1</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>20</u> FT.		TOTAL DEPTH: <u>30</u>
		<b>SCREEN MATERIAL</b> <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____		

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/01/2512
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-MD	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**  
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

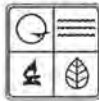
OWNER NAME U.S. Dept. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc	CITY Washington	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB01D	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 2.53

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE		LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN.	DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT.	SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER	LOCATION OF WELL (DIM/S FORMAT ONLY) LAT. <u>38</u> ° <u>58</u> ' <u>12.858</u> " LONG <u>91</u> ° <u>29</u> ' <u>44.78</u> "											
ANNULAR SEAL LENGTH <u>41</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED _____ % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL		<b>RISER</b> RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>47</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>sc40</u>		SMALLEST _____ LARGEST _____ SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST												
SECONDARY FILTER PACK LENGTH <u>2</u> FT.		<b>BENTONITE SEAL</b> LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES												
DEPTH TO TOP OF PRIMARY FILTER PACK <u>45</u> FT.		<b>SCREEN</b> SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>47</u> FT.		PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH												
LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.		<b>SCREEN MATERIAL</b> <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER		DEPTH TO FORMATION DESCRIPTION <table border="1"> <thead> <tr> <th>TO</th> <th>FROM</th> <th>FORMATION DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>top soil</td> </tr> <tr> <td>3</td> <td>47</td> <td>glacial till</td> </tr> <tr> <td>47</td> <td>57</td> <td>sandy silt</td> </tr> </tbody> </table>	TO	FROM	FORMATION DESCRIPTION	1	3	top soil	3	47	glacial till	47	57	sandy silt
TO	FROM	FORMATION DESCRIPTION														
1	3	top soil														
3	47	glacial till														
47	57	sandy silt														
TOTAL DEPTH: <u>57</u>																

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-MD	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

<b>INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR</b> NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS			
OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		CONTACT NAME Steve Gilmore	
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc		CITY Washington	STATE DC
SITE NAME Montgomery City		WELL NUMBER SB08S	ZIP CODE 20250
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City	VARIANCE GRANTED BY DNR NUMBER 4952
<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____		LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. <u>38</u> ° <u>58</u> ' <u>12.302</u> " LONG. <u>91</u> ° <u>29</u> ' <u>44.66</u> " SMALLEST _____ LARGEST _____ SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH	
ANNULAR SEAL LENGTH <u>14</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED _____ % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL.		RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>20</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>sc40</u> MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____	
SECONDARY FILTER PACK LENGTH <u>2</u> FT. DEPTH TO TOP OF PRIMARY FILTER PACK <u>18</u> FT. LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.		BENTONITE SEAL LENGTH <u>2</u> <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input checked="" type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>20</u> FT. SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____	
		DEPTH TO TOP OF PRIMARY FILTER PACK <u>18</u> FT. LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.	
		TOTAL DEPTH: <u>30</u>	
FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED			
SIGNATURE (PRIMARY CONTRACTOR)		PERMIT NUMBER <u>00439-M</u>	DATE WELL DRILLING WAS COMPLETED <u>01/25/2012</u>
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.			<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)		PERMIT NUMBER <u>00439-MD</u>	SIGNATURE (OF APPRENTICE)
			APPRENTICE PERMIT NUMBER

MO 760-1415 (07-11)

DISTRIBUTION: WHITE/DIVISION CANARY/CONTACTOR PINK/OWNER

RETURN WHITE COPY WITH APPROPRIATE FEE TO: MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF GEOLOGY AND LAND SURVEY, WELLHEAD PROTECTION SECTION, PO BOX 250, ROLLA, MO 65402 573-368-2165



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**  
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB08D	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 4.31

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____		LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. <u>38</u> ° <u>58</u> ' <u>12.281</u> " LONG <u>91</u> ° <u>29</u> ' <u>44.67</u> " SMALLEST <u>¼</u> ° <u>SE</u> ° <u>¼</u> ° SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> ° EAST <input checked="" type="checkbox"/> WEST MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCS <input type="checkbox"/> PESTICIDES/HERBICIDES PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH
ANNULAR SEAL LENGTH <u>41</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED _____ % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL SECONDARY FILTER PACK LENGTH <u>2</u> FT. DEPTH TO TOP OF PRIMARY FILTER PACK <u>45</u> FT. LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.	RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>47</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>sc40</u> MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____ BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>47</u> FT. SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____	DEPTH TO TOP OF PRIMARY FILTER PACK <u>45</u> FT. LENGTH OF PRIMARY FILTER PACK <u>12</u> FT. TOTAL DEPTH: <u>57</u>

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-MD	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**  
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB016S	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 3.44

<b>SURFACE COMPLETION</b>		LOCATION OF WELL (D/M/S FORMAT ONLY)	
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION	DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED	SURFACE COMPLETION GROUT
<input type="checkbox"/> ABOVE GROUND	LENGTH <u>3</u> FT.	DIAMETER <u>12</u> IN.	<input checked="" type="checkbox"/> CONCRETE
<input checked="" type="checkbox"/> FLUSH MOUNT	DIAMETER <u>6</u> IN.	LENGTH <u>3</u> FT.	<input type="checkbox"/> OTHER _____
<input checked="" type="checkbox"/> LOCKING CAP	ELEVATION <u>824.25</u> FT.		
<input type="checkbox"/> WEEP HOLE	ANNULAR SEAL		
	LENGTH <u>2</u> FT.		
	<input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS		
	<input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR		
	<input type="checkbox"/> CEMENT/SLURRY		
	IF CEMENT/BENTONITE MIX:		
	BAGS OF CEMENT USED <u>0.5</u>		
	% OF BENTONITE USED _____		
	WATER USED/BAG <u>6-7</u> GAL		
	SECONDARY FILTER PACK		
	LENGTH <u>2</u> FT.		
	DEPTH TO TOP OF PRIMARY FILTER PACK <u>13</u> FT.		
	LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.		
	SURFACE COMPLETION		
	<input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC		
	RISER		
	RISER PIPE DIAMETER <u>0.5</u> IN.		
	RISER PIPE LENGTH <u>8</u> FT.		
	DIAMETER OF DRILL HOLE <u>2.5</u> IN.		
	WEIGHT OR SDR# <u>sc40</u>		
	MATERIAL		
	<input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC)		
	<input type="checkbox"/> OTHER _____		
	BENTONITE SEAL		
	LENGTH <u>2</u>		
	<input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input checked="" type="checkbox"/> GRANULAR		
	<input type="checkbox"/> SLURRY		
	<input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED		
	SCREEN		
	SCREEN DIAMETER <u>0.5</u> IN.		
	SCREEN LENGTH <u>10</u> FT.		
	DIAMETER OF DRILL HOLE <u>2.5</u> IN.		
	DEPTH TO TOP <u>8</u> FT.		
	SCREEN MATERIAL		
	<input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC)		
	<input type="checkbox"/> OTHER _____		
		DEPTH	
		TO	FROM
		1	3
		3	8
		8	18
		FORMATION DESCRIPTION	
		top soil	
		glacial till	
		sandy silt	
		TOTAL DEPTH: <b>18</b>	

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-MD	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER

MO 700-1415 (07-11)

DISTRIBUTION: WHITE/DIVISION CANARY/CONTACTOR PINK/OWNER  
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WELLHEAD PROTECTION SECTION, PO BOX 250, ROLLA, MO 65402 573-368-2165





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**

NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB017S	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 3.94

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE		LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN.	DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT.	SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER	LOCATION OF WELL (D/M/S FORMAT ONLY) LAT <u>38</u> ° <u>58</u> ' <u>14.037</u> " LONG <u>91</u> ° <u>29</u> ' <u>42.44</u> " SMALLEST <u>1/4</u> LARGEST <u>1/4</u> <b>SE</b> SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST												
ANNULAR SEAL LENGTH <u>12</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>3</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL		RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>18</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>SC40</u>		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCS <input type="checkbox"/> PESTICIDES/HERBICIDES													
SECONDARY FILTER PACK LENGTH <u>2</u> FT.		BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED		PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH													
DEPTH TO TOP OF PRIMARY FILTER PACK <u>16</u> FT.		SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>18</u> FT.		DEPTH <table border="1"> <thead> <tr> <th>TO</th> <th>FROM</th> <th>FORMATION DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>top soil</td> </tr> <tr> <td>3</td> <td>18</td> <td>glacial till</td> </tr> <tr> <td>18</td> <td>28</td> <td>sandy silt</td> </tr> </tbody> </table>		TO	FROM	FORMATION DESCRIPTION	1	3	top soil	3	18	glacial till	18	28	sandy silt
TO	FROM	FORMATION DESCRIPTION															
1	3	top soil															
3	18	glacial till															
18	28	sandy silt															
LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.		SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER		TOTAL DEPTH: <b>28</b>													

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-MD	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
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REFERENCE NO.	CHECK NO.	
C.R. NO.	REVENUE NO.	
STATE WELL NUMBER	APPROVED BY	
ENTERED	ROUTE	
Ph1 Ph2 Ph3		

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**

NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB017D	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 3.22

<b>SURFACE COMPLETION</b>		DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED		SURFACE COMPLETION GROUT		LOCATION OF WELL (D/M/S FORMAT ONLY)			
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION	DIAMETER	DEPTH	<input checked="" type="checkbox"/> CONCRETE		LAT. 38 ° 58 ' 14.037 "			
<input type="checkbox"/> ABOVE GROUND	LENGTH 3 FT.	12 IN.	3 FT.	<input type="checkbox"/> OTHER		LONG. 91 ° 29 ' 42.44 "			
<input checked="" type="checkbox"/> FLUSH MOUNT	DIAMETER 6 IN.					SMALLEST 1/4 LARGEST 1/4 SE 1/4			
<input checked="" type="checkbox"/> LOCKING CAP						SECTION 32 TOWNSHIP 49 NORTH			
<input type="checkbox"/> WEEP HOLE						RANGE 5 <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST			
ELEVATION 824.21 FT.							MONITORING FOR: (CHECK ALL THAT APPLY)		
<b>ANNULAR SEAL</b>				<b>RISER</b>		<input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY			
LENGTH 45.3 FT.			RISER PIPE DIAMETER 0.5 IN.		<input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC		<input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION		
<input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS			RISER PIPE LENGTH 51.3 FT.		<input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES		<input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE		
<input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR			DIAMETER OF DRILL HOLE 2.5 IN.				<input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL		
<input type="checkbox"/> CEMENT/SLURRY			WEIGHT OR SDR# sc40				<input type="checkbox"/> DIRECT PUSH		
IF CEMENT/BENTONITE MIX:			<b>MATERIAL</b>				DEPTH		
BAGS OF CEMENT USED 3			<input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC)				TO FROM FORMATION DESCRIPTION		
% OF BENTONITE USED			<input type="checkbox"/> OTHER				1 3 top soil		
WATER USED/BAG 6-7 GAL							3 51.3 glacial till		
<b>SECONDARY FILTER PACK</b>				<b>BENTONITE SEAL</b>				51.3 61.3 sandy silt	
LENGTH 2 FT.			LENGTH 2				TOTAL DEPTH: 61.3		
			<input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR						
			<input type="checkbox"/> SLURRY						
			<input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED						
			<b>SCREEN</b>						
			SCREEN DIAMETER 0.5 IN.						
			SCREEN LENGTH 10 FT.						
			DIAMETER OF DRILL HOLE 2.5 IN.						
			DEPTH TO TOP 61.3 FT.						
			<b>SCREEN MATERIAL</b>						
			<input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC)						
			<input type="checkbox"/> OTHER						

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-MD	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
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ENTERED	APPROVED BY	ROUTE
Ph1 Ph2 Ph3		

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**

NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Dept. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence	CITY Washington	STATE ZIP CODE DC 20250
SITE NAME Montgomery City	WELL NUMBER SB022S	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 4.3

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>1</u> FT. DIAMETER <u>12</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>24</u> IN. LENGTH <u>2</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER		LOCATION OF WELL (D/M/S FORMAT ONLY) LAT <u>38</u> ° <u>58</u> ' <u>11.025</u> " LONG <u>91</u> ° <u>29</u> ' <u>42.05</u> " SMALLEST <u>1/4</u> LARGEST <u>SE 1/4</u> SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> EAST <input checked="" type="checkbox"/> WEST MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH																	
ANNULAR SEAL LENGTH <u>2</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>0.5</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL SECONDARY FILTER PACK LENGTH <u>2</u> FT. DEPTH TO TOP OF PRIMARY FILTER PACK <u>6</u> FT. LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.	SURFACE COMPLETION <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC RISER RISER PIPE DIAMETER <u>1</u> IN. RISER PIPE LENGTH <u>8</u> FT. DIAMETER OF DRILL HOLE <u>2 3/8</u> IN. WEIGHT OR SDR# <u>sc40</u> MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____ BENTONITE SEAL LENGTH <u>2</u> <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input checked="" type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED SCREEN SCREEN DIAMETER <u>1</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>8</u> FT. SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____	<table border="1"> <thead> <tr> <th colspan="2">DEPTH</th> <th rowspan="2">FORMATION DESCRIPTION</th> </tr> <tr> <th>TO</th> <th>FROM</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>top soil</td> </tr> <tr> <td>3</td> <td>8</td> <td>glacial till</td> </tr> <tr> <td>8</td> <td>18</td> <td>sandy silt</td> </tr> <tr> <td colspan="2">TOTAL DEPTH:</td> <td>18</td> </tr> </tbody> </table>	DEPTH		FORMATION DESCRIPTION	TO	FROM	1	3	top soil	3	8	glacial till	8	18	sandy silt	TOTAL DEPTH:		18
DEPTH		FORMATION DESCRIPTION																	
TO	FROM																		
1	3	top soil																	
3	8	glacial till																	
8	18	sandy silt																	
TOTAL DEPTH:		18																	

FOR CASSED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL, HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-MD	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**  
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Dept. of Agriculture/Commodity Credit Corp (USDA/CCC)		CONTACT NAME Steve Gilmore		VARIANCE GRANTED BY DNR	
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc		CITY Washington	STATE DC	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City			WELL NUMBER SB24	COUNTY Montgomery	
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.			CITY Montgomery City	STATIC WATER LEVEL 2.74	

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE		LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>12</u> IN.	DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>24</u> IN. LENGTH <u>3</u> FT.	SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER	LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. <u>38</u> ° <u>58</u> ' <u>11.395</u> " LONG. <u>91</u> ° <u>29</u> ' <u>44.97</u> "												
ANNULAR SEAL LENGTH <u>2</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>0.5</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL		ELEVATION <u>827.01</u> FT.		SURFACE COMPLETION <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC	SMALLEST _____ LARGEST _____ SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST												
SECONDARY FILTER PACK LENGTH <u>2</u> FT.		RISER RISER PIPE DIAMETER <u>1</u> IN. RISER PIPE LENGTH <u>8</u> FT. DIAMETER OF DRILL HOLE <u>3.25</u> IN. WEIGHT OR SDR# <u>sc40</u>		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES													
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1	3	top soil															
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8	18	sandy silt															
SCREEN SCREEN DIAMETER <u>1</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>3.25</u> IN. DEPTH TO TOP <u>8</u> FT.		SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER		TOTAL DEPTH: <b>18</b>													

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-MD	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
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C. R. NO.	REVENUE NO.	
STATE WELL NUMBER	APPROVED BY	
ENTERED	Ph1	Ph2
	Ph3	ROUTE

<b>INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR</b>			
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS			
OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		CONTACT NAME Steve Gilmore	
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc		CITY Washington	STATE DC
		ZIP CODE 20250	VARIANCE GRANTED BY DNR NUMBER 4952
SITE NAME Montgomery City		WELL NUMBER SB027S	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City	STATIC WATER LEVEL 2.67
<b>SURFACE COMPLETION</b>		LOCATION OF WELL (D/M/S FORMAT ONLY)	
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION	DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED	SURFACE COMPLETION GROUT
<input type="checkbox"/> ABOVE GROUND	LENGTH <u>3</u> FT.	DIAMETER <u>12</u> IN.	<input checked="" type="checkbox"/> CONCRETE
<input checked="" type="checkbox"/> FLUSH MOUNT	DIAMETER <u>6</u> IN.	LENGTH <u>3</u> FT.	<input type="checkbox"/> OTHER _____
<input checked="" type="checkbox"/> LOCKING CAP			LAT. <u>38</u> ° <u>58</u> ' <u>16.191</u> " LONG <u>91</u> ° <u>29</u> ' <u>42.85</u> "
<input type="checkbox"/> WEEP HOLE	ANNULAR SEAL LENGTH <u>14</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>1</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL		SMALLEST _____ LARGEST <u>SE</u> _____ SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST
SECONDARY FILTER PACK LENGTH <u>2</u> FT.  DEPTH TO TOP OF PRIMARY FILTER PACK <u>18</u> FT.  LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.		SURFACE COMPLETION <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC  RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>20</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>sc40</u>  MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____  BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED	MONITORING FOR (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES  PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH
		SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>20</u> FT.  SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____	DEPTH TO TOP OF PRIMARY FILTER PACK <u>18</u> FT.  LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.  TOTAL DEPTH: <u>30</u>
FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.			
SIGNATURE (PRIMARY CONTRACTOR)		PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.			<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)		PERMIT NUMBER 00439-MD	SIGNATURE (OF APPRENTICE)
			APPRENTICE PERMIT NUMBER

MO 260-1415 (07-11) DISTRIBUTION: WHITE/DIVISION CANARY/CONTACTOR PINK/OWNER  
RETURN WHITE COPY WITH APPROPRIATE FEE TO: MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF GEOLOGY AND LAND SURVEY, WELLHEAD PROTECTION SECTION, PO BOX 250, ROLLA, MO 65402 573-368-2165





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
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STATE WELL NUMBER	APPROVED BY	
ENTERED	Ph1	Ph2 Ph3
ROUTE		

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OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB027D	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 5.98

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____ LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. <u>38</u> ° <u>58</u> ' <u>16.172</u> " LONG <u>91</u> ° <u>29</u> ' <u>42.85</u> "																			
<input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE ELEVATION <u>817.41</u> FT. ANNULAR SEAL LENGTH <u>35</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>2</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL. SECONDARY FILTER PACK LENGTH <u>2</u> FT. DEPTH TO TOP OF PRIMARY FILTER PACK <u>39</u> FT. LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.	SURFACE COMPLETION <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>41</u> FT. DIAMETER OF DRILLHOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>sc40</u> MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____ BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILLHOLE <u>2.5</u> IN. DEPTH TO TOP <u>41</u> FT. SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____	MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH <table border="1"> <thead> <tr> <th colspan="2">DEPTH</th> <th rowspan="2">FORMATION DESCRIPTION</th> </tr> <tr> <th>TO</th> <th>FROM</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>top soil</td> </tr> <tr> <td>3</td> <td>41</td> <td>glacial till</td> </tr> <tr> <td>41</td> <td>51</td> <td>sandy silt</td> </tr> <tr> <td colspan="2">TOTAL DEPTH:</td> <td><b>51</b></td> </tr> </tbody> </table>	DEPTH		FORMATION DESCRIPTION	TO	FROM	1	3	top soil	3	41	glacial till	41	51	sandy silt	TOTAL DEPTH:		<b>51</b>
DEPTH		FORMATION DESCRIPTION																	
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41	51	sandy silt																	
TOTAL DEPTH:		<b>51</b>																	

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
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I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.  PUMP INSTALLED

SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-MD	SIGNATURE (OF APPRENTICE)	APPRENTICE PERMIT NUMBER
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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
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ROUTE		

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OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CDC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB29	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 6.18

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>12</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>24</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____		LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. <u>38</u> ° <u>58</u> ' <u>16.476</u> " LONG. <u>91</u> ° <u>29</u> ' <u>42.45</u> " SMALLEST _____ ° _____ ' _____ " LARGEST _____ ° _____ ' _____ " SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST
LOCKING CAP <input type="checkbox"/> WEEP HOLE <input type="checkbox"/> ELEVATION <u>817.34</u> FT. <b>ANNULAR SEAL</b> LENGTH <u>6</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>0.5</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH
MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____ <b>BENTONITE SEAL</b> LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED		DEPTH TO TOP OF PRIMARY FILTER PACK <u>10</u> FT. LENGTH OF PRIMARY FILTER PACK <u>12</u> FT. DEPTH TO TOP <u>12</u> FT. <b>SCREEN</b> SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>3.25</u> IN. DEPTH TO TOP <u>12</u> FT. SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____
SECONDARY FILTER PACK LENGTH <u>2</u> FT.		PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH
TOTAL DEPTH:		22

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-MD	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**  
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB36S	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 2.98

<b>SURFACE COMPLETION</b>		DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED		SURFACE COMPLETION GROUT	LOCATION OF WELL (DIM/S FORMAT ONLY)																	
TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT	LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN.	DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT.		<input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER	LAT. <u>38</u> ° <u>58</u> ' <u>14.764</u> " LONG. <u>91</u> ° <u>29</u> ' <u>44.83</u> "																	
<input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE			<b>SURFACE COMPLETION</b> <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC  <b>RISER</b> RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>15</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>sc40</u>  <b>MATERIAL</b> <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER		SMALLEST <u>3/4</u> LARGEST <u>SE</u> SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST																	
<b>ANNULAR SEAL</b> LENGTH <u>9</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>0.5</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL.		<b>BENTONITE SEAL</b> LENGTH <u>2</u> <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input checked="" type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES																		
SECONDARY FILTER PACK LENGTH <u>2</u> FT.  DEPTH TO TOP OF PRIMARY FILTER PACK <u>13</u> FT.  LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.		<b>SCREEN</b> SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>15</u> FT.  <b>SCREEN MATERIAL</b> <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER		PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH																		
				<table border="1"> <thead> <tr> <th colspan="2">DEPTH</th> <th rowspan="2">FORMATION DESCRIPTION</th> </tr> <tr> <th>TO</th> <th>FROM</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>top soil</td> </tr> <tr> <td>3</td> <td>15</td> <td>glacial till</td> </tr> <tr> <td>15</td> <td>25</td> <td>sandy silt</td> </tr> <tr> <td colspan="2">TOTAL DEPTH:</td> <td>25</td> </tr> </tbody> </table>		DEPTH		FORMATION DESCRIPTION	TO	FROM	1	3	top soil	3	15	glacial till	15	25	sandy silt	TOTAL DEPTH:		25
DEPTH		FORMATION DESCRIPTION																				
TO	FROM																					
1	3	top soil																				
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TOTAL DEPTH:		25																				

FOR CASSED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-MD	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
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C.R. NO.	REVENUE NO.	
STATE WELL NUMBER	APPROVED BY	
ENTERED Ph1 Ph2 Ph3	ROUTE	

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**

NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Dept. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB36D	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 3.59

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE LENGTH 3 FT. DIAMETER 6 IN.		DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER 12 IN. LENGTH 3 FT.		SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER		LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. 38 ° 58 ' 14.765 " LONG. 91 ° 29 ' 44.85 "	
ANNULAR SEAL LENGTH 36.2 FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED 2 % OF BENTONITE USED WATER USED/BAG 6-7 GAL		RISER RISER PIPE DIAMETER 0.5 IN. RISER PIPE LENGTH 42.5 FT. DIAMETER OF DRILL HOLE 2.5 IN. WEIGHT OR SDR# sc40		MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCS <input type="checkbox"/> PESTICIDES/HERBICIDES	
SECONDARY FILTER PACK LENGTH 2 FT.		BENTONITE SEAL LENGTH 2 <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED		SCREEN SCREEN DIAMETER 0.5 IN. SCREEN LENGTH 10 FT. DIAMETER OF DRILL HOLE 2.5 IN. DEPTH TO TOP 42.2 FT.		PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH	
DEPTH TO TOP OF PRIMARY FILTER PACK 40.2 FT.		LENGTH OF PRIMARY FILTER PACK 12 FT.		TO FROM FORMATION DESCRIPTION 1 3 top soil 3 42.2 glacial till 42.2 52.2 sandy silt		TOTAL DEPTH: 52.2	

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-MD	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
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ENTERED	APPROVED BY	ROUTE
Ph1 Ph2 Ph3		

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OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB37S	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 6.48

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____		LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. <u>38</u> ° <u>58</u> ' <u>17.348</u> " LONG <u>91</u> ° <u>29</u> ' <u>44.75</u> " SMALLEST _____" LARGEST _____" SE _____" SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> EAST <input checked="" type="checkbox"/> WEST
LOCKING CAP <input checked="" type="checkbox"/> WEEP HOLE <input type="checkbox"/> ELEVATION <u>811.63</u> FT. ANNULAR SEAL LENGTH <u>9</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>0.5</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL. SECONDARY FILTER PACK LENGTH <u>2</u> FT. DEPTH TO TOP OF PRIMARY FILTER PACK <u>13</u> FT. LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH
RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>15</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>sc40</u> MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____		DEPTH TO TOP OF PRIMARY FILTER PACK <u>13</u> FT. BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>15</u> FT. SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____
		TO DEPTH FROM FORMATION DESCRIPTION 1 3 top soil 3 15 glacial till 15 25 sandy silt TOTAL DEPTH: <u>25</u>

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-MD	SIGNATURE (OF APPRENTICE)
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ENTERED	ROUTE	
Ph1 Ph2 Ph3		

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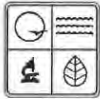
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB37D	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 5.24

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____		LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. <u>38</u> ° <u>58</u> ' <u>17.351</u> " LONG. <u>91</u> ° <u>29</u> ' <u>44.77</u> " SMALLEST <u>1/4</u> ° <u>SE</u> ° <u>1/4</u> ° SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> ° EAST <input checked="" type="checkbox"/> WEST																	
ANNUAL SEAL LENGTH <u>29.8</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>2</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES																	
SECONDARY FILTER PACK LENGTH <u>2</u> FT. DEPTH TO TOP OF PRIMARY FILTER PACK <u>33.8</u> FT. LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.		PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH																	
RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>35.8</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>sc40</u>		<table border="1"> <thead> <tr> <th colspan="2">DEPTH</th> <th rowspan="2">FORMATION DESCRIPTION</th> </tr> <tr> <th>TO</th> <th>FROM</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>top soil</td> </tr> <tr> <td>3</td> <td>35.8</td> <td>glacial till</td> </tr> <tr> <td>35.8</td> <td>45.8</td> <td>sandy silt</td> </tr> <tr> <td colspan="2">TOTAL DEPTH:</td> <td>45.8</td> </tr> </tbody> </table>	DEPTH		FORMATION DESCRIPTION	TO	FROM	1	3	top soil	3	35.8	glacial till	35.8	45.8	sandy silt	TOTAL DEPTH:		45.8
DEPTH		FORMATION DESCRIPTION																	
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TOTAL DEPTH:		45.8																	
MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____																			
BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED																			
SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>35.8</u> FT. SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____																			

FOR CASSED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-MD	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER



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Ph1 Ph2 Ph3		

<b>INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR</b>			
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OWNER NAME US Depart. of Agriculture/Commodity Credit Corp.(USDA/CCC)		CONTACT NAME Steve Gilmore	
OWNER ADDRESS STOP0513, Room 4717-S, 1400 Independenc		CITY Washington	STATE DC
		ZIP CODE 20250	VARIANCE GRANTED BY DNR NUMBER 4952
SITE NAME Montgomery City		WELL NUMBER SB38S	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairground, 700 S Sturgeon St		CITY Montgomery City	STATIC WATER LEVEL 7.49
<b>SURFACE COMPLETION</b>		DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED	
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION	SURFACE COMPLETION GROUT	
<input type="checkbox"/> ABOVE GROUND	LENGTH <u>3</u> FT.	<input checked="" type="checkbox"/> CONCRETE	
<input checked="" type="checkbox"/> FLUSH MOUNT	DIAMETER <u>6</u> IN.	<input type="checkbox"/> OTHER _____	
<input checked="" type="checkbox"/> LOCKING CAP		<b>SURFACE COMPLETION</b>	
<input type="checkbox"/> WEEP HOLE		<input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC	
ELEVATION <u>814.84</u> FT.		<b>RISER</b>	
<b>ANNULAR SEAL</b>		RISER PIPE DIAMETER <u>0.5</u> IN.	
LENGTH <u>4</u> FT.		RISER PIPE LENGTH <u>10</u> FT.	
<input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS		DIAMETER OF DRILL HOLE <u>2.5</u> IN.	
<input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR		WEIGHT OR SDR# <u>40</u>	
<input type="checkbox"/> CEMENT/SLURRY		<b>MATERIAL</b>	
IF CEMENT/BENTONITE MIX:		<input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC)	
BAGS OF CEMENT USED <u>0.5</u>		<input type="checkbox"/> OTHER _____	
% OF BENTONITE USED _____		<b>BENTONITE SEAL</b>	
WATER USED/BAG <u>6-7</u> GAL.		LENGTH <u>2</u>	
<b>SECONDARY FILTER PACK</b>		<input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR	
LENGTH <u>2</u> FT.		<input type="checkbox"/> SLURRY	
<b>DEPTH TO TOP OF PRIMARY FILTER PACK</b>		<input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED	
LENGTH <u>8</u> FT.		<b>SCREEN</b>	
<b>LENGTH OF PRIMARY FILTER PACK</b>		SCREEN DIAMETER <u>0.5</u> IN.	
PACK <u>7</u> FT.		SCREEN LENGTH <u>5</u> FT.	
		DIAMETER OF DRILL HOLE <u>2.5</u> IN.	
		DEPTH TO TOP <u>10</u> FT.	
		<b>SCREEN MATERIAL</b>	
		<input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC)	
		<input type="checkbox"/> OTHER _____	
		<b>LOCATION OF WELL (D/M/S FORMAT ONLY)</b>	
		LAT. <u>38</u> ° <u>58</u> ' <u>18.067</u> "	
		LONG <u>91</u> ° <u>28</u> ' <u>41.12</u> "	
		SMALLEST _____ LARGEST _____	
		SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH	
		RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST	
		MONITORING FOR: (CHECK ALL THAT APPLY)	
		<input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY	
		<input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC	
		<input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES	
		PROPOSED USE OF WELL	
		<input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION	
		<input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE	
		<input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL	
		<input type="checkbox"/> DIRECT PUSH	
		DEPTH	
		TO	FROM
		1	3
		3	10
		10	15
		FORMATION DESCRIPTION	
		Top Soil	
		Glacial Till	
		Sandy Silt	
		TOTAL DEPTH: <b>15</b>	
FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.			
SIGNATURE (PRIMARY CONTACTOR)		PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.			<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)		PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
			APPRENTICE PERMIT NUMBER none

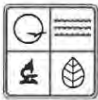
MO 780-1415 (07-11)

DISTRIBUTION: WHITE/DIVISION CANARY/CONTACTOR PINK/OWNER

RETURN WHITE COPY WITH APPROPRIATE FEE TO: MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF GEOLOGY AND LAND SURVEY, WELLHEAD PROTECTION SECTION, PO BOX 250, ROLLA, MO 65402 573-368-2165







MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

<b>OFFICE USE ONLY</b>		DATE RECEIVED
REFERENCE 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**

NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME US Depart. of Agriculture/Commodity Credit Corp.(USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB38D	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairground, 700 S Sturheon St	CITY Montgomery City	STATIC WATER LEVEL 6.03

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____		LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. <u>38</u> ° <u>58</u> ' <u>18.114</u> " LONG. <u>91</u> ° <u>28</u> ' <u>41.19</u> " SMALLEST _____ LARGEST <u>SE</u> _____ SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> EAST WEST																	
LOCKING CAP <input type="checkbox"/> WEEP HOLE <input type="checkbox"/> ELEVATION <u>814.88</u> FT.		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES																	
ANNULAR SEAL LENGTH <u>35.2</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>1.5</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL		PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH																	
SECONDARY FILTER PACK LENGTH <u>2</u> FT.		<table border="1"> <thead> <tr> <th colspan="2">DEPTH</th> <th rowspan="2">FORMATION DESCRIPTION</th> </tr> <tr> <th>TO</th> <th>FROM</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>Top Soil</td> </tr> <tr> <td>3</td> <td>41.2</td> <td>Glacial Till</td> </tr> <tr> <td>41.2</td> <td>51.2</td> <td>Sandy Silt</td> </tr> <tr> <td colspan="2">TOTAL DEPTH:</td> <td>51.2</td> </tr> </tbody> </table>	DEPTH		FORMATION DESCRIPTION	TO	FROM	1	3	Top Soil	3	41.2	Glacial Till	41.2	51.2	Sandy Silt	TOTAL DEPTH:		51.2
DEPTH		FORMATION DESCRIPTION																	
TO	FROM																		
1	3	Top Soil																	
3	41.2	Glacial Till																	
41.2	51.2	Sandy Silt																	
TOTAL DEPTH:		51.2																	
DEPTH TO TOP OF PRIMARY FILTER PACK <u>39.2</u> FT.																			
LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.																			
BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED																			
SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>41.2</u> FT.																			
SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____																			

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER none





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**  
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME US Depart. of Agriculture/Commodity Credit Corp.(USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB39S	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairground, 700 S Sturgeon St	CITY Montgomery City	STATIC WATER LEVEL 6.25

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____ LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. <u>38</u> ° <u>58</u> ' <u>15.269</u> " LONG <u>91</u> ° <u>29</u> ' <u>40.38</u> " SMALLEST _____ ¼ _____ ¼ <u>SE</u> ¼ SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH																			
LOCKING CAP <input type="checkbox"/> WEEP HOLE <input type="checkbox"/> ELEVATION <u>822.77</u> FT. ANNULAR SEAL LENGTH <u>17</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>2</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL. SECONDARY FILTER PACK LENGTH <u>2</u> FT. DEPTH TO TOP OF PRIMARY FILTER PACK <u>21</u> FT. LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.	SURFACE COMPLETION <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>23</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>40</u> MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____ BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>23</u> FT. SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____	<table border="1"> <thead> <tr> <th rowspan="2">DEPTH</th> <th colspan="2">FORMATION DESCRIPTION</th> </tr> <tr> <th>TO</th> <th>FROM</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>Top Soil</td> </tr> <tr> <td>3</td> <td>23</td> <td>Glacial Till</td> </tr> <tr> <td>23</td> <td>33</td> <td>Sandy Silt</td> </tr> <tr> <td colspan="2">TOTAL DEPTH:</td> <td><b>33</b></td> </tr> </tbody> </table>	DEPTH	FORMATION DESCRIPTION		TO	FROM	1	3	Top Soil	3	23	Glacial Till	23	33	Sandy Silt	TOTAL DEPTH:		<b>33</b>
DEPTH	FORMATION DESCRIPTION																		
	TO	FROM																	
1	3	Top Soil																	
3	23	Glacial Till																	
23	33	Sandy Silt																	
TOTAL DEPTH:		<b>33</b>																	

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**

NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME US Depart. of Agriculture/Commodity Credit Corp.(USDA/CCC)		CONTACT NAME Steve Gilmore		VARIANCE GRANTED BY DNR	
OWNER ADDRESS STOP0513, Room 4717-S, 1400 Independenc		CITY Washington	STATE DC	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City			WELL NUMBER SB39D	COUNTY Montgomery	
SITE ADDRESS Montgomery City Fairground, 700 S Sturgeon St			CITY Montgomery City	STATIC WATER LEVEL 6.1	

<b>SURFACE COMPLETION</b>				LOCATION OF WELL (DIMS FORMAT ONLY)	
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION	DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED	SURFACE COMPLETION GROUT	LAT. 38 ° 58 ' 15.266 "	
<input type="checkbox"/> ABOVE GROUND	LENGTH 3 FT.	DIAMETER 12 IN.	<input checked="" type="checkbox"/> CONCRETE	LONG 91 ° 29 ' 40.35 "	
<input checked="" type="checkbox"/> FLUSH MOUNT	DIAMETER 6 IN.	LENGTH 3 FT.	<input type="checkbox"/> OTHER		
<input checked="" type="checkbox"/> LOCKING CAP				SMALLEST 1/4	LARGEST 1/4 SE 1/4
<input type="checkbox"/> WEEP HOLE				SECTION 32	TOWNSHIP 49 NORTH
				RANGE 5	<input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST
				MONITORING FOR: (CHECK ALL THAT APPLY)	
				<input type="checkbox"/> RADIONUCLIDES	<input type="checkbox"/> PETROLEUM PRODUCTS ONLY
				<input type="checkbox"/> EXPLOSIVES	<input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC
				<input type="checkbox"/> SVOCs	<input type="checkbox"/> PESTICIDES/HERBICIDES
				PROPOSED USE OF WELL	
				<input type="checkbox"/> GAS MIGRATION WELL	<input checked="" type="checkbox"/> OBSERVATION
				<input type="checkbox"/> EXTRACTION WELL	<input type="checkbox"/> OPEN HOLE
				<input type="checkbox"/> PIEZOMETERS	<input type="checkbox"/> INJECTION WELL
				<input type="checkbox"/> DIRECT PUSH	
ANNULAR SEAL		RISER		DEPTH	
LENGTH 31.8 FT.		RISER PIPE DIAMETER 0.5 IN.		TO	FROM
<input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS		RISER PIPE LENGTH 45.8 FT.		1	3
<input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR		DIAMETER OF DRILL HOLE 2.5 IN.		3	45.8
<input type="checkbox"/> CEMENT/SLURRY		WEIGHT OR SDR# 40		45.8	55.8
IF CEMENT/BENTONITE MIX:		MATERIAL		FORMATION DESCRIPTION	
BAGS OF CEMENT USED 3		<input checked="" type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC)		Top Soil	
% OF BENTONITE USED		<input type="checkbox"/> OTHER		Glacial Till	
WATER USED/BAG 6-7 GAL.		BENTONITE SEAL		Sandy Silt	
SECONDARY FILTER PACK		LENGTH 2			
LENGTH 2 FT.		<input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR			
DEPTH TO TOP OF PRIMARY FILTER PACK 43.8 FT.		<input type="checkbox"/> SLURRY			
LENGTH OF PRIMARY FILTER PACK 12 FT.		<input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED			
		SCREEN			
		SCREEN DIAMETER 0.5 IN.			
		SCREEN LENGTH 10 FT.			
		DIAMETER OF DRILL HOLE 2.5 IN.			
		DEPTH TO TOP 45.8 FT.			
		SCREEN MATERIAL			
		<input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC)			
		<input type="checkbox"/> OTHER			
				TOTAL DEPTH: 55.8	

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
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<b>OFFICE USE ONLY</b>		DATE RECEIVED
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G. R. NO.	REVENUE NO.	
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ROUTE		

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OWNER NAME US Depart. of Agriculture/Commodity Credit Corp.(USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB40S	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairground, 700 S Sturgeon St	CITY Montgomery City	STATIC WATER LEVEL 3.84

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____		LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. <u>38</u> ° <u>58</u> ' <u>14.150</u> " LONG <u>91</u> ° <u>29</u> ' <u>46.70</u> " SMALLEST _____ % LARGEST <u>SE</u> % SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST																	
ANNULAR SEAL LENGTH <u>2</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>1</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL.	RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>8</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>40</u> MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____	MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH																	
BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED	SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>8</u> FT. SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____	<table border="1"> <thead> <tr> <th colspan="2">DEPTH</th> <th rowspan="2">FORMATION DESCRIPTION</th> </tr> <tr> <th>TO</th> <th>FROM</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>Top Soil</td> </tr> <tr> <td>3</td> <td>8</td> <td>Glacial Till</td> </tr> <tr> <td>8</td> <td>18</td> <td>Sandy Silt</td> </tr> <tr> <td colspan="2">TOTAL DEPTH:</td> <td>18</td> </tr> </tbody> </table>	DEPTH		FORMATION DESCRIPTION	TO	FROM	1	3	Top Soil	3	8	Glacial Till	8	18	Sandy Silt	TOTAL DEPTH:		18
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FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**  
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME US Depart. of Agriculture/Commodity Credit Corp.(USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB40M	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairground, 700 S Sturgeon St	CITY Montgomery City	STATIC WATER LEVEL 4.26

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____		LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. <u>38</u> ° <u>58</u> ' <u>14.145</u> " LONG. <u>91</u> ° <u>29</u> ' <u>46.64</u> " SMALLEST <u>1/4</u> ° <u>SE</u> ° <u>1/4</u> ° SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> ° EAST <input checked="" type="checkbox"/> WEST																	
ANNULAR SEAL LENGTH <u>14</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>1</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL.	<b>RISER</b> RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>20</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>40</u> <b>MATERIAL</b> <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER <u>2</u>	MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH																	
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SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
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Ph1 Ph2 Ph3		

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OWNER ADDRESS STOP0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB40D	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairground, 700 S Sturgeon St	CITY Montgomery City	STATIC WATER LEVEL 3.77

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE		LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN.	DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT.	SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER	LOCATION OF WELL (D/M/S FORMAT ONLY) LAT <u>38</u> ° <u>58</u> ' <u>14.145</u> " LONG <u>91</u> ° <u>29</u> ' <u>46.66</u> "																						
ANNULAR SEAL LENGTH <u>37.3</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>3</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL.		<b>RISER</b> RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>43.3</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>40</u>		SMALLEST _____ LARGEST <u>SE</u> _____ SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST	MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES																						
SECONDARY FILTER PACK LENGTH <u>2</u> FT.		<b>BENTONITE SEAL</b> LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED		PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH	<table border="1"> <thead> <tr> <th rowspan="2">DEPTH</th> <th colspan="2">DEPTH</th> <th rowspan="2">FORMATION DESCRIPTION</th> </tr> <tr> <th>TO</th> <th>FROM</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td></td> <td>Top Soil</td> </tr> <tr> <td>3</td> <td>43.3</td> <td></td> <td>Glacial Till</td> </tr> <tr> <td>43.3</td> <td>53.3</td> <td></td> <td>Sandy Silt</td> </tr> <tr> <td colspan="3">TOTAL DEPTH:</td> <td>53.3</td> </tr> </tbody> </table>	DEPTH	DEPTH		FORMATION DESCRIPTION	TO	FROM	1	3		Top Soil	3	43.3		Glacial Till	43.3	53.3		Sandy Silt	TOTAL DEPTH:			53.3
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DEPTH TO TOP OF PRIMARY FILTER PACK <u>41.3</u> FT.		<b>SCREEN</b> SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>43.3</u> FT.																									
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Ph1 Ph2 Ph3		

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OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc		CITY Washington	STATE DC	ZIP CODE 20250
SITE NAME Montgomery City		WELL NUMBER SB43S		COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City		STATIC WATER LEVEL 4.87

<p><b>SURFACE COMPLETION</b></p> <p>TYPE</p> <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <p>LENGTH AND DIAMETER OF SURFACE COMPLETION</p> <p>LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN.</p> <p><input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE</p> <p>ELEVATION <u>817.19</u> FT.</p> <p><b>ANNULAR SEAL</b></p> <p>LENGTH <u>2</u> FT.</p> <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY <p>IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>1</u> % OF BENTONITE USED _____</p> <p>WATER USED/BAG <u>6-7</u> GAL</p> <p>SECONDARY FILTER PACK LENGTH <u>2</u> FT.</p> <p>DEPTH TO TOP OF PRIMARY FILTER PACK <u>6</u> FT.</p> <p>LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.</p>	<p>DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED</p> <p>DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT.</p> <p><b>SURFACE COMPLETION GROUT</b></p> <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____ <p><b>SURFACE COMPLETION</b></p> <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC <p><b>RISER</b></p> <p>RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>8</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>40</u></p> <p><b>MATERIAL</b></p> <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____ <p><b>BENTONITE SEAL</b></p> <p>LENGTH <u>2</u></p> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED <p><b>SCREEN</b></p> <p>SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>8</u> FT.</p> <p><b>SCREEN MATERIAL</b></p> <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____	<p>LOCATION OF WELL (D/M/S FORMAT ONLY)</p> <p>LAT. <u>38</u> ° <u>58</u> ' <u>17.658</u> "</p> <p>LONG. <u>91</u> ° <u>29</u> ' <u>36.22</u> "</p> <p>SMALLEST _____ LARGEST _____</p> <p>SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> EAST <input checked="" type="checkbox"/> WEST</p> <p>MONITORING FOR: (CHECK ALL THAT APPLY)</p> <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES <p>PROPOSED USE OF WELL</p> <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH <table border="1"> <thead> <tr> <th colspan="2">DEPTH</th> <th rowspan="2">FORMATION DESCRIPTION</th> </tr> <tr> <th>TO</th> <th>FROM</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>Top Soil</td> </tr> <tr> <td>3</td> <td>8</td> <td>Glacial Till</td> </tr> <tr> <td>8</td> <td>18</td> <td>Sandy Silt</td> </tr> <tr> <td colspan="2">TOTAL DEPTH:</td> <td><b>18</b></td> </tr> </tbody> </table>	DEPTH		FORMATION DESCRIPTION	TO	FROM	1	3	Top Soil	3	8	Glacial Till	8	18	Sandy Silt	TOTAL DEPTH:		<b>18</b>
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SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-M	SIGNATURE (OF APPRENTICE) APPRENTICE PERMIT NUMBER none

MO 78011915 (07-11)

DISTRIBUTION: WHITE/DIVISION CANARY/CONTRACTOR PINK/OWNER  
RETURN WHITE COPY WITH APPROPRIATE FEE TO: MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF GEOLOGY AND LAND SURVEY,  
WELLHEAD PROTECTION SECTION, PO BOX 260, ROLLA, MO 65402 573-368-2165





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
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<b>SURFACE COMPLETION</b>		DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED		SURFACE COMPLETION GROUT		LOCATION OF WELL (D/M/S FORMAT ONLY)	
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION	DIAMETER	DEPTH	<input checked="" type="checkbox"/> CONCRETE		LAT. 38 ° 58 ' 17.678 "	
<input type="checkbox"/> ABOVE GROUND	LENGTH 3 FT.	DIAMETER 12 IN.	LENGTH 3 FT.	<input type="checkbox"/> OTHER		LONG 91 ° 29 ' 36.22 "	
<input checked="" type="checkbox"/> FLUSH MOUNT	DIAMETER 6 IN.					SMALLEST 1/4 " LARGEST 1/4 " SE 1/4 "	
<input checked="" type="checkbox"/> LOCKING CAP							SECTION 32 TOWNSHIP 49 NORTH
<input type="checkbox"/> WEEP HOLE							RANGE 5 <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST
ELEVATION 817.14 FT.							MONITORING FOR: (CHECK ALL THAT APPLY)
<b>ANNULAR SEAL</b>						<input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY	
LENGTH 14 FT.							<input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC
<input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS							<input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES
<input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR							PROPOSED USE OF WELL
<input type="checkbox"/> CEMENT/SLURRY							<input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION
IF CEMENT/BENTONITE MIX:							<input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE
BAGS OF CEMENT USED 1							<input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL
% OF BENTONITE USED							<input type="checkbox"/> DIRECT PUSH
WATER USED/BAG 6-7 GAL							DEPTH TO
<b>SECONDARY FILTER PACK</b>						TO	
LENGTH 2 FT.							FROM
<b>DEPTH TO TOP OF PRIMARY FILTER PACK 18 FT.</b>						FORMATION DESCRIPTION	
<b>LENGTH OF PRIMARY FILTER PACK 12 FT.</b>						1 3 Top Soil	
						3 20 Glacial Till	
						20 30 Sandy Silt	
						TOTAL DEPTH: 30	

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
THEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER none

MO 780-1415 (07-11)

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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

<b>INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR</b> NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS																				
OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		CONTACT NAME Steve Gilmore																		
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc		CITY Washington	STATE DC																	
		ZIP CODE 20250	NUMBER 4952																	
SITE NAME Montgomery City		WELL NUMBER SB43D	COUNTY Montgomery																	
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City	STATIC WATER LEVEL 3.27																	
<b>SURFACE COMPLETION</b>		LOCATION OF WELL (D/M/S FORMAT ONLY)																		
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION	DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED	SURFACE COMPLETION GROUT																	
<input type="checkbox"/> ABOVE GROUND	LENGTH <u>3</u> FT.	DIAMETER <u>12</u> IN.	<input checked="" type="checkbox"/> CONCRETE																	
<input checked="" type="checkbox"/> FLUSH MOUNT	DIAMETER <u>6</u> IN.	LENGTH <u>3</u> FT.	<input type="checkbox"/> OTHER _____																	
<input checked="" type="checkbox"/> LOCKING CAP																				
<input type="checkbox"/> WEEP HOLE	<b>SURFACE COMPLETION</b> <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC																			
ELEVATION <u>817.18</u> FT.	<b>RISER</b> RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>37.4</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>40</u>																			
<b>ANNULAR SEAL</b>	<b>MATERIAL</b> <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____																			
LENGTH <u>31.4</u> FT.	<b>BENTONITE SEAL</b> LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED																			
<input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS	<b>SCREEN</b> SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>37.4</u> FT.																			
<input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR	<b>SCREEN MATERIAL</b> <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____																			
<input type="checkbox"/> CEMENT/SLURRY	<b>BENTONITE SEAL</b> LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED																			
IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>2</u>	<b>PROPOSED USE OF WELL</b> <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH																			
% OF BENTONITE USED _____	<table border="1"> <thead> <tr> <th colspan="2">DEPTH</th> <th rowspan="2">FORMATION DESCRIPTION</th> </tr> <tr> <th>TO</th> <th>FROM</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>Top Soil</td> </tr> <tr> <td>3</td> <td>37.4</td> <td>Glacial Till</td> </tr> <tr> <td>37.4</td> <td>47.4</td> <td>Sandy Silt</td> </tr> <tr> <td colspan="2">TOTAL DEPTH:</td> <td>47.4</td> </tr> </tbody> </table>			DEPTH		FORMATION DESCRIPTION	TO	FROM	1	3	Top Soil	3	37.4	Glacial Till	37.4	47.4	Sandy Silt	TOTAL DEPTH:		47.4
DEPTH		FORMATION DESCRIPTION																		
TO	FROM																			
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37.4	47.4	Sandy Silt																		
TOTAL DEPTH:		47.4																		
WATER USED/BAG <u>6-7</u> GAL	<b>MONITORING FOR: (CHECK ALL THAT APPLY)</b> <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES																			
SECONDARY FILTER PACK LENGTH <u>2</u> FT.	<b>PROPOSED USE OF WELL</b> <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH																			
DEPTH TO TOP OF PRIMARY FILTER PACK <u>35.4</u> FT.	<b>PROPOSED USE OF WELL</b> <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH																			
LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.	<b>PROPOSED USE OF WELL</b> <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH																			
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SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012																		
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SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-M	SIGNATURE (OF APPRENTICE)	APPRENTICE PERMIT NUMBER none																	

MO 780-1415 (07-11)

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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**  
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB44M	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 3.84

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____		LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. <u>38</u> ° <u>58</u> ' <u>11.433</u> " LONG. <u>91</u> ° <u>29</u> ' <u>43.05</u> " SMALLEST <u>1/4</u> ° <u>SE</u> ° <u>1/4</u> ° SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> ° EAST <input checked="" type="checkbox"/> WEST												
ANNULAR SEAL LENGTH <u>14</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>0.5</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL. SECONDARY FILTER PACK LENGTH <u>2</u> FT. DEPTH TO TOP OF PRIMARY FILTER PACK <u>18</u> FT. LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH												
RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>20</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>40</u> MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____		BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED												
SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>20</u> FT. SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____		FORMATION DESCRIPTION <table border="1"> <thead> <tr> <th>DEPTH TO</th> <th>DEPTH FROM</th> <th>FORMATION DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>Top Soil</td> </tr> <tr> <td>3</td> <td>20</td> <td>Glacial Till</td> </tr> <tr> <td>20</td> <td>30</td> <td>Sandy Silt</td> </tr> </tbody> </table> TOTAL DEPTH: <b>30</b>	DEPTH TO	DEPTH FROM	FORMATION DESCRIPTION	1	3	Top Soil	3	20	Glacial Till	20	30	Sandy Silt
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20	30	Sandy Silt												

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
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SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER none

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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
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SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City	STATIC WATER LEVEL 4.83																	
<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____ <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE		LOCATION OF WELL (D/M/S FORMAT ONLY) LAT <u>38</u> ° <u>58</u> ' <u>11.413</u> " LONG. <u>91</u> ° <u>29</u> ' <u>43.05</u> " SMALLEST <u>1/4</u> LARGEST <u>1/4</u> <u>SE</u> SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH																		
ANNULAR SEAL LENGTH <u>44</u> FT <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>2</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL		RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>50</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>40</u> MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____																		
SECONDARY FILTER PACK LENGTH <u>2</u> FT DEPTH TO TOP OF PRIMARY FILTER PACK <u>48</u> FT LENGTH OF PRIMARY FILTER PACK <u>12</u> FT		BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>50</u> FT. SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____																		
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MO 790-1415 (07-11)

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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
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SITE NAME Montgomery City			WELL NUMBER SB45S	COUNTY Montgomery	
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.			CITY Montgomery City	STATIC WATER LEVEL 4.27	

<b>SURFACE COMPLETION</b>		DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED		SURFACE COMPLETION GROUT		LOCATION OF WELL (D/M/S FORMAT ONLY)	
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION	DIAMETER	LENGTH	<input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER		LAT.	LONG.
<input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT	LENGTH 3 FT. DIAMETER 6 IN.	DIAMETER 12 IN. LENGTH 3 FT.				38	91
						58	29
						10.242	40.68
<input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE				<b>SURFACE COMPLETION</b> <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC		SMALLEST _____ LARGEST SE _____ SECTION 32 TOWNSHIP 49 NORTH RANGE 5 <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST	
ELEVATION 828.58 FT.				<b>RISER</b> RISER PIPE DIAMETER 0.5 IN. RISER PIPE LENGTH 18 FT. DIAMETER OF DRILL HOLE 2.5 IN. WEIGHT OR SDR# 40		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES	
<b>ANNULAR SEAL</b> LENGTH 12 FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY				<b>MATERIAL</b> <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER		PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH	
IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED 1 % OF BENTONITE USED				<b>BENTONITE SEAL</b> LENGTH 2 <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED		DEPTH TO TOP OF WELL	
WATER USED/BAG 6-7 GAL				<b>SCREEN</b> SCREEN DIAMETER 0.5 IN. SCREEN LENGTH 10 FT. DIAMETER OF DRILL HOLE 2.5 IN. DEPTH TO TOP 18 FT.		FORMATION DESCRIPTION	
<b>SECONDARY FILTER PACK</b> LENGTH 2 FT.				<b>SCREEN MATERIAL</b> <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER		TO FROM	
<b>DEPTH TO TOP OF PRIMARY FILTER PACK</b> 16 FT.						1 3 3 18 18 28	
<b>LENGTH OF PRIMARY FILTER PACK</b> 12 FT.						TOTAL DEPTH: 28	

FOR CASSED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER none

MO 780.1415 (07-11)

DISTRIBUTION: WHITE/DIVISION CANARY/CONTACTOR PINK/OWNER  
RETURN WHITE COPY WITH APPROPRIATE FEE TO: MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF GEOLOGY AND LAND SURVEY,  
WELLHEAD PROTECTION SECTION, PO BOX 250, ROLLA, MO 65402 573-368-2165



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**  
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB45D	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 6.9

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____		LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. <u>38</u> ° <u>58</u> ' <u>10.225</u> " LONG <u>91</u> ° <u>29</u> ' <u>40.68</u> " SMALLEST <u>1/4</u> LARGEST <u>1/4</u> SE <u>1/4</u> SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> EAST <input checked="" type="checkbox"/> WEST															
ANNULAR SEAL LENGTH <u>50</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>1</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES															
SECONDARY FILTER PACK LENGTH <u>2</u> FT. DEPTH TO TOP OF PRIMARY FILTER PACK <u>54</u> FT. LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.		PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH															
RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>56</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>40</u>		DEPTH <table border="1"> <thead> <tr> <th>TO</th> <th>FROM</th> <th>FORMATION DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>Top Soil</td> </tr> <tr> <td>3</td> <td>56</td> <td>Glacial Till</td> </tr> <tr> <td>56</td> <td>66</td> <td>Sandy Silt</td> </tr> <tr> <td colspan="2">TOTAL DEPTH:</td> <td><b>66</b></td> </tr> </tbody> </table>	TO	FROM	FORMATION DESCRIPTION	1	3	Top Soil	3	56	Glacial Till	56	66	Sandy Silt	TOTAL DEPTH:		<b>66</b>
TO	FROM	FORMATION DESCRIPTION															
1	3	Top Soil															
3	56	Glacial Till															
56	66	Sandy Silt															
TOTAL DEPTH:		<b>66</b>															
BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED																	
SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>56</u> FT. SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____																	

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER none





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**  
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CDC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB46S	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 1.91

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____ <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE		LOCATION OF WELL (D/M/S FORMAT ONLY) LAT <u>38</u> ° <u>58</u> ' <u>12.716</u> " LONG <u>91</u> ° <u>29</u> ' <u>45.51</u> " SMALLEST <u>1/4</u> LARGEST <u>SE 1/4</u> SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> EAST <input checked="" type="checkbox"/> WEST MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH
ANNULAR SEAL LENGTH <u>2</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>0.5</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL	RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>8</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>40</u> MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____	DEPTH TO FROM FORMATION DESCRIPTION 1 3 Top Soil 3 8 Glacial Till 8 18 Sandy Silt TOTAL DEPTH: 18
BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED	SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>8</u> FT. SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____	

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER none



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**

NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independenc	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB46D	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 3.07

<b>SURFACE COMPLETION</b>		DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED		SURFACE COMPLETION GROUT		LOCATION OF WELL (DIMS FORMAT ONLY)	
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION	DIAMETER	DEPTH	<input checked="" type="checkbox"/> CONCRETE			LAT. 38 ° 58 ' 12.695 "
<input type="checkbox"/> ABOVE GROUND	LENGTH 3 FT.	DIAMETER 12 IN.	LENGTH 3 FT.	<input type="checkbox"/> OTHER			LONG 91 ° 29 ' 45.47 "
<input checked="" type="checkbox"/> FLUSH MOUNT	DIAMETER 6 IN.					SMALLEST 1/4 LARGEST 1/4 SE 1/4	
<input checked="" type="checkbox"/> LOCKING CAP							SECTION 32 TOWNSHIP 49 NORTH
<input type="checkbox"/> WEEP HOLE							RANGE 5 <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST
ELEVATION 823.65 FT.							MONITORING FOR: (CHECK ALL THAT APPLY)
<b>ANNULAR SEAL</b>	LENGTH 38.5 FT.					<input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY	
<input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS							<input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC
<input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR							<input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES
<input type="checkbox"/> CEMENT/SLURRY							PROPOSED USE OF WELL
IF CEMENT/BENTONITE MIX:							<input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION
BAGS OF CEMENT USED 1							<input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE
% OF BENTONITE USED							<input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL
WATER USED/BAG 6-7 GAL							<input type="checkbox"/> DIRECT PUSH
<b>SECONDARY FILTER PACK</b>	LENGTH 2 FT.					DEPTH	
DEPTH TO TOP OF PRIMARY FILTER PACK 42.5 FT.							TO FROM FORMATION DESCRIPTION
LENGTH OF PRIMARY FILTER PACK 12 FT.							1 3 Top Soil
							3 44.5 Glacial Till
							44.5 54.5 Sandy Silt
							TOTAL DEPTH: 54.5

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 00439-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
--------------------------------	--------------------------	--

I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.  PUMP INSTALLED

SIGNATURE (WELL DRILLER)	PERMIT NUMBER 00439-M	SIGNATURE (OF APPRENTICE)	APPRENTICE PERMIT NUMBER none
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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
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ROUTE		

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OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS TOP 0513, Room 4717-S, 1400 Independence	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB49S	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 3.66

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>12</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>36</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____		LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. <u>39</u> ° <u>58</u> ' <u>11.921</u> " LONG. <u>91</u> ° <u>29</u> ' <u>46.53</u> " SMALLEST <u>1/4</u> LARGEST <u>SE 1/4</u> SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH															
ANNULAR SEAL LENGTH <u>2</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>0.5</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL		RISER RISER PIPE DIAMETER <u>1</u> IN. RISER PIPE LENGTH <u>8</u> FT. DIAMETER OF DRILL HOLE <u>3.25</u> IN. WEIGHT OR SDR# <u>40</u> MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____															
SECONDARY FILTER PACK LENGTH <u>2</u> FT. DEPTH TO TOP OF PRIMARY FILTER PACK <u>6</u> FT. LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.		BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED															
SCREEN SCREEN DIAMETER <u>1</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>3.25</u> IN. DEPTH TO TOP <u>8</u> FT. SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____		DEPTH <table border="1"> <thead> <tr> <th>TO</th> <th>FROM</th> <th>FORMATION DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>Top Soil</td> </tr> <tr> <td>3</td> <td>8</td> <td>Glacial Till</td> </tr> <tr> <td>8</td> <td>18</td> <td>Sandy Silt</td> </tr> <tr> <td colspan="2">TOTAL DEPTH:</td> <td>18</td> </tr> </tbody> </table>	TO	FROM	FORMATION DESCRIPTION	1	3	Top Soil	3	8	Glacial Till	8	18	Sandy Silt	TOTAL DEPTH:		18
TO	FROM	FORMATION DESCRIPTION															
1	3	Top Soil															
3	8	Glacial Till															
8	18	Sandy Silt															
TOTAL DEPTH:		18															

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
THEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER none



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
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STATE WELL NUMBER	REVENUE NO.	
ENTERED	APPROVED BY	ROUTE
Ph1 Ph2 Ph3		

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**  
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

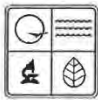
OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS TOP 0513, Room 4717-S, 1400 Independence	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB49M	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 4.77

<b>SURFACE COMPLETION</b>		LOCATION OF WELL (D/M/S FORMAT ONLY)																
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION	DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED	SURFACE COMPLETION GROUT															
<input type="checkbox"/> ABOVE GROUND	LENGTH <u>3</u> FT.	DIAMETER <u>36</u> IN.	<input checked="" type="checkbox"/> CONCRETE															
<input checked="" type="checkbox"/> FLUSH MOUNT	DIAMETER <u>12</u> IN.	LENGTH <u>3</u> FT.	<input type="checkbox"/> OTHER															
<input checked="" type="checkbox"/> LOCKING CAP																		
<input type="checkbox"/> WEEP HOLE																		
ELEVATION <u>825.25</u> FT.	<b>SURFACE COMPLETION</b> <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC		LAT <u>39</u> ° <u>58</u> ' <u>11.895</u> " LONG <u>91</u> ° <u>29</u> ' <u>46.54</u> "															
<b>ANNULAR SEAL</b> LENGTH <u>14</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>1</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL	<b>RISER</b> RISER PIPE DIAMETER <u>1</u> IN. RISER PIPE LENGTH <u>20</u> FT. DIAMETER OF DRILL HOLE <u>3.25</u> IN. WEIGHT OR SDR# <u>40</u>		SMALLEST _____ LARGEST _____ SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST															
<b>SECONDARY FILTER PACK</b> LENGTH <u>2</u> FT.	<b>MATERIAL</b> <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES															
<b>DEPTH TO TOP OF PRIMARY FILTER PACK</b> <u>18</u> FT.	<b>BENTONITE SEAL</b> LENGTH _____ <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input checked="" type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED		PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH															
<b>LENGTH OF PRIMARY FILTER PACK</b> <u>12</u> FT.	<b>SCREEN</b> SCREEN DIAMETER <u>1</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>3.25</u> IN. DEPTH TO TOP <u>20</u> FT.		DEPTH TO FORMATION DESCRIPTION <table border="1"> <thead> <tr> <th>TO</th> <th>FROM</th> <th>FORMATION DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>Top Soil</td> </tr> <tr> <td>3</td> <td>20</td> <td>Glacial Till</td> </tr> <tr> <td>20</td> <td>30</td> <td>Sandy Silt</td> </tr> <tr> <td colspan="2">TOTAL DEPTH:</td> <td>30</td> </tr> </tbody> </table>	TO	FROM	FORMATION DESCRIPTION	1	3	Top Soil	3	20	Glacial Till	20	30	Sandy Silt	TOTAL DEPTH:		30
TO	FROM	FORMATION DESCRIPTION																
1	3	Top Soil																
3	20	Glacial Till																
20	30	Sandy Silt																
TOTAL DEPTH:		30																

FOR BASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE) none





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**

NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS TOP 0513, Room 4717-S, 1400 Independence	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB49D	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 7.59

<b>SURFACE COMPLETION</b>		LOCATION OF WELL (D/M/S FORMAT ONLY)	
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION	DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED	SURFACE COMPLETION GROUT
<input type="checkbox"/> ABOVE GROUND	LENGTH <u>3</u> FT.	DIAMETER <u>12</u> IN.	<input checked="" type="checkbox"/> CONCRETE
<input checked="" type="checkbox"/> FLUSH MOUNT	DIAMETER <u>6</u> IN.	LENGTH <u>3</u> FT.	<input type="checkbox"/> OTHER
<input checked="" type="checkbox"/> LOCKING CAP	ELEVATION <u>825.31</u> FT.		
<input type="checkbox"/> WEEP HOLE			
<b>ANNULAR SEAL</b>		<b>SURFACE COMPLETION</b>	
LENGTH <u>43.5</u> FT.	<input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC		
<input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS	<b>RISER</b>		
<input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR	RISER PIPE DIAMETER <u>0.5</u> IN.		
<input type="checkbox"/> CEMENT/SLURRY	RISER PIPE LENGTH <u>49.5</u> FT.		
IF CEMENT/BENTONITE MIX:	DIAMETER OF DRILL HOLE <u>2.5</u> IN.		
BAGS OF CEMENT USED <u>1.5</u>	WEIGHT OR SDR# <u>40</u>		
% OF BENTONITE USED _____	<b>MATERIAL</b>		
WATER USED/BAG <u>6-7</u> GAL.	<input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC)		
	<input type="checkbox"/> OTHER _____		
<b>SECONDARY FILTER PACK</b>	<b>BENTONITE SEAL</b>		
LENGTH <u>2</u> FT.	LENGTH <u>2</u>		
	<input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR		
<b>DEPTH TO TOP OF PRIMARY FILTER PACK</b> <u>47.5</u> FT.	<input type="checkbox"/> SLURRY		
	<input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED		
<b>LENGTH OF PRIMARY FILTER PACK</b> <u>12</u> FT.	<b>SCREEN</b>		
	SCREEN DIAMETER <u>0.5</u> IN.		
	SCREEN LENGTH <u>10</u> FT.		
	DIAMETER OF DRILL HOLE <u>2.5</u> IN.		
	DEPTH TO TOP <u>49.5</u> FT.		
	<b>SCREEN MATERIAL</b>		
	<input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC)		
	<input type="checkbox"/> OTHER _____		
		TO	DEPTH FROM
		1	3
		3	49.5
		49.5	59.5
		FORMATION DESCRIPTION	
		Top Soil	
		Glacial Till	
		Sandy Silt	
		TOTAL DEPTH: <b>59.5</b>	

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER none



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**  
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		CONTACT NAME Steve Gilmore		VARIANCE GRANTED BY DNR	
OWNER ADDRESS TOP 0513, Room 4717-S, 1400 Independence		CITY Washington	STATE DC	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City			WELL NUMBER SB50S	COUNTY Montgomery	
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.			CITY Montgomery City	STATIC WATER LEVEL 12.31	

<b>SURFACE COMPLETION</b>		DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED		SURFACE COMPLETION GROUT		LOCATION OF WELL (D/M/S FORMAT ONLY)	
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION			<input checked="" type="checkbox"/> CONCRETE		LAT. 39 - 58 - 12.824 -	
<input checked="" type="checkbox"/> ABOVE GROUND	LENGTH 3 FT.	DIAMETER 16 IN.		<input type="checkbox"/> OTHER		LONG 91 - 29 - 41.52 -	
<input type="checkbox"/> FLUSH MOUNT	DIAMETER 4 IN.	LENGTH 1.5 FT.				SMALLEST 1/4 LARGEST 1/4 SE 1/4	
<input checked="" type="checkbox"/> LOCKING CAP				<input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC		SECTION 32 TOWNSHIP 49 NORTH	
<input type="checkbox"/> WEEP HOLE						RANGE 5 <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST	
ELEVATION 827.07 FT.				<b>RISER</b>		MONITORING FOR: (CHECK ALL THAT APPLY)	
				RISER PIPE DIAMETER 1 IN.		<input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY	
				RISER PIPE LENGTH 8 FT.		<input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC	
				DIAMETER OF DRILL HOLE 2.5 IN.		<input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES	
				WEIGHT OR SDR# 40 3		PROPOSED USE OF WELL	
<b>ANNULAR SEAL</b>				<b>MATERIAL</b>		<input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION	
LENGTH 2 FT.				<input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC)		<input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE	
<input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS				<input type="checkbox"/> OTHER		<input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL	
<input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR						<input type="checkbox"/> DIRECT PUSH	
<input type="checkbox"/> CEMENT/SLURRY						DEPTH TO FORMATION DESCRIPTION	
IF CEMENT/BENTONITE MIX:						TO FROM DESCRIPTION	
BAGS OF CEMENT USED 0.5						1 3 Top Soil	
% OF BENTONITE USED						3 8 Glacial Till	
WATER USED/BAG 6-7 GAL						8 18 Sandy Silt	
<b>SECONDARY FILTER PACK</b>						TOTAL DEPTH: 18	
LENGTH 2 FT.							
<b>DEPTH TO TOP OF PRIMARY FILTER PACK</b>							
6 FT.							
<b>LENGTH OF PRIMARY FILTER PACK</b>							
12 FT.							

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.			
SIGNATURE (PRIMARY CONTRACTOR)		PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.			<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)		PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
			APPRENTICE PERMIT NUMBER none





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

<b>INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR</b>			
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS			
OWNER NAME U.S. Dept. of Agriculture/Commodity Credit Corp (USDA/CCC)		CONTACT NAME Steve Gilmore	
OWNER ADDRESS TOP 0513, Room 4717-S, 1400 Independence		CITY Washington	STATE DC
SITE NAME Montgomery City		WELL NUMBER SB50M	ZIP CODE 20250
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City	NUMBER 4952
			COUNTY Montgomery
			STATIC WATER LEVEL 8.48
<b>SURFACE COMPLETION</b>		LOCATION OF WELL (DIMS FORMAT ONLY)	
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION	LAT. 39 ° 58 ' 12.783 "	
<input checked="" type="checkbox"/> ABOVE GROUND	LENGTH 3 FT.	LONG 91 ° 29 ' 41.52 "	
<input type="checkbox"/> FLUSH MOUNT	DIAMETER 4 IN.	SMALLEST 1/4" LARGEST 1/4" SE 1/4"	
		SECTION 32 TOWNSHIP 49 NORTH	
		RANGE 5 EAST WEST	
<input checked="" type="checkbox"/> LOCKING CAP		MONITORING FOR: (CHECK ALL THAT APPLY)	
<input type="checkbox"/> WEEP HOLE		<input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY	
		<input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC	
		<input type="checkbox"/> SVOCS <input type="checkbox"/> PESTICIDES/HERBICIDES	
ELEVATION 827.14 FT.		PROPOSED USE OF WELL	
		<input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION	
		<input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE	
		<input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL	
		<input type="checkbox"/> DIRECT PUSH	
<b>ANNULAR SEAL</b>		DEPTH	
LENGTH 14 FT.		TO	FROM
<input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS		1	3
<input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR		3	20
<input type="checkbox"/> CEMENT/SLURRY		20	30
<b>IF CEMENT/BENTONITE MIX:</b>		FORMATION DESCRIPTION	
BAGS OF CEMENT USED 1.5		Top Soil	
% OF BENTONITE USED		Glacial Till	
WATER USED/BAG 6-7 GAL		Sandy Silt	
<b>SECONDARY FILTER PACK</b>		TOTAL DEPTH: 30	
LENGTH 2 FT.			
<b>DEPTH TO TOP OF PRIMARY FILTER PACK</b>			
18 FT.			
<b>LENGTH OF PRIMARY FILTER PACK</b>			
12 FT.			
FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.			
SIGNATURE (PRIMARY CONTRACTOR)		PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS. <input type="checkbox"/> PUMP INSTALLED			
SIGNATURE (WELL DRILLER)		PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
			APPRENTICE PERMIT NUMBER none

MS 780-1415 (67-11)

DISTRIBUTION: WHITE/DIVISION CANARY/CONTRACTOR PINK/OWNER  
RETURN WHITE COPY WITH APPROPRIATE FEE TO: MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF GEOLOGY AND LAND SURVEY,  
WELLHEAD PROTECTION SECTION, PO BOX 250, ROLLA, MO 65402 573-368-2165



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**

**NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS**

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS TOP 0513, Room 4717-S, 1400 Independence	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB50D	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 6.88

<b>SURFACE COMPLETION</b>		DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED		SURFACE COMPLETION GROUT		LOCATION OF WELL (D/M/S FORMAT ONLY)		
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION	DIAMETER	DEPTH	<input checked="" type="checkbox"/> CONCRETE		LAT 39 ° 58 ' 12.749 "		
<input checked="" type="checkbox"/> ABOVE GROUND	LENGTH 3 FT.	DIAMETER 16 IN.	LENGTH 1.5 FT.	<input type="checkbox"/> OTHER		LONG 91 ° 29 ' 41.52 "		
<input type="checkbox"/> FLUSH MOUNT	DIAMETER 4 IN.					SMALLEST _____ LARGEST SE _____		
<input checked="" type="checkbox"/> LOCKING CAP						SECTION 32 TOWNSHIP 49 NORTH		
<input type="checkbox"/> WEEP HOLE						RANGE 5 <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST		
ELEVATION 827.25 FT							MONITORING FOR: (CHECK ALL THAT APPLY)	
<b>ANNULAR SEAL</b>	LENGTH 41 FT					<input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY		
<input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS						<input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC		
<input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR						<input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES		
<input type="checkbox"/> CEMENT/SLURRY						PROPOSED USE OF WELL		
IF CEMENT/BENTONITE MIX:						<input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION		
BAGS OF CEMENT USED 2						<input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE		
% OF BENTONITE USED						<input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL		
WATER USED/BAG 6-7 GAL						<input type="checkbox"/> DIRECT PUSH		
<b>SECONDARY FILTER PACK</b>	LENGTH 2 FT.					DEPTH		
DEPTH TO TOP OF PRIMARY FILTER PACK 45 FT.						TO FROM FORMATION DESCRIPTION		
LENGTH OF PRIMARY FILTER PACK 12 FT.						1 3 Top Soil		
						3 47 Glacial Till		
						47 57 Sandy Silt		
						TOTAL DEPTH: 57		

FOR CASSED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED

SIGNATURE (PRIMARY CONTACTOR)	PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER none

MC 280-1415 (07-11) DISTRIBUTION: WHITE/DIVISION CANARY/CONTACTOR PINK/OWNER  
RETURN WHITE COPY WITH APPROPRIATE FEE TO: MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF GEOLOGY AND LAND SURVEY, WELLHEAD PROTECTION SECTION, PO BOX 260, ROLLA, MO 65402 573-368-2165





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**  
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS TOP 0513, Room 4717-S, 1400 Independence	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB51S	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 5.56

<b>SURFACE COMPLETION</b>		DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED		SURFACE COMPLETION GROUT		LOCATION OF WELL (D/M/S FORMAT ONLY)	
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION	DIAMETER	DEPTH	CONCRETE		LAT 39 ° 58 ' 16.144 "	
<input type="checkbox"/> ABOVE GROUND	LENGTH 1 FT.	DIAMETER 24 IN.	LENGTH 24 FT.	<input checked="" type="checkbox"/>		LONG 91 ° 29 ' 46.13 "	
<input checked="" type="checkbox"/> FLUSH MOUNT	DIAMETER 12 IN.			<input type="checkbox"/>		SMALLEST _____ LARGEST _____	
<input checked="" type="checkbox"/> LOCKING CAP				<input type="checkbox"/>		SECTION 32 TOWNSHIP 49 NORTH	
<input type="checkbox"/> WEEP HOLE				<input type="checkbox"/>		RANGE 5 <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST	
ELEVATION 817.1 FT.				<b>SURFACE COMPLETION</b>		MONITORING FOR: (CHECK ALL THAT APPLY)	
				<input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC		<input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY	
<b>ANNULAR SEAL</b>				RISER		<input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC	
LENGTH 2 FT.				RISER PIPE DIAMETER 1 IN.		<input type="checkbox"/> SVOCS <input type="checkbox"/> PESTICIDES/HERBICIDES	
<input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS				RISER PIPE LENGTH 8 FT.		PROPOSED USE OF WELL	
<input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR				DIAMETER OF DRILL HOLE 2.5 IN.		<input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION	
<input type="checkbox"/> CEMENT/SLURRY				WEIGHT OR SDR# 40		<input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE	
IF CEMENT/BENTONITE MIX:				<b>MATERIAL</b>		<input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL	
BAGS OF CEMENT USED 0.5				<input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC)		<input type="checkbox"/> DIRECT PUSH	
% OF BENTONITE USED _____				<input type="checkbox"/> OTHER _____		DEPTH	
WATER USED/BAG 6-7 GAL.				<b>BENTONITE SEAL</b>		TO FROM FORMATION DESCRIPTION	
SECONDS FILTER PACK				LENGTH _____		1 3 Top Soil	
LENGTH 2 FT.				<input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input checked="" type="checkbox"/> GRANULAR		3 8 Glacial Till	
DEPTH TO TOP OF PRIMARY FILTER PACK 6 FT.				<input type="checkbox"/> SLURRY		8 18 Sandy Silt	
LENGTH OF PRIMARY FILTER PACK 12 FT.				<input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED		TOTAL DEPTH: 18	
				<b>SCREEN</b>			
				SCREEN DIAMETER 1 IN.			
				SCREEN LENGTH 10 FT.			
				DIAMETER OF DRILL HOLE 2.5 IN.			
				DEPTH TO TOP 8 FT.			
				<b>SCREEN MATERIAL</b>			
				<input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC)			
				<input type="checkbox"/> OTHER _____			

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER none

MO 780-1415 (07-11) DISTRIBUTION: WHITE/DIVISION CANARY/CONTRACTOR PINK/OWNER  
RETURN WHITE COPY WITH APPROPRIATE FEE TO: MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF GEOLOGY AND LAND SURVEY, WELLHEAD PROTECTION SECTION, PO BOX 250, ROLLA, MO 65402 573-368-2165



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**

NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

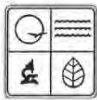
OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS TOP 0513, Room 4717-S, 1400 Independence	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB51M	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 4.58

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>1</u> FT. DIAMETER <u>12</u> IN.		DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>24</u> IN. LENGTH <u>2</u> FT.	SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____	LOCATION OF WELL (DM/S FORMAT ONLY) LAT. <u>39</u> ° <u>58</u> ' <u>16.119</u> " LONG <u>91</u> ° <u>29</u> ' <u>46.15</u> " SMALLEST _____ LARGEST <u>SE</u> _____ SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST																		
ANNULAR SEAL LENGTH <u>14</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>1</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL.			RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>20</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>40</u>	MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCS <input type="checkbox"/> PESTICIDES/HERBICIDES																		
SECONDARY FILTER PACK LENGTH <u>2</u> FT. DEPTH TO TOP OF PRIMARY FILTER PACK <u>18</u> FT. LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.			MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____	PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH																		
		BENTONITE SEAL LENGTH _____ <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input checked="" type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED	SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>20</u> FT.	DEPTH TO FORMATION DESCRIPTION <table border="1"> <thead> <tr> <th colspan="2">DEPTH</th> <th>FORMATION DESCRIPTION</th> </tr> <tr> <th>TO</th> <th>FROM</th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>Top Soil</td> </tr> <tr> <td>3</td> <td>20</td> <td>Glacial Till</td> </tr> <tr> <td>20</td> <td>30</td> <td>Sandy Silt</td> </tr> <tr> <td colspan="2"><b>TOTAL DEPTH:</b></td> <td><b>30</b></td> </tr> </tbody> </table>	DEPTH		FORMATION DESCRIPTION	TO	FROM		1	3	Top Soil	3	20	Glacial Till	20	30	Sandy Silt	<b>TOTAL DEPTH:</b>		<b>30</b>
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<b>TOTAL DEPTH:</b>		<b>30</b>																				

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER none





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
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C. R. NO.	REVENUE NO.	
STATE WELL NUMBER	APPROVED BY	
ENTERED	Ph1	Ph2 Ph3
ROUTE		

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OWNER ADDRESS TOP 0513, Room 4717-S, 1400 Independence	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB51D	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 5.68

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN. <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE		DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT.		SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER		LOCATION OF WELL (DIM/S FORMAT ONLY) LAT. <u>39</u> ° <u>58</u> ' <u>16.096</u> " LONG. <u>91</u> ° <u>29</u> ' <u>46.16</u> " SMALLEST <u>¼</u> LARGEST <u>¼</u> <u>SE</u> <u>¼</u> SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST																		
ANNULAR SEAL LENGTH <u>35</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>2</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL		RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>41</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>40</u>		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES		PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH																		
SECONDARY FILTER PACK LENGTH <u>2</u> FT.		BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED		MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER		DEPTH <table border="1"> <thead> <tr> <th colspan="2">DEPTH</th> <th rowspan="2">FORMATION DESCRIPTION</th> </tr> <tr> <th>TO</th> <th>FROM</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>Top Soil</td> </tr> <tr> <td>3</td> <td>41</td> <td>Glacial Till</td> </tr> <tr> <td>41</td> <td>51</td> <td>Sandy Silt</td> </tr> <tr> <td colspan="2">TOTAL DEPTH:</td> <td><b>51</b></td> </tr> </tbody> </table>		DEPTH		FORMATION DESCRIPTION	TO	FROM	1	3	Top Soil	3	41	Glacial Till	41	51	Sandy Silt	TOTAL DEPTH:		<b>51</b>
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DEPTH TO TOP OF PRIMARY FILTER PACK <u>39</u> FT.		SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>41</u> FT.		SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER																				
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SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
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ENTERED	Ph1	Ph2 Ph3
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OWNER ADDRESS TOP 0513, Room 4717-S, 1400 Independence	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB52S	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 5.37

<b>SURFACE COMPLETION</b>		LOCATION OF WELL (D/M/S FORMAT ONLY)	
TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT	LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>1</u> FT. DIAMETER <u>12</u> IN.	DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>24</u> IN. LENGTH <u>2</u> FT.	LAT. <u>39</u> ° <u>58</u> ' <u>16.862</u> "
<input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE		SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER	LONG. <u>91</u> ° <u>29</u> ' <u>39.47</u> "
ANNULAR SEAL LENGTH <u>2</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>0.5</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL		SMALLEST _____ LARGEST _____ SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST	
SECONDARY FILTER PACK LENGTH <u>2</u> FT.		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES	
DEPTH TO TOP OF PRIMARY FILTER PACK <u>6</u> FT.		PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH	
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SCREEN SCREEN DIAMETER <u>1</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>8</u> FT.		DEPTH TO FROM	
SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER		FORMATION DESCRIPTION	
BENTONITE SEAL LENGTH _____ <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input checked="" type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED		TO FROM	
TOTAL DEPTH: <u>18</u>		TO FROM	

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SITE NAME Montgomery City	WELL NUMBER SB52M	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 5.42

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>1</u> FT. DIAMETER <u>12</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>24</u> IN. LENGTH <u>2</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____		LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. <u>39</u> ° <u>58</u> ' <u>16.837</u> " LONG. <u>91</u> ° <u>29</u> ' <u>39.47</u> " SMALLEST _____ LARGEST _____ SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST																	
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STATE DC	ZIP CODE 20250	COUNTY Montgomery
SITE NAME Montgomery City	WELL NUMBER SB52D	STATIC WATER LEVEL 5.1
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____ LOCATION OF WELL (D/M/S FORMAT ONLY) LAT. <u>39</u> ° <u>58</u> ' <u>16.812</u> " LONG <u>91</u> ° <u>29</u> ' <u>39.48</u> " SMALLEST _____ ° _____ ' _____ " LARGEST <u>SE</u> ° _____ ' _____ " SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> ° EAST <input checked="" type="checkbox"/> WEST																		
MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH																		
ANNULAR SEAL LENGTH <u>34</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>3</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL SECONDARY FILTER PACK LENGTH <u>2</u> FT. DEPTH TO TOP OF PRIMARY FILTER PACK <u>38</u> FT. LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.																		
RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>40</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>40</u> MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____ BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>40</u> FT. SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____																		
FORMATION DESCRIPTION <table border="1"> <thead> <tr> <th colspan="2">DEPTH</th> <th rowspan="2">FORMATION DESCRIPTION</th> </tr> <tr> <th>TO</th> <th>FROM</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>Top Soil</td> </tr> <tr> <td>3</td> <td>40</td> <td>Glacial Till</td> </tr> <tr> <td>40</td> <td>50</td> <td>Sandy Silt</td> </tr> <tr> <td colspan="2">TOTAL DEPTH:</td> <td>50</td> </tr> </tbody> </table>		DEPTH		FORMATION DESCRIPTION	TO	FROM	1	3	Top Soil	3	40	Glacial Till	40	50	Sandy Silt	TOTAL DEPTH:		50
DEPTH		FORMATION DESCRIPTION																
TO	FROM																	
1	3	Top Soil																
3	40	Glacial Till																
40	50	Sandy Silt																
TOTAL DEPTH:		50																

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED

SIGNATURE (PRIMARY CONTACTOR)	PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE) none
		APPRENTICE PERMIT NUMBER none





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**

NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Dept. of Agriculture/Commodity Credit Corp (USDA/CCC)		CONTACT NAME Steve Gilmore		VARIANCE GRANTED BY DNR	
OWNER ADDRESS TOP 0513, Room 4717-S, 1400 Independence		CITY Washington	STATE DC	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City			WELL NUMBER SB53S	COUNTY Montgomery	
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.			CITY Montgomery City	STATIC WATER LEVEL 11.78	

<b>SURFACE COMPLETION</b>		DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED		SURFACE COMPLETION GROUT		LOCATION OF WELL (D/M/S FORMAT ONLY)								
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION	DIAMETER	DEPTH	<input checked="" type="checkbox"/> CONCRETE		LAT. 39 ° 58 ' 14.566 "								
<input type="checkbox"/> ABOVE GROUND	LENGTH 1 FT.	DIAMETER 24 IN.	LENGTH 2 FT.	<input type="checkbox"/> OTHER		LONG 91 ° 29 ' 38.05 "								
<input checked="" type="checkbox"/> FLUSH MOUNT	DIAMETER 12 IN.					SMALLEST _____ LARGEST _____								
<input checked="" type="checkbox"/> LOCKING CAP							SECTION 32 TOWNSHIP 49 NORTH							
<input type="checkbox"/> WEEP HOLE							RANGE 5 <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST							
ELEVATION 823.03 FT.						MONITORING FOR: (CHECK ALL THAT APPLY)								
<b>ANNULAR SEAL</b>						<input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY								
LENGTH 2 FT.							<input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC							
<input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS							<input type="checkbox"/> SVOCS <input type="checkbox"/> PESTICIDES/HERBICIDES							
<input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR							PROPOSED USE OF WELL							
<input type="checkbox"/> CEMENT/SLURRY							<input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION							
IF CEMENT/BENTONITE MIX:							<input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE							
BAGS OF CEMENT USED 3							<input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL							
% OF BENTONITE USED							<input type="checkbox"/> DIRECT PUSH							
WATER USED/BAG 6-7 GAL							DEPTH							
<b>SECONDARY FILTER PACK</b>						TO		FROM						
LENGTH 2 FT.							1		3					
<b>DEPTH TO TOP OF PRIMARY FILTER PACK</b>								3		8				
6 FT.									8		18			
<b>LENGTH OF PRIMARY FILTER PACK</b>										TOTAL DEPTH:		18		
12 FT.														

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
--------------------------------	---------------------------	--

I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.  PUMP INSTALLED

SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)	APPRENTICE PERMIT NUMBER None
--------------------------	---------------------------	---------------------------	----------------------------------



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**  
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS TOP 0513, Room 4717-S, 1400 Independence	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB53M	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 8.53

<b>SURFACE COMPLETION</b>		LOCATION OF WELL (D/M/S FORMAT ONLY)	
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION	DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED	SURFACE COMPLETION GROUT
<input type="checkbox"/> ABOVE GROUND	LENGTH <u>1</u> FT.	DIAMETER <u>24</u> IN.	<input checked="" type="checkbox"/> CONCRETE
<input checked="" type="checkbox"/> FLUSH MOUNT	DIAMETER <u>12</u> IN.	LENGTH <u>2</u> FT.	<input type="checkbox"/> OTHER _____
<input checked="" type="checkbox"/> LOCKING CAP	ELEVATION <u>823.01</u> FT.		SMALLEST _____ LARGEST _____
<input type="checkbox"/> WEEP HOLE	ANNULAR SEAL		SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH
	LENGTH <u>14</u> FT.	<input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS	RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST
	<input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR	<input type="checkbox"/> CEMENT/SLURRY	MONITORING FOR: (CHECK ALL THAT APPLY)
	IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>3</u>	<input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY	<input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC
	% OF BENTONITE USED _____	<input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES	PROPOSED USE OF WELL
	WATER USED/BAG <u>6-7</u> GAL	<input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION	<input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE
	SECONDARY FILTER PACK	<input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL	<input type="checkbox"/> DIRECT PUSH
	LENGTH <u>2</u> FT.	DEPTH	
	DEPTH TO TOP OF PRIMARY FILTER PACK <u>18</u> FT.	TO	FROM
	LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.	1	3
		3	20
		20	30
		FORMATION DESCRIPTION	
		Top Soil	
		Glacial Till	
		Sandy Silt	
		TOTAL DEPTH: <b>30</b>	

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER none

MO 780-1345 (07-1X) DISTRIBUTION: WHITE/DIVISION CANARY/CONTRACTOR PINK/OWNER  
RETURN WHITE COPY WITH APPROPRIATE FEE TO: MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF GEOLOGY AND LAND SURVEY,  
WELLHEAD PROTECTION SECTION, PO BOX 250, ROLLA, MO 65402 573-368-2165





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

<b>OFFICE USE ONLY</b>		DATE RECEIVED
REFERENCE NO.		CHECK NO.
C.R. NO.		
STATE WELL NUMBER		REVENUE NO.
ENTERED		APPROVED BY
Ph1	Ph2	Ph3

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**

NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	CONTACT NAME Steve Gilmore	VARIANCE GRANTED BY DNR
OWNER ADDRESS TOP 0513, Room 4717-S, 1400 Independence	CITY Washington	STATE DC
	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB53D	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 4.76

<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>3</u> FT. DIAMETER <u>6</u> IN. DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>12</u> IN. LENGTH <u>3</u> FT. SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER _____		LOCATION OF WELL (DIM/S FORMAT ONLY) LAT. <u>39</u> ° <u>58</u> ' <u>14.559</u> " LONG <u>91</u> ° <u>29</u> ' <u>37.99</u> " SMALLEST _____ ¼ _____ ¼ <u>SE</u> _____ ¼ SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST															
MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCS <input type="checkbox"/> PESTICIDES/HERBICIDES		PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH															
ANNULAR SEAL LENGTH <u>37</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>3</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL		DEPTH <table border="1"> <thead> <tr> <th>TO</th> <th>FROM</th> <th>FORMATION DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3</td> <td>Top Soil</td> </tr> <tr> <td>3</td> <td>43</td> <td>Glacial Till</td> </tr> <tr> <td>43</td> <td>53</td> <td>Sandy Silt</td> </tr> <tr> <td colspan="2">TOTAL DEPTH:</td> <td>53</td> </tr> </tbody> </table>	TO	FROM	FORMATION DESCRIPTION	1	3	Top Soil	3	43	Glacial Till	43	53	Sandy Silt	TOTAL DEPTH:		53
TO	FROM	FORMATION DESCRIPTION															
1	3	Top Soil															
3	43	Glacial Till															
43	53	Sandy Silt															
TOTAL DEPTH:		53															
RISER RISER PIPE DIAMETER <u>0.5</u> IN. RISER PIPE LENGTH <u>43</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR SDR# <u>40</u> MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____																	
BENTONITE SEAL LENGTH <u>2</u> <input checked="" type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED																	
SECONDARY FILTER PACK LENGTH <u>2</u> FT. DEPTH TO TOP OF PRIMARY FILTER PACK <u>41</u> FT. LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.																	
SCREEN SCREEN DIAMETER <u>0.5</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>43</u> FT. SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER _____																	

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER none



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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REFERENCE NO.	CHECK NO.	
C.R. NO.	REVENUE NO.	
STATE WELL NUMBER	APPROVED BY	
ENTERED	Ph1	Ph2 Ph3
ROUTE		

**INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR**  
NOTE: THIS FORM IS NOT TO BE USED FOR NESTED WELLS

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		CONTACT NAME Steve Gilmore		VARIANCE GRANTED BY DNR
OWNER ADDRESS TOP 0513, Room 4717-S, 1400 Independence		CITY Washington	STATE DC	ZIP CODE 20250
SITE NAME Montgomery City		WELL NUMBER SB54S		COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City		STATIC WATER LEVEL 1.84

<b>SURFACE COMPLETION</b>		DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED		SURFACE COMPLETION GROUT		LOCATION OF WELL (DIMS FORMAT ONLY)		
TYPE	LENGTH AND DIAMETER OF SURFACE COMPLETION					LAT. 39 58 13.021		
<input type="checkbox"/> ABOVE GROUND	LENGTH 1 FT.	DIAMETER 24 IN.		<input checked="" type="checkbox"/> CONCRETE		LONG 91 29 36.74		
<input checked="" type="checkbox"/> FLUSH MOUNT	DIAMETER 12 IN.	LENGTH 2 FT.		<input type="checkbox"/> OTHER		SMALLEST 1/4 LARGEST 1/4 SE 1/4		
<input checked="" type="checkbox"/> LOCKING CAP							SECTION 32 TOWNSHIP 49 NORTH	
<input type="checkbox"/> WEEP HOLE							RANGE 5 EAST WEST	
ELEVATION 821.71 FT.						MONITORING FOR: (CHECK ALL THAT APPLY)		
						<input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY		
						<input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC		
						<input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES		
<b>ANNULAR SEAL</b>						PROPOSED USE OF WELL		
LENGTH 2 FT.						<input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION		
<input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS							<input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE	
<input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR							<input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL	
<input type="checkbox"/> CEMENT/SLURRY							<input type="checkbox"/> DIRECT PUSH	
IF CEMENT/BENTONITE MIX:						DEPTH		
BAGS OF CEMENT USED 3						TO FROM FORMATION DESCRIPTION		
% OF BENTONITE USED						1 3 Top Soil		
WATER USED/BAG 6-7 GAL						3 8 Glacial Till		
						8 18 Sandy Silt		
<b>SECONDARY FILTER PACK</b>						TOTAL DEPTH: 18		
LENGTH 2 FT.								
<b>DEPTH TO TOP OF PRIMARY FILTER PACK</b>								
6 FT.								
<b>LENGTH OF PRIMARY FILTER PACK</b>								
12 FT.								

FOR CASED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED

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SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER none

MO 789-1415 (07-11) DISTRIBUTION: WHITE/DIVISION CANARY/CONTACTOR PINK/OWNER  
RETURN WHITE COPY WITH APPROPRIATE FEE TO: MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF GEOLOGY AND LAND SURVEY, WELLHEAD PROTECTION SECTION, PO BOX 250, ROLLA, MO 65402 573-368-2165





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL  
CERTIFICATION RECORD**

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	ZIP CODE 20250	NUMBER 4952
SITE NAME Montgomery City	WELL NUMBER SB54M	COUNTY Montgomery
SITE ADDRESS Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATIC WATER LEVEL 6.36

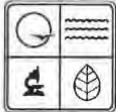
<b>SURFACE COMPLETION</b> TYPE <input type="checkbox"/> ABOVE GROUND <input checked="" type="checkbox"/> FLUSH MOUNT <input checked="" type="checkbox"/> LOCKING CAP <input type="checkbox"/> WEEP HOLE		LENGTH AND DIAMETER OF SURFACE COMPLETION LENGTH <u>1</u> FT. DIAMETER <u>12</u> IN.	DIAMETER AND DEPTH OF THE HOLE SURFACE COMPLETION WAS PLACED DIAMETER <u>24</u> IN. LENGTH <u>2</u> FT.	SURFACE COMPLETION GROUT <input checked="" type="checkbox"/> CONCRETE <input type="checkbox"/> OTHER	LOCATION OF WELL (D/M/S FORMAT ONLY) LAT <u>39</u> ° <u>58</u> ' <u>12.967</u> " LONG <u>91</u> ° <u>29</u> ' <u>36.74</u> "
ANNULAR SEAL LENGTH <u>14</u> FT. <input checked="" type="checkbox"/> SLURRY <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input type="checkbox"/> GRANULAR <input type="checkbox"/> CEMENT/SLURRY IF CEMENT/BENTONITE MIX: BAGS OF CEMENT USED <u>1</u> % OF BENTONITE USED _____ WATER USED/BAG <u>6-7</u> GAL		SURFACE COMPLETION <input checked="" type="checkbox"/> STEEL <input type="checkbox"/> ALUMINUM <input type="checkbox"/> PLASTIC		MONITORING FOR: (CHECK ALL THAT APPLY) <input type="checkbox"/> RADIONUCLIDES <input type="checkbox"/> PETROLEUM PRODUCTS ONLY <input type="checkbox"/> EXPLOSIVES <input type="checkbox"/> METALS <input checked="" type="checkbox"/> VOC <input type="checkbox"/> SVOCs <input type="checkbox"/> PESTICIDES/HERBICIDES	SMALLEST _____ LARGEST _____ SECTION <u>32</u> TOWNSHIP <u>49</u> NORTH RANGE <u>5</u> <input type="checkbox"/> EAST <input checked="" type="checkbox"/> WEST
SECONDARY FILTER PACK LENGTH <u>2</u> FT.		RISER RISER PIPE DIAMETER <u>1</u> IN. RISER PIPE LENGTH <u>20</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. WEIGHT OR DR# <u>40</u>		PROPOSED USE OF WELL <input type="checkbox"/> GAS MIGRATION WELL <input checked="" type="checkbox"/> OBSERVATION <input type="checkbox"/> EXTRACTION WELL <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PIEZOMETERS <input type="checkbox"/> INJECTION WELL <input type="checkbox"/> DIRECT PUSH	DEPTH TO TOP OF PRIMARY FILTER PACK <u>6</u> FT.
LENGTH OF PRIMARY FILTER PACK <u>12</u> FT.		MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER		BENTONITE SEAL LENGTH _____ <input type="checkbox"/> CHIPS <input type="checkbox"/> PELLETS <input checked="" type="checkbox"/> GRANULAR <input type="checkbox"/> SLURRY <input type="checkbox"/> SATURATED ZONE <input type="checkbox"/> HYDRATED	TOPOGRAPHY ELEVATION <u>821.72</u> FT.
SCREEN SCREEN DIAMETER <u>1</u> IN. SCREEN LENGTH <u>10</u> FT. DIAMETER OF DRILL HOLE <u>2.5</u> IN. DEPTH TO TOP <u>20</u> FT.		SCREEN MATERIAL <input type="checkbox"/> STEEL <input checked="" type="checkbox"/> THERMOPLASTIC (PVC) <input type="checkbox"/> OTHER		TOTAL DEPTH: <u>30</u>	

FOR CASSED WELLS, SUBMIT ADDITIONAL AS BUILT DIAGRAMS SHOWING WELL CONSTRUCTION DETAILS INCLUDING TYPE & SIZE OF ALL CASING, HOLE DIAMETER & GROUT USED.

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER 004395-M	DATE WELL DRILLING WAS COMPLETED 01/25/2012
I HEREBY CERTIFY THAT THE MONITORING WELL HEREIN DESCRIBED WAS CONSTRUCTED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS FOR THE CONSTRUCTION OF MONITORING WELLS.		<input type="checkbox"/> PUMP INSTALLED
SIGNATURE (WELL DRILLER)	PERMIT NUMBER 004395-M	SIGNATURE (OF APPRENTICE)
		APPRENTICE PERMIT NUMBER none







MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING  
REGISTRATION RECORD**

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

INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR				
OWNER NAME U.S. Dept. of Agriculture/Commodity Credit Corp (USDA/CCC)		TELEPHONE NUMBER 202 720-5104		VARIANCE NUMBER (IF APPLICABLE) 4952
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence Ave		CITY Washington	STATE DC	ZIP CODE 20250
ADDRESS OF WELL SITE Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City	STATE MO	ZIP CODE 63361
SITE NAME Montgomery City		WELL NUMBER SB01	DATE 01/25/2012	
LOCATION OF WELL LAT. 38 ° 58 ' 12.8 "      LONG. 91 ° 29 ' 44.7 "		DRILL AREA 1	SMALLEST _____ LARGEST _____ Sec. 3 <sup>d</sup> Township 4 <sup>th</sup> North Range 5 <input type="checkbox"/> East <input checked="" type="checkbox"/> West	

PLUGGING INFORMATION			
ORIGINAL DRILLER (IF KNOWN) David Surgnier, PE	DATE ORIGINALLY DRILLED 01/25/2012	STATIC WATER LEVEL 2.53	DRILLER NOTES Glacial Till

<input type="checkbox"/> MONITORING WELL		<input type="checkbox"/> SOIL BORING(S)		Boring Diameter: 2.5 IN.
DEPTH OF WELL 18 FT.	LENGTH OF RISER 8 FT.	QUANTITY	DEPTH	TYPE OF FILL MATERIAL <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER 1 IN.	WELL SCREEN AND RISER REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			AMOUNT OF FILL USED <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED? <input type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	CASING REMOVED? <input type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	TOTAL _____ BORING(S)	TOTAL _____ FT.	DEPTH TO TOP OF FILL na FT.

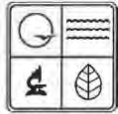
GROUT INSTALLATION METHOD <input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	GROUT MATERIAL USED Neat Cement    Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other _____	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE? <input checked="" type="checkbox"/> Hydrated to Saturation	TOTAL NUMBER OF BAGS OF GROUT USED 1
			POUNDS OF GROUT PER BAG 50

DATE 1 <sup>st</sup> WELL PLUGGED 01/25/2012	DATE LAST WELL PLUGGED 01/25/2012	FINISHED SURFACE MATERIAL <input type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	SURFACE MATERIAL LENGTH _____ FT. _____ IN.
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REMARKS lled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	REASON FOR ABANDONMENT Soil and water sampling was completed.
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I hereby certify that the monitoring well herein described was plugged in accordance with the Department of Natural Resources requirements for the plugging of wells.

SIGNATURE (PRIMARY CONTRACTOR) 	SIGNATURE (CONTRACTOR)	PERMIT NUMBER 004395-M	DATE 01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING  
REGISTRATION RECORD**

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

**INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR**

OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		TELEPHONE NUMBER 202 720-5104		VARIANCE NUMBER (IF APPLICABLE) 4952
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence Ave		CITY Washington	STATE DC	ZIP CODE 20250
ADDRESS OF WELL SITE Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City	STATE MO	ZIP CODE 63361
SITE NAME Montgomery City		WELL NUMBER SB01M		DATE 01/25/2012

LOCATION OF WELL	DRILL AREA	SMALLEST	LARGEST
LAT. 38 ° 58 ' 12.8 "	1	_____ ¼ _____ ¼	SE ¼
LONG. 91 ° 29 ' 44.7 "	COUNTY Montgomery	Sec. 32 Township 49 North Range 5 <input type="checkbox"/> East <input checked="" type="checkbox"/> West	

**PLUGGING INFORMATION**

ORIGINAL DRILLER (IF KNOWN) David Surngier, PE	DATE ORIGINALLY DRILLED 01/25/2012	STATIC WATER LEVEL 2.9	DRILLER NOTES Glacial Till
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<input type="checkbox"/> MONITORING WELL		<input type="checkbox"/> SOIL BORING(S)		Boring Diameter: 2.5 IN.
DEPTH OF WELL 30 FT.	LENGTH OF RISER 20 FT.	QUANTITY	DEPTH	TYPE OF FILL MATERIAL <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER 1 IN.	WELL SCREEN AND RISER REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			AMOUNT OF FILL USED <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED? <input type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	CASING REMOVED? <input type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No			DEPTH TO TOP OF FILL na FT.
TOTAL BORING(S)		TOTAL FT.		

GROUT INSTALLATION METHOD <input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	GROUT MATERIAL USED Neat Cement Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other _____	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE? <input checked="" type="checkbox"/> Hydrated to Saturation	TOTAL NUMBER OF BAGS OF GROUT USED 2 POUNDS OF GROUT PER BAG 50
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DATE 1 <sup>st</sup> WELL PLUGGED 01/25/2012	DATE LAST WELL PLUGGED 01/25/2012	FINISHED SURFACE MATERIAL <input type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	SURFACE MATERIAL LENGTH _____ FT. _____ IN.
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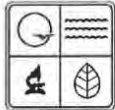
REMARKS illed to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	REASON FOR ABANDONMENT Soil and water sampling was completed.
--	--

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

SIGNATURE (PRIMARY CONTRACTOR)	SIGNATURE (CONTRACTOR)	PERMIT NUMBER 004395-M	DATE 01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER
			DATE







MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING REGISTRATION RECORD**

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

INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR				
OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		TELEPHONE NUMBER 202 720-5104	VARIANCE NUMBER (IF APPLICABLE) 4952	
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence Ave	CITY Washington	STATE DC	ZIP CODE 20250	
ADDRESS OF WELL SITE Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATE MO	ZIP CODE 63361	REFERENCE NUMBER OF ORIGINAL WELL (IF KNOWN)
SITE NAME Montgomery City	WELL NUMBER SB09S	DATE 01/25/2012		
LOCATION OF WELL LAT. 38 ° 58 ' 12.1 "	DRILL AREA 1	SMALLEST _____ ¼ _____ ¼ SE ¼		
LONG. 91 ° 29 ' 43.9 "	COUNTY Montgomery	Sec. 3d Township 44 North Range 5 <input type="checkbox"/> East <input checked="" type="checkbox"/> West		

PLUGGING INFORMATION			
ORIGINAL DRILLER (IF KNOWN) David Surngner, PE	DATE ORIGINALLY DRILLED 01/25/2012	STATIC WATER LEVEL 1.36	DRILLER NOTES Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL 28 FT.	LENGTH OF RISER 18 FT.	<b>QUANTITY</b>	<b>DEPTH</b>	TYPE OF FILL MATERIAL <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER 0.5 IN.	WELL SCREEN AND RISER REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			AMOUNT OF FILL USED none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	CASING REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	TOTAL _____ BORING(S)	TOTAL _____ FT.	DEPTH TO TOP OF FILL NA FT.

GROUT INSTALLATION METHOD <input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	GROUT MATERIAL USED Neat Cement    Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other _____	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE? 6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	TOTAL NUMBER OF BAGS OF GROUT USED 1 POUNDS OF GROUT PER BAG 50
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DATE 1 <sup>st</sup> WELL PLUGGED 01/25/2012	DATE LAST WELL PLUGGED 01/25/2012	FINISHED SURFACE MATERIAL <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	SURFACE MATERIAL LENGTH _____ FT. _____ IN.
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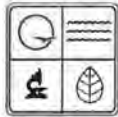
REMARKS Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	REASON FOR ABANDONMENT Soil and water sampling was completed.
--	--

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

SIGNATURE (PRIMARY CONTRACTOR)	SIGNATURE (CONTRACTOR)	PERMIT NUMBER 004395-M	DATE 01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER

MO-780-2181 (1-12)      REMIT TO: MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF GEOLOGY AND LAND SURVEY  
WELLHEAD PROTECTION SECTION, PO BOX 250, ROLLA, MO 65402 573-368-2165  
ENCLOSE \$50 FEE WITH REGISTRATION RECORD WITHIN 60 DAYS AFTER WELL PLUGGING OR WITHIN 180 DAYS AFTER THE PLUGGING OF TEMPORARY WELLS





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING  
REGISTRATION RECORD**

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

**INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR**

OWNER NAME U.S. Dept. of Agriculture/Commodity Credit Corp (USDA/CCC)		TELEPHONE NUMBER 202 720-5104		VARIANCE NUMBER (IF APPLICABLE) 4952
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence Ave		CITY Washington	STATE DC	ZIP CODE 20250
ADDRESS OF WELL SITE Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City	STATE MO	ZIP CODE 63361
SITE NAME Montgomery City		WELL NUMBER SB09D	DATE 01/25/2012	
LOCATION OF WELL LAT. 38 ° 58 ' 12.1 " N LONG. 91 ° 29 ' 43.9 " W		DRILL AREA 1	SMALLEST 32 1/4 "      LARGEST 32 1/4 " SE 1/4 "	
		COUNTY Montgomery	Sec. 32 Township 32 North 32 Range 5 <input type="checkbox"/> East <input checked="" type="checkbox"/> West	

**PLUGGING INFORMATION**

ORIGINAL DRILLER (IF KNOWN) David Surngier, PE	DATE ORIGINALLY DRILLED 01/20/2012	STATIC WATER LEVEL 1.36	DRILLER NOTES Glacial Till
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<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL 63 FT.	LENGTH OF RISER 58 FT.	QUANTITY	DEPTH	TYPE OF FILL MATERIAL <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER 0.5 IN.	WELL SCREEN AND RISER REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			AMOUNT OF FILL USED none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	CASING REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	TOTAL BORING(S)	TOTAL FT.	DEPTH TO TOP OF FILL NA FT.

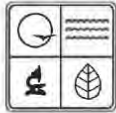
GROUT INSTALLATION METHOD <input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	GROUT MATERIAL USED Neat Cement    Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE? 6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	TOTAL NUMBER OF BAGS OF GROUT USED 3 POUNDS OF GROUT PER BAG 50
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DATE 1 <sup>st</sup> WELL PLUGGED 01/25/2012	DATE LAST WELL PLUGGED 01/25/2012	FINISHED SURFACE MATERIAL <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	SURFACE MATERIAL LENGTH ____ FT. ____ IN.
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REMARKS Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	REASON FOR ABANDONMENT Soil and water sampling was completed.
--	--

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

SIGNATURE (PRIMARY CONTRACTOR)	SIGNATURE (CONTRACTOR)	PERMIT NUMBER 004395-M	DATE 01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER
			DATE



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING  
REGISTRATION RECORD**

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

INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR				
OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		TELEPHONE NUMBER 202 720-5104		VARIANCE NUMBER (IF APPLICABLE) 4952
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence Ave	CITY Washington	STATE DC	ZIP CODE 20250	REFERENCE NUMBER OF ORIGINAL WELL (IF KNOWN)
ADDRESS OF WELL SITE Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATE MO	ZIP CODE 63361	
SITE NAME Montgomery City	WELL NUMBER SB10	DATE 01/25/2012		

LOCATION OF WELL	DRILL AREA	SMALLEST	LARGEST
LAT. 38 ° 58 ' 12.1 "	1	1/4	1/4 SE 1/4
LONG. 91 ° 29 ' 43.0 "	COUNTY Montgomery	Sec. 32 Township 49 North Range 5 <input type="checkbox"/> East <input checked="" type="checkbox"/> West	

PLUGGING INFORMATION			
ORIGINAL DRILLER (IF KNOWN) David Surgnier, PE	DATE ORIGINALLY DRILLED 01/25/2012	STATIC WATER LEVEL 1.08	DRILLER NOTES Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL 18 FT.	LENGTH OF RISER 8 FT.	QUANTITY	DEPTH	TYPE OF FILL MATERIAL <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER 1 IN.	WELL SCREEN AND RISER REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			AMOUNT OF FILL USED none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	CASING REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	TOTAL BORING(S)	TOTAL FT.	DEPTH TO TOP OF FILL NA FT.

GROUT INSTALLATION METHOD <input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	GROUT MATERIAL USED Neat Cement    Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE? 6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	TOTAL NUMBER OF BAGS OF GROUT USED 1 POUNDS OF GROUT PER BAG 50
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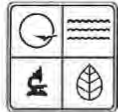
DATE 1 <sup>st</sup> WELL PLUGGED 01/25/2012	DATE LAST WELL PLUGGED 01/25/2012	FINISHED SURFACE MATERIAL <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	SURFACE MATERIAL LENGTH ____ FT. ____ IN.
---	--------------------------------------	--	--

REMARKS Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	REASON FOR ABANDONMENT Soil and water sampling was completed.
--	--

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

SIGNATURE (PRIMARY CONTRACTOR) 	SIGNATURE (CONTRACTOR)	PERMIT NUMBER 004395-M	DATE 01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING  
REGISTRATION RECORD**

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

INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR				
OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	TELEPHONE NUMBER 202 720-5104	VARIANCE NUMBER (IF APPLICABLE) 4952		
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence Ave	CITY Washington	STATE DC	ZIP CODE 20250	
ADDRESS OF WELL SITE Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATE MO	ZIP CODE 63361	REFERENCE NUMBER OF ORIGINAL WELL (IF KNOWN)
SITE NAME Montgomery City	WELL NUMBER SB11	DATE 01/25/2012		

LOCATION OF WELL	DRILL AREA	SMALLEST	LARGEST
LAT. 38 ° 58 ' 12.7 "	1	_____ ¼ _____ ¼ SE ¼	
LONG. 91 ° 29 ' 42.9 "	COUNTY Montgomery	Sec. 32 Township 49 North Range 5	<input type="checkbox"/> East <input checked="" type="checkbox"/> West

PLUGGING INFORMATION			
ORIGINAL DRILLER (IF KNOWN) David Surnier, PE	DATE ORIGINALLY DRILLED 01/25/2012	STATIC WATER LEVEL 3.36	DRILLER NOTES Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL 25 FT.	LENGTH OF RISER 15 FT.	QUANTITY	DEPTH	TYPE OF FILL MATERIAL <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER 0.5 IN.	WELL SCREEN AND RISER REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			AMOUNT OF FILL USED none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	CASING REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	TOTAL _____ BORING(S)	TOTAL _____ FT.	DEPTH TO TOP OF FILL NA FT.

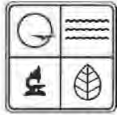
GROUT INSTALLATION METHOD <input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	GROUT MATERIAL USED Neat Cement    Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other _____	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE? 6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	TOTAL NUMBER OF BAGS OF GROUT USED 1 POUNDS OF GROUT PER BAG 50
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DATE 1 <sup>st</sup> WELL PLUGGED 01/25/2012	DATE LAST WELL PLUGGED 01/25/2012	FINISHED SURFACE MATERIAL <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	SURFACE MATERIAL LENGTH _____ FT. _____ IN.
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REMARKS Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	REASON FOR ABANDONMENT Soil and water sampling was completed.
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I hereby certify that the monitoring well herein described was plugged in accordance with the Department of Natural Resources requirements for the plugging of wells.

SIGNATURE (PRIMARY CONTRACTOR)	SIGNATURE (CONTRACTOR)	PERMIT NUMBER 004395-M	DATE 01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING  
REGISTRATION RECORD**

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

**INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR**

OWNER NAME U.S. Dept. of Agriculture/Commodity Credit Corp (USDA/CCC)		TELEPHONE NUMBER 202 720-5104		VARIANCE NUMBER (IF APPLICABLE) 4952
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence Ave		CITY Washington	STATE DC	ZIP CODE 20250
ADDRESS OF WELL SITE Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City	STATE MO	ZIP CODE 63361
SITE NAME Montgomery City		WELL NUMBER SB16M		DATE 01/25/2012

LOCATION OF WELL	DRILL AREA	SMALLEST	LARGEST
LAT. 38 ° 58 ' 13.2 "	1	1/4	1/4 SE 1/4
LONG. 91 ° 29 ' 43.2 "	COUNTY Montgomery	Sec. 32 Township 49 North Range 5 <input type="checkbox"/> East <input checked="" type="checkbox"/> West	

**PLUGGING INFORMATION**

ORIGINAL DRILLER (IF KNOWN) David Surgnier, PE	DATE ORIGINALLY DRILLED 01/25/2012	STATIC WATER LEVEL 4.95	DRILLER NOTES Glacial Till
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<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL 30 FT.	LENGTH OF RISER 20 FT.	QUANTITY	DEPTH	TYPE OF FILL MATERIAL <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER 0.5 IN.	WELL SCREEN AND RISER REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			AMOUNT OF FILL USED none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	CASING REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	TOTAL BORING(S)	TOTAL FT.	DEPTH TO TOP OF FILL NA FT.

GROUT INSTALLATION METHOD <input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	GROUT MATERIAL USED Neat Cement    Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE? 6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	TOTAL NUMBER OF BAGS OF GROUT USED 2 POUNDS OF GROUT PER BAG 50
--	---	--	--

DATE 1 <sup>st</sup> WELL PLUGGED 01/25/2012	DATE LAST WELL PLUGGED 01/25/2012	FINISHED SURFACE MATERIAL <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	SURFACE MATERIAL LENGTH ____ FT. ____ IN.
---	--------------------------------------	--	--

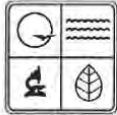
REMARKS  
Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.

REASON FOR ABANDONMENT  
Soil and water sampling was completed.

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

SIGNATURE (PRIMARY CONTRACTOR)	SIGNATURE (CONTRACTOR)	PERMIT NUMBER 004395-M	DATE 01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER
			DATE





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING  
REGISTRATION RECORD**

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

INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR				
OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		TELEPHONE NUMBER 202 720-5104		VARIANCE NUMBER (IF APPLICABLE) 4952
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence Ave		CITY Washington	STATE DC	ZIP CODE 20250
ADDRESS OF WELL SITE Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City	STATE MO	ZIP CODE 63361
SITE NAME Montgomery City		WELL NUMBER SB16D	DATE 01/25/2012	
LOCATION OF WELL LAT. 38 ° 58 ' 13.2 " LONG. 91 ° 29 ' 43.2 "		DRILL AREA 1	SMALLEST _____ ¼ _____ ¼ SE ¼ LARGEST _____ ¼ _____ ¼ Sec. 32 Township 49 North 5 Range <input type="checkbox"/> East <input checked="" type="checkbox"/> West	
		COUNTY Montgomery		

PLUGGING INFORMATION			
ORIGINAL DRILLER (IF KNOWN) David Surnier, PE	DATE ORIGINALLY DRILLED 01/25/2012	STATIC WATER LEVEL 2.56	DRILLER NOTES Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL 58 FT.	LENGTH OF RISER 48 FT.	<b>QUANTITY</b>	<b>DEPTH</b>	TYPE OF FILL MATERIAL <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER 0.5 IN.	WELL SCREEN AND RISER REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			AMOUNT OF FILL USED none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	CASING REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No			DEPTH TO TOP OF FILL NA FT.
		TOTAL _____ BORING(S)	TOTAL _____ FT.	

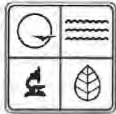
GROUT INSTALLATION METHOD <input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	GROUT MATERIAL USED Neat Cement    Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other _____	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE? 6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	TOTAL NUMBER OF BAGS OF GROUT USED 3 POUNDS OF GROUT PER BAG 50
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DATE 1 <sup>st</sup> WELL PLUGGED 01/25/2012	DATE LAST WELL PLUGGED 01/25/2012	FINISHED SURFACE MATERIAL <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	SURFACE MATERIAL LENGTH _____ FT. _____ IN.
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REMARKS Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	REASON FOR ABANDONMENT Soil and water sampling was completed.
--	--

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

SIGNATURE (PRIMARY CONTRACTOR) 	SIGNATURE (CONTRACTOR)	PERMIT NUMBER 004395-M	DATE 01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER
			DATE



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING REGISTRATION RECORD**

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

INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR				
OWNER NAME		TELEPHONE NUMBER		VARIANCE NUMBER (IF APPLICABLE)
U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		202 720-5104		4952
OWNER ADDRESS		CITY	STATE	ZIP CODE
STOP 0513, Room 4717-S, 1400 Independence Ave		Washington	DC	20250
ADDRESS OF WELL SITE		CITY	STATE	ZIP CODE
Montgomery City Fairgrounds/700 S. Sturgeon St.		Montgomery City	MO	63361
SITE NAME		WELL NUMBER	DATE	
Montgomery City		SB22M	01/25/2012	
LOCATION OF WELL		DRILL AREA	SMALLEST LARGEST	
LAT. 38 ° 58 ' 11.0 "		1	_____ ¼ _____ ¼ SE ¼	
LONG. 91 ° 29 ' 42.0 "		COUNTY	Sec. <u>32</u> Township <u>49</u> North Range <u>5</u> <input type="checkbox"/> East <input checked="" type="checkbox"/> West	
		Montgomery		

PLUGGING INFORMATION			
ORIGINAL DRILLER (IF KNOWN)	DATE ORIGINALLY DRILLED	STATIC WATER LEVEL	DRILLER NOTES
David Surgnier, PE	01/25/2012	7.21	Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: <u>2.5</u> IN.
DEPTH OF WELL	LENGTH OF RISER	QUANTITY	DEPTH	TYPE OF FILL MATERIAL
<u>28</u> FT.	<u>18</u> FT.			<input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER	WELL SCREEN AND RISER REMOVED?			AMOUNT OF FILL USED
<u>0.5</u> IN.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			<u>none</u> <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED?	CASING REMOVED?	TOTAL BORING(S)	TOTAL FT.	DEPTH TO TOP OF FILL
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No			<u>NA</u> FT.

GROUT INSTALLATION METHOD	GROUT MATERIAL USED	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE?	TOTAL NUMBER OF BAGS OF GROUT USED
<input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	Neat Cement Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other _____	<u>6-7</u> <input checked="" type="checkbox"/> Hydrated to Saturation	<u>3</u> POUNDS OF GROUT PER BAG <u>50</u>

DATE 1 <sup>st</sup> WELL PLUGGED	DATE LAST WELL PLUGGED	FINISHED SURFACE MATERIAL	SURFACE MATERIAL LENGTH
01/25/2012	01/25/2012	<input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	_____ FT. _____ IN.

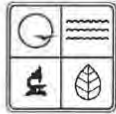
REMARKS	REASON FOR ABANDONMENT
Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	Soil and water sampling was completed.

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

SIGNATURE (PRIMARY CONTRACTOR)	SIGNATURE (CONTRACTOR)	PERMIT NUMBER	DATE
		004395-M	01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER

MO-780-2161 (1-12) REMIT TO: MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF GEOLOGY AND LAND SURVEY  
WELLHEAD PROTECTION SECTION, PO BOX 250, ROLLA, MO 65402 573-368-2165  
ENCLOSE \$50 FEE WITH REGISTRATION RECORD WITHIN 60 DAYS AFTER WELL PLUGGING OR WITHIN 180 DAYS AFTER THE PLUGGING OF TEMPORARY WELLS





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING  
REGISTRATION RECORD**

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

INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR				
OWNER NAME	TELEPHONE NUMBER	VARIANCE NUMBER (IF APPLICABLE)		
U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	202 720-5104	4952		
OWNER ADDRESS	CITY	STATE	ZIP CODE	
STOP 0513, Room 4717-S, 1400 Independence Ave	Washington	DC	20250	
ADDRESS OF WELL SITE	CITY	STATE	ZIP CODE	
Montgomery City Fairgrounds/700 S. Sturgeon St.	Montgomery City	MO	63361	
SITE NAME	WELL NUMBER	DATE		
Montgomery City	SB22D	01/25/2012		

LOCATION OF WELL	DRILL AREA	SMALLEST	LARGEST
LAT. 38 ° 58 ' 11.0 "	1	_____ ¼ _____	_____ ¼ SE _____ ¼
LONG. 91 ° 29 ' 42.0 "	COUNTY	Sec. 32 Township 49 North 5 Range <input type="checkbox"/> East <input checked="" type="checkbox"/> West	
	Montgomery		

PLUGGING INFORMATION			
ORIGINAL DRILLER (IF KNOWN)	DATE ORIGINALLY DRILLED	STATIC WATER LEVEL	DRILLER NOTES
David Surgnier, PE	01/25/2012	5.36	Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL	LENGTH OF RISER	QUANTITY	DEPTH	TYPE OF FILL MATERIAL
67.2 FT.	57.2 FT.			<input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER	WELL SCREEN AND RISER REMOVED?			AMOUNT OF FILL USED
0.5 IN.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED?	CASING REMOVED?			DEPTH TO TOP OF FILL
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No			NA FT.
		TOTAL BORING(S)	TOTAL FT.	

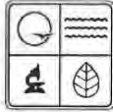
GROUT INSTALLATION METHOD	GROUT MATERIAL USED	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE?	TOTAL NUMBER OF BAGS OF GROUT USED
<input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	Neat Cement Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other _____	6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	3 POUNDS OF GROUT PER BAG 50

DATE 1 <sup>st</sup> WELL PLUGGED	DATE LAST WELL PLUGGED	FINISHED SURFACE MATERIAL	SURFACE MATERIAL LENGTH
01/25/2012	01/25/2012	<input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	_____ FT. _____ IN.

REMARKS	REASON FOR ABANDONMENT
Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	Soil and water sampling was completed.

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

SIGNATURE (PRIMARY CONTRACTOR)	SIGNATURE (CONTRACTOR)	PERMIT NUMBER	DATE
		004395-M	01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING  
REGISTRATION RECORD**

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

INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR					
OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		TELEPHONE NUMBER 202 720-5104		VARIANCE NUMBER (IF APPLICABLE) 4952	
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence Ave		CITY Washington	STATE DC	ZIP CODE 20250	
ADDRESS OF WELL SITE Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City	STATE MO	ZIP CODE 63361	
SITE NAME Montgomery City		WELL NUMBER SB33		DATE 01/25/2012	
LOCATION OF WELL LAT. 38 ° 58 ' 12.2 " LONG. 91 ° 29 ' 44.3 "		DRILL AREA 1	SMALLEST _____ 1/4 _____ 1/4 SE 1/4 _____ LARGEST _____ Sec. 32 Township 49 North 5 Range <input type="checkbox"/> East <input checked="" type="checkbox"/> West		
		COUNTY Montgomery			

PLUGGING INFORMATION			
ORIGINAL DRILLER (IF KNOWN) David Surgnier, PE	DATE ORIGINALLY DRILLED 01/25/2012	STATIC WATER LEVEL 2.87	DRILLER NOTES Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL 22 FT.	LENGTH OF RISER 12 FT.	<b>QUANTITY</b>	<b>DEPTH</b>	TYPE OF FILL MATERIAL <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER 1 IN.	WELL SCREEN AND RISER REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			AMOUNT OF FILL USED none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	CASING REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No			DEPTH TO TOP OF FILL NA FT.
		TOTAL _____ BORING(S)	TOTAL _____ FT.	

GROUT INSTALLATION METHOD <input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	GROUT MATERIAL USED Neat Cement    Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other _____	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE? 6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	TOTAL NUMBER OF BAGS OF GROUT USED 2 POUNDS OF GROUT PER BAG 50
--	---	--	--

DATE 1 <sup>st</sup> WELL PLUGGED 01/25/2012	DATE LAST WELL PLUGGED 01/25/2012	FINISHED SURFACE MATERIAL <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	SURFACE MATERIAL LENGTH _____ FT. _____ IN.
---	--------------------------------------	--	--

REMARKS Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	REASON FOR ABANDONMENT Soil and water sampling was completed.
--	--

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

SIGNATURE (PRIMARY CONTRACTOR) 	SIGNATURE (CONTRACTOR)	PERMIT NUMBER 004395-M	DATE 01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER
			DATE





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING  
REGISTRATION RECORD**

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

INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR			
OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)	TELEPHONE NUMBER 202 720-5104	VARIANCE NUMBER (IF APPLICABLE) 4952	
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence Ave	CITY Washington	STATE DC	ZIP CODE 20250
ADDRESS OF WELL SITE Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATE MO	ZIP CODE 63361
SITE NAME Montgomery City	WELL NUMBER SB34	DATE 01/25/2012	

LOCATION OF WELL LAT. 38 ° 58 ' 12.1 "	DRILL AREA 1	SMALLEST 1/4	LARGEST 1/4 SE 1/4
LONG. 91 ° 29 ' 43.4 "	COUNTY Montgomery	Sec. 32 Township 49 North 5 Range <input type="checkbox"/> East <input checked="" type="checkbox"/> West	

PLUGGING INFORMATION			
ORIGINAL DRILLER (IF KNOWN) David Surngier, PE	DATE ORIGINALLY DRILLED 01/25/2012	STATIC WATER LEVEL 2.43	DRILLER NOTES Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL 22 FT.	LENGTH OF RISER 17 FT.	QUANTITY	DEPTH	TYPE OF FILL MATERIAL <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER 0.5 IN.	WELL SCREEN AND RISER REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			AMOUNT OF FILL USED none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	CASING REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No			DEPTH TO TOP OF FILL NA FT.
TOTAL BORING(S)		TOTAL FT.		

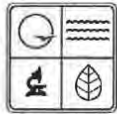
GROUT INSTALLATION METHOD <input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	GROUT MATERIAL USED Neat Cement Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE? 6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	TOTAL NUMBER OF BAGS OF GROUT USED 2 POUNDS OF GROUT PER BAG 50
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DATE 1 <sup>st</sup> WELL PLUGGED 01/25/2012	DATE LAST WELL PLUGGED 01/25/2012	FINISHED SURFACE MATERIAL <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	SURFACE MATERIAL LENGTH ____ FT. ____ IN.
---	--------------------------------------	--	--

REMARKS Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	REASON FOR ABANDONMENT Soil and water sampling was completed.
--	--

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

SIGNATURE (PRIMARY CONTRACTOR) 	SIGNATURE (CONTRACTOR)	PERMIT NUMBER 004395-M	DATE 01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER
			DATE



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING  
REGISTRATION RECORD**

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

INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR				
OWNER NAME		TELEPHONE NUMBER		VARIANCE NUMBER (IF APPLICABLE)
U.S. Dept. of Agriculture/Commodity Credit Corp (USDA/CCC)		202 720-5104		4952
OWNER ADDRESS		CITY	STATE	ZIP CODE
STOP 0513, Room 4717-S, 1400 Independence Ave		Washington	DC	20250
ADDRESS OF WELL SITE		CITY	STATE	ZIP CODE
Montgomery City Fairgrounds/700 S. Sturgeon St.		Montgomery City	MO	63361
SITE NAME		WELL NUMBER	DATE	
Montgomery City		SB41S	01/25/2012	
LOCATION OF WELL		DRILL AREA	SMALLEST LARGEST	
LAT. 38 ° 58 ' 13.7 "		1	_____ ¼ _____ ¼ SE ¼	
LONG. 91 ° 29 ' 45.0 "		COUNTY	Sec. 32 Township 49 North 5 Range <input type="checkbox"/> East <input checked="" type="checkbox"/> West	
		Montgomery		

PLUGGING INFORMATION			
ORIGINAL DRILLER (IF KNOWN)	DATE ORIGINALLY DRILLED	STATIC WATER LEVEL	DRILLER NOTES
David Surngner, PE	01/25/2012	3.1	Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL	LENGTH OF RISER	QUANTITY	DEPTH	TYPE OF FILL MATERIAL
18 FT.	8 FT.			<input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER	WELL SCREEN AND RISER REMOVED?			AMOUNT OF FILL USED
0.5 IN.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED?	CASING REMOVED?			DEPTH TO TOP OF FILL
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	TOTAL BORING(S)	TOTAL FT.	NA FT.

GROUT INSTALLATION METHOD	GROUT MATERIAL USED	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE?	TOTAL NUMBER OF BAGS OF GROUT USED
<input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	Neat Cement Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other _____	6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	1 POUNDS OF GROUT PER BAG 50

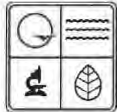
DATE 1 <sup>st</sup> WELL PLUGGED	DATE LAST WELL PLUGGED	FINISHED SURFACE MATERIAL	SURFACE MATERIAL LENGTH
01/25/2012	01/25/2012	<input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	_____ FT. _____ IN.

REMARKS	REASON FOR ABANDONMENT
Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	Soil and water sampling was completed.

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

SIGNATURE (PRIMARY CONTRACTOR)	SIGNATURE (CONTRACTOR)	PERMIT NUMBER	DATE
		004395-M	01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING  
REGISTRATION RECORD**

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

<b>INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR</b>				
OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		TELEPHONE NUMBER 202 720-5104		VARIANCE NUMBER (IF APPLICABLE) 4952
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence Ave	CITY Washington	STATE DC	ZIP CODE 20250	
ADDRESS OF WELL SITE Montgomery City Fairgrounds/700 S. Sturgeon St.	CITY Montgomery City	STATE MO	ZIP CODE 63361	REFERENCE NUMBER OF ORIGINAL WELL (IF KNOWN)
SITE NAME Montgomery City	WELL NUMBER SB41M	DATE 01/25/2012		
LOCATION OF WELL LAT. 38 ° 58 ' 13.7 " LONG. 91 ° 29 ' 45.0 "	DRILL AREA 1	SMALLEST _____ LARGEST _____ Sec. 32 Township 49 North 5 Range <input type="checkbox"/> East <input checked="" type="checkbox"/> West		

<b>PLUGGING INFORMATION</b>			
ORIGINAL DRILLER (IF KNOWN) David Surgnier, PE	DATE ORIGINALLY DRILLED 01/25/2012	STATIC WATER LEVEL 1.81	DRILLER NOTES Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL 30 FT.	LENGTH OF RISER 20 FT.	<b>QUANTITY</b>	<b>DEPTH</b>	TYPE OF FILL MATERIAL <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER 0.5 IN.	WELL SCREEN AND RISER REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			AMOUNT OF FILL USED none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	CASING REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No			DEPTH TO TOP OF FILL NA FT.
		TOTAL _____ BORING(S)	TOTAL _____ FT.	

GROUT INSTALLATION METHOD <input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	GROUT MATERIAL USED Neat Cement    Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other _____	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE? 6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	TOTAL NUMBER OF BAGS OF GROUT USED 2 POUNDS OF GROUT PER BAG 50
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DATE 1 <sup>st</sup> WELL PLUGGED 01/25/2012	DATE LAST WELL PLUGGED 01/25/2012	FINISHED SURFACE MATERIAL <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	SURFACE MATERIAL LENGTH _____ FT. _____ IN.
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REMARKS: Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.

REASON FOR ABANDONMENT: Soil and water sampling was completed.

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

SIGNATURE (PRIMARY CONTRACTOR)	SIGNATURE (CONTRACTOR)	PERMIT NUMBER 004395-M	DATE 01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER

MO-780-2161 (1-12) REMIT TO: MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF GEOLOGY AND LAND SURVEY  
WELLHEAD PROTECTION SECTION, PO BOX 250, ROLLA, MO 65402 573-368-2165  
ENCLOSE \$50 FEE WITH REGISTRATION RECORD WITHIN 60 DAYS AFTER WELL PLUGGING OR WITHIN 180 DAYS AFTER THE PLUGGING OF TEMPORARY WELLS



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING  
REGISTRATION RECORD**

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

INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR				
OWNER NAME		TELEPHONE NUMBER		VARIANCE NUMBER (IF APPLICABLE)
U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CDC)		202 720-5104		4952
OWNER ADDRESS		CITY	STATE	ZIP CODE
STOP 0513, Room 4717-S, 1400 Independence Ave		Washington	DC	20250
ADDRESS OF WELL SITE		CITY	STATE	ZIP CODE
Montgomery City Fairgrounds/700 S: Sturgeon St.		Montgomery City	MO	63361
SITE NAME		WELL NUMBER	DATE	
Montgomery City		SB41D	01/25/2012	
LOCATION OF WELL		DRILL AREA	SMALLEST LARGEST	
LAT. 38 ° 58 ' 13.7 "		1	_____ ¼ _____ ¼ SE ¼	
LONG. 91 ° 29 ' 45.0 "		COUNTY	Sec. 3 2 Township 49 North 5 Range <input type="checkbox"/> East <input checked="" type="checkbox"/> West	
		Montgomery		

PLUGGING INFORMATION			
ORIGINAL DRILLER (IF KNOWN)	DATE ORIGINALLY DRILLED	STATIC WATER LEVEL	DRILLER NOTES
David Surngner, PE	01/25/2012	2.13	Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL	LENGTH OF RISER	QUANTITY	DEPTH	TYPE OF FILL MATERIAL
58 FT.	48 FT.			<input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER	WELL SCREEN AND RISER REMOVED?			AMOUNT OF FILL USED
0.5 IN.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED?	CASING REMOVED?			DEPTH TO TOP OF FILL
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No			NA FT.
TOTAL BORING(S)		TOTAL FT.		

GROUT INSTALLATION METHOD	GROUT MATERIAL USED	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE?	TOTAL NUMBER OF BAGS OF GROUT USED
<input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	Neat Cement Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other _____	6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	3
POUNDS OF GROUT PER BAG		SURFACE MATERIAL LENGTH	
50		_____ FT. _____ IN.	

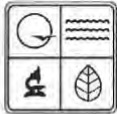
DATE 1 <sup>st</sup> WELL PLUGGED	DATE LAST WELL PLUGGED	FINISHED SURFACE MATERIAL	
01/25/2012	01/25/2012	<input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	

REMARKS	REASON FOR ABANDONMENT
Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	Soil and water sampling was completed.

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

SIGNATURE (PRIMARY CONTRACTOR)	SIGNATURE (CONTRACTOR)	PERMIT NUMBER	DATE
		004395-M	01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING REGISTRATION RECORD**

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

INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR				
OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		TELEPHONE NUMBER 202 720-5104		VARIANCE NUMBER (IF APPLICABLE) 4952
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence Ave		CITY Washington	STATE DC	ZIP CODE 20250
ADDRESS OF WELL SITE Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City	STATE MO	ZIP CODE 63361
SITE NAME Montgomery City		WELL NUMBER SB42S	DATE 01/25/2012	

LOCATION OF WELL	DRILL AREA	SMALLEST	LARGEST
LAT. 38 ° 58 ' 13.6 "	1	1/4	1/4 SE 1/4
LONG. 91 ° 29 ' 44.1 "	COUNTY Montgomery	Sec. 32 Township 49 North 5 Range <input type="checkbox"/> East <input checked="" type="checkbox"/> West	

PLUGGING INFORMATION			
ORIGINAL DRILLER (IF KNOWN) David Surgnier, PE	DATE ORIGINALLY DRILLED 01/25/2012	STATIC WATER LEVEL 3.27	DRILLER NOTES Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL 27 FT.	LENGTH OF RISER 17 FT.	<b>QUANTITY</b>	<b>DEPTH</b>	TYPE OF FILL MATERIAL <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER 0.5 IN.	WELL SCREEN AND RISER REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			AMOUNT OF FILL USED none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	CASING REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No			DEPTH TO TOP OF FILL NA FT.
		TOTAL _____ BORING(S)	TOTAL _____ FT.	

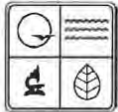
GROUT INSTALLATION METHOD <input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	GROUT MATERIAL USED Neat Cement Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other _____	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE? 6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	TOTAL NUMBER OF BAGS OF GROUT USED 2 POUNDS OF GROUT PER BAG 50
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DATE 1 <sup>st</sup> WELL PLUGGED 01/25/2012	DATE LAST WELL PLUGGED 01/25/2012	FINISHED SURFACE MATERIAL <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	SURFACE MATERIAL LENGTH _____ FT. _____ IN.
---	--------------------------------------	--	--

REMARKS Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	REASON FOR ABANDONMENT Soil and water sampling was completed.
--	--

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

SIGNATURE (PRIMARY CONTRACTOR) 	SIGNATURE (CONTRACTOR)	PERMIT NUMBER 004395-M	DATE 01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING REGISTRATION RECORD**

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

<b>INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR</b>				
OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		TELEPHONE NUMBER 202 720-5104		VARIANCE NUMBER (IF APPLICABLE) 4952
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence Ave		CITY Washington	STATE DC	ZIP CODE 20250
ADDRESS OF WELL SITE Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City	STATE MO	ZIP CODE 63361
SITE NAME Montgomery City		WELL NUMBER SB42D		DATE 01/25/2012
LOCATION OF WELL LAT. 38 ° 58 ' 13.6 "      LONG. 91 ° 29 ' 44.1 "		DRILL AREA 1	SMALLEST _____ 1/4 _____ 1/4 SE _____ 1/4 LARGEST _____ 1/4 _____ 1/4 SE _____ 1/4 Sec. 32 Township 49 North 6 Range <input type="checkbox"/> East <input checked="" type="checkbox"/> West	
		COUNTY Montgomery		

<b>PLUGGING INFORMATION</b>			
ORIGINAL DRILLER (IF KNOWN) David Surngier, PE	DATE ORIGINALLY DRILLED 01/25/2012	STATIC WATER LEVEL 2.03	DRILLER NOTES Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL 57 FT.	LENGTH OF RISER 47 FT.	<b>QUANTITY</b>	<b>DEPTH</b>	TYPE OF FILL MATERIAL <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER 0.5 IN.	WELL SCREEN AND RISER REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			AMOUNT OF FILL USED none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	CASING REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No			DEPTH TO TOP OF FILL NA FT.
<b>TOTAL</b>		<b>BORING(S)</b>	<b>FT.</b>	

GROUT INSTALLATION METHOD <input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	GROUT MATERIAL USED Neat Cement    Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other _____	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE? 6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	TOTAL NUMBER OF BAGS OF GROUT USED 3 POUNDS OF GROUT PER BAG 50
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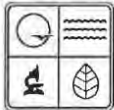
DATE 1 <sup>st</sup> WELL PLUGGED 01/25/2012	DATE LAST WELL PLUGGED 01/25/2012	FINISHED SURFACE MATERIAL <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	SURFACE MATERIAL LENGTH _____ FT. _____ IN.
---	--------------------------------------	--	--

REMARKS Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	REASON FOR ABANDONMENT Soil and water sampling was completed.
--	--

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

SIGNATURE (PRIMARY CONTRACTOR) 	SIGNATURE (CONTRACTOR)	PERMIT NUMBER 004395-M	DATE 01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER
			DATE





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING  
REGISTRATION RECORD**

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

<b>INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR</b>			
OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		TELEPHONE NUMBER 202 720-5104	
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence Ave		CITY Washington	STATE DC
ADDRESS OF WELL SITE Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City	STATE MO
SITE NAME Montgomery City		WELL NUMBER SB44S	DATE 01/25/2012
LOCATION OF WELL LAT. 38 ° 58 ' 11.4 "      LONG. 91 ° 29 ' 43.0 "		DRILL AREA 1	COUNTY Montgomery
		SMALLEST 1/4	LARGEST 1/4 SE 1/4
		Sec. 32 Township 49 North 5 Range <input type="checkbox"/> East <input checked="" type="checkbox"/> West	

<b>PLUGGING INFORMATION</b>			
ORIGINAL DRILLER (IF KNOWN) David Surgnier, PE	DATE ORIGINALLY DRILLED 01/25/2012	STATIC WATER LEVEL 3.29	DRILLER NOTES Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL 18 FT.	LENGTH OF RISER 8 FT.	QUANTITY	DEPTH	TYPE OF FILL MATERIAL <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER 0.5 IN.	WELL SCREEN AND RISER REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			AMOUNT OF FILL USED none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	CASING REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	TOTAL BORING(S)	TOTAL FT.	DEPTH TO TOP OF FILL NA FT.

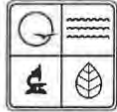
GROUT INSTALLATION METHOD <input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	GROUT MATERIAL USED Neat Cement    Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other _____	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE? 6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	TOTAL NUMBER OF BAGS OF GROUT USED 1 POUNDS OF GROUT PER BAG 50
--	---	--	--

DATE 1 <sup>st</sup> WELL PLUGGED 01/25/2012	DATE LAST WELL PLUGGED 01/25/2012	FINISHED SURFACE MATERIAL <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	SURFACE MATERIAL LENGTH _____ FT. _____ IN
---	--------------------------------------	--	---

REMARKS Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	REASON FOR ABANDONMENT Soil and water sampling was completed.
--	--

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

SIGNATURE (PRIMARY CONTRACTOR) 	SIGNATURE (CONTRACTOR)	PERMIT NUMBER 004395-M	DATE 01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	DATE



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING  
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<b>OFFICE USE ONLY</b>		DATE RECEIVED
<b>REF NO.</b>		
C.R. NO.	CHECK NO.	TRANSMITTAL NO.
STATE WELL NUMBER	APPROVED BY	DATE APPROVED
ENTERED	ROUTE	
Ph1      Ph2      Ph3		

INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR				
OWNER NAME		TELEPHONE NUMBER	VARIANCE NUMBER (IF APPLICABLE)	
U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		202 720-5104	4952	
OWNER ADDRESS	CITY	STATE	ZIP CODE	
STOP 0513, Room 4717-S, 1400 Independence Ave	Washington	DC	20250	
ADDRESS OF WELL SITE	CITY	STATE	ZIP CODE	REFERENCE NUMBER OF ORIGINAL WELL (IF KNOWN)
Montgomery City Fairgrounds/700 S. Sturgeon St.	Montgomery City	MO	63361	
SITE NAME	WELL NUMBER	DATE		
Montgomery City	SB46M	01/25/2012		

LOCATION OF WELL	DRILL AREA	SMALLEST	LARGEST
LAT. 38 ° 58 ' 12.7 "	1	1/4	1/4 SE 1/4
LONG. 91 ° 29 ' 45.4 "	COUNTY Montgomery	Sec. 32 Township 49 North 5 Range <input type="checkbox"/> East <input checked="" type="checkbox"/> West	

PLUGGING INFORMATION			
ORIGINAL DRILLER (IF KNOWN)	DATE ORIGINALLY DRILLED	STATIC WATER LEVEL	DRILLER NOTES
David Surgnier, PE	01/25/2012	1.45	Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL	LENGTH OF RISER	QUANTITY	DEPTH	TYPE OF FILL MATERIAL
30 FT.	30 FT.			<input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER	WELL SCREEN AND RISER REMOVED?			AMOUNT OF FILL USED
0.5 IN.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED?	CASING REMOVED?			DEPTH TO TOP OF FILL
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	TOTAL BORING(S)	TOTAL FT.	NA FT.

GROUT INSTALLATION METHOD	GROUT MATERIAL USED	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE?	TOTAL NUMBER OF BAGS OF GROUT USED
<input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	Neat Cement    Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other	6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	1 POUNDS OF GROUT PER BAG 50

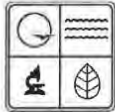
DATE 1 <sup>st</sup> WELL PLUGGED	DATE LAST WELL PLUGGED	FINISHED SURFACE MATERIAL	SURFACE MATERIAL LENGTH
01/25/2012	01/25/2012	<input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	_____ FT. _____ IN.

REMARKS	REASON FOR ABANDONMENT
Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	Soil and water sampling was completed.

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SIGNATURE (PRIMARY CONTRACTOR)	SIGNATURE (CONTRACTOR)	PERMIT NUMBER	DATE
		004395-M	01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	DATE





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
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C.R. NO.		APPROVED BY	DATE APPROVED
STATE WELL NUMBER		ROUTE	
ENTERED	ROUTE		
Ph1	Ph2	Ph3	

<b>INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR</b>					
OWNER NAME		TELEPHONE NUMBER		VARIANCE NUMBER (IF APPLICABLE)	
U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		202 720-5104		4952	
OWNER ADDRESS		CITY	STATE	ZIP CODE	
STOP 0513, Room 4717-S, 1400 Independence Ave		Washington	DC	20250	
ADDRESS OF WELL SITE		CITY	STATE	ZIP CODE	
Montgomery City Fairgrounds/700 S. Sturgeon St.		Montgomery City	MO	63361	
SITE NAME		WELL NUMBER	DATE		
Montgomery City		SB47S	01/25/2012		
LOCATION OF WELL		DRILL AREA	SMALLEST LARGEST		
LAT. 38 ° 58 ' 13.2 "		1	_____ ¼ _____ ¼ SE ¼		
LONG. 91 ° 29 ' 45.5 "		COUNTY	Sec. 32 Township 44 North 5 Range <input type="checkbox"/> East <input checked="" type="checkbox"/> West		
		Montgomery			

<b>PLUGGING INFORMATION</b>				
ORIGINAL DRILLER (IF KNOWN)	DATE ORIGINALLY DRILLED	STATIC WATER LEVEL	DRILLER NOTES	
David Surgnier, PE	01/25/2012	4.46	Glacial Till	

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL	LENGTH OF RISER	QUANTITY	DEPTH	TYPE OF FILL MATERIAL
30 FT.	20 FT.			<input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER	WELL SCREEN AND RISER REMOVED?			AMOUNT OF FILL USED
0.5 IN.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED?	CASING REMOVED?	TOTAL BORING(S)	TOTAL FT.	DEPTH TO TOP OF FILL
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No			NA FT.

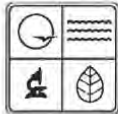
GROUT INSTALLATION METHOD	GROUT MATERIAL USED	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE?	TOTAL NUMBER OF BAGS OF GROUT USED
<input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	Neat Cement Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other	6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	1
			POUNDS OF GROUT PER BAG
			50

DATE 1 <sup>st</sup> WELL PLUGGED	DATE LAST WELL PLUGGED	FINISHED SURFACE MATERIAL	SURFACE MATERIAL LENGTH
01/25/2012	01/25/2012	<input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	_____ FT. _____ IN.

REMARKS	REASON FOR ABANDONMENT
Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	Soil and water sampling was completed.

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

SIGNATURE (PRIMARY CONTRACTOR)	SIGNATURE (CONTRACTOR)	PERMIT NUMBER	DATE
		004395-M	01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
GEOLOGICAL SURVEY PROGRAM  
**MONITORING WELL PLUGGING  
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C.R. NO.	CHECK NO.	TRANSMITTAL NO.	
STATE WELL NUMBER		APPROVED BY	DATE APPROVED
ENTERED		ROUTE	
Ph1	Ph2	Ph3	

INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR				
OWNER NAME		TELEPHONE NUMBER		VARIANCE NUMBER (IF APPLICABLE)
U.S. Dept. of Agriculture/Commodity Credit Corp (USDA/CCC)		202 720-5104		4952
OWNER ADDRESS		CITY	STATE	ZIP CODE
STOP 0513, Room 4717-S, 1400 Independence Ave		Washington	DC	20250
ADDRESS OF WELL SITE		CITY	STATE	ZIP CODE
Montgomery City Fairgrounds/700 S. Sturgeon St.		Montgomery City	MO	63361
SITE NAME		WELL NUMBER	DATE	
Montgomery City		SB47D	01/25/2012	
LOCATION OF WELL		DRILL AREA		
LAT. 38 ° 58 ' 13.2 "		1		
LONG. 91 ° 29 ' 45.5 "		COUNTY		
		Montgomery		
		SMALLEST LARGEST		
		1/4 1/4 SE 1/4		
		Sec. 32 Township 49 North 5 Range <input type="checkbox"/> East <input checked="" type="checkbox"/> West		

PLUGGING INFORMATION			
ORIGINAL DRILLER (IF KNOWN)	DATE ORIGINALLY DRILLED	STATIC WATER LEVEL	DRILLER NOTES
David Surgnier, PE	01/25/2012	6.47	Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL	LENGTH OF RISER	QUANTITY	DEPTH	TYPE OF FILL MATERIAL
57 FT.	47 FT.			<input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER	WELL SCREEN AND RISER REMOVED?			AMOUNT OF FILL USED
0.5 IN.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED?	CASING REMOVED?	TOTAL BORING(S)	TOTAL FT.	DEPTH TO TOP OF FILL
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No			NA FT.

GROUT INSTALLATION METHOD	GROUT MATERIAL USED	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE?	TOTAL NUMBER OF BAGS OF GROUT USED
<input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	Neat Cement Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other	6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	2
			POUNDS OF GROUT PER BAG
			50

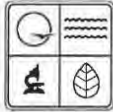
DATE 1 <sup>st</sup> WELL PLUGGED	DATE LAST WELL PLUGGED	FINISHED SURFACE MATERIAL	SURFACE MATERIAL LENGTH
01/25/2012	01/25/2012	<input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	____ FT. ____ IN.

REMARKS	REASON FOR ABANDONMENT
Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	Soil and water sampling was completed.

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

SIGNATURE (PRIMARY CONTRACTOR)	SIGNATURE (CONTRACTOR)	PERMIT NUMBER	DATE
		004395-M	01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER





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GEOLOGICAL SURVEY PROGRAM  
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C.R. NO.	CHECK NO.	TRANSMITTAL NO.
STATE WELL NUMBER	APPROVED BY	DATE APPROVED
ENTERED Ph1      Ph2      Ph3	ROUTE	

INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR				
OWNER NAME U.S. Depart. of Agriculture/Commodity Credit Corp (USDA/CCC)		TELEPHONE NUMBER 202 720-5104		VARIANCE NUMBER (IF APPLICABLE) 4952
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence Ave		CITY Washington	STATE DC	ZIP CODE 20250
ADDRESS OF WELL SITE Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City	STATE MO	ZIP CODE 63361
SITE NAME Montgomery City		WELL NUMBER SB48S	DATE 01/25/2012	
LOCATION OF WELL LAT. 38 ° 58 ' 12.9 " N LONG. 91 ° 29 ' 43.9 " W		DRILL AREA 1	SMALLEST _____ LARGEST _____ Sec. 32 Township 49 North 5 Range <input type="checkbox"/> East <input checked="" type="checkbox"/> West	

PLUGGING INFORMATION			
ORIGINAL DRILLER (IF KNOWN) David Surgnier, PE	DATE ORIGINALLY DRILLED 01/25/2012	STATIC WATER LEVEL 5.54	DRILLER NOTES Glacial Till

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.
DEPTH OF WELL 30 FT.	LENGTH OF RISER 20 FT.	QUANTITY	DEPTH	TYPE OF FILL MATERIAL <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other
SCREEN/RISER DIAMETER 0.5 IN.	WELL SCREEN AND RISER REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			AMOUNT OF FILL USED none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS
PUMP AND SAMPLING EQUIPMENT REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	CASING REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No			DEPTH TO TOP OF FILL NA FT.
TOTAL BORING(S)		TOTAL FT.		

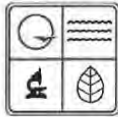
GROUT INSTALLATION METHOD <input type="checkbox"/> Gravity <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	GROUT MATERIAL USED Neat Cement    Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other _____	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE? 6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	TOTAL NUMBER OF BAGS OF GROUT USED 1 POUNDS OF GROUT PER BAG 50
--	---	--	--

DATE 1 <sup>st</sup> WELL PLUGGED 01/25/2012	DATE LAST WELL PLUGGED 01/25/2012	FINISHED SURFACE MATERIAL <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	SURFACE MATERIAL LENGTH _____ FT. _____ IN.
---	--------------------------------------	--	--

REMARKS Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	REASON FOR ABANDONMENT Soil and water sampling was completed.
--	--

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

SIGNATURE (PRIMARY CONTRACTOR)	SIGNATURE (CONTRACTOR)	PERMIT NUMBER 004395-M	DATE 01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER
			DATE



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<b>REF NO.</b>		
C.R. NO.	CHECK NO.	TRANSMITTAL NO.
STATE WELL NUMBER	APPROVED BY	DATE APPROVED
ENTERED Ph1      Ph2      Ph3		ROUTE

<b>INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR</b>					
OWNER NAME U.S. Dept. of Agriculture/Commodity Credit Corp (USDA/CCC)			TELEPHONE NUMBER 202 720-5104		VARIANCE NUMBER (IF APPLICABLE) 4952
OWNER ADDRESS STOP 0513, Room 4717-S, 1400 Independence Ave		CITY Washington	STATE DC	ZIP CODE 20250	
ADDRESS OF WELL SITE Montgomery City Fairgrounds/700 S. Sturgeon St.		CITY Montgomery City	STATE MO	ZIP CODE 63361	
SITE NAME Montgomery City		WELL NUMBER SB48D		DATE 01/25/2012	
LOCATION OF WELL LAT. 38 ° 58 ' 12.9 " LONG. 91 ° 29 ' 43.9 "		DRILL AREA 1	SMALLEST _____ LARGEST _____ SE ¼		
		COUNTY Montgomery	Sec. 32 Township 49 North 5 Range <input type="checkbox"/> East <input checked="" type="checkbox"/> West		

<b>PLUGGING INFORMATION</b>					
ORIGINAL DRILLER (IF KNOWN) David Surgnier, PE		DATE ORIGINALLY DRILLED 01/25/2012	STATIC WATER LEVEL 2.05	DRILLER NOTES Glacial Till	

<input checked="" type="checkbox"/> <b>MONITORING WELL</b>		<input type="checkbox"/> <b>SOIL BORING(S)</b>		Boring Diameter: 2.5 IN.	
DEPTH OF WELL 54 FT.	LENGTH OF RISER 44 FT.	<b>QUANTITY</b>	<b>DEPTH</b>	TYPE OF FILL MATERIAL <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Other	
SCREEN/RISER DIAMETER 0.5 IN.	WELL SCREEN AND RISER REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			AMOUNT OF FILL USED none <input type="checkbox"/> TONS <input type="checkbox"/> CUBIC YARDS	
PUMP AND SAMPLING EQUIPMENT REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No	CASING REMOVED? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A <input type="checkbox"/> No			DEPTH TO TOP OF FILL NA FT.	
		TOTAL _____ BORING(S)	TOTAL _____ FT.		

GROUT INSTALLATION METHOD <input type="checkbox"/> Gravitry <input checked="" type="checkbox"/> Tremie <input type="checkbox"/> Excavation	GROUT MATERIAL USED Neat Cement    Bentonite <input type="checkbox"/> Hi-Early <input checked="" type="checkbox"/> Slurry <input type="checkbox"/> Granular <input type="checkbox"/> Pellets <input type="checkbox"/> Type 1 <input type="checkbox"/> Chips <input type="checkbox"/> Other _____	HOW MANY GALLONS OF WATER MIXED PER BAG OF CEMENT OR BENTONITE? 6-7 <input checked="" type="checkbox"/> Hydrated to Saturation	TOTAL NUMBER OF BAGS OF GROUT USED 2 POUNDS OF GROUT PER BAG 50
---	---	--	--

DATE 1 <sup>st</sup> WELL PLUGGED 01/25/2012	DATE LAST WELL PLUGGED 01/25/2012	FINISHED SURFACE MATERIAL <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Other	SURFACE MATERIAL LENGTH _____ FT. _____ IN.
---	--------------------------------------	--	--

REMARKS Holes were filled to within 3-ft of surface with bentonite slurry and then filled with top soil to the surface.	REASON FOR ABANDONMENT Soil and water sampling was completed.
--	--

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

SIGNATURE (PRIMARY CONTRACTOR)	SIGNATURE (CONTRACTOR)	PERMIT NUMBER 004395-M	DATE 01/25/2012
PERMIT NUMBER	DATE	SIGNATURE (APPRENTICE)	PERMIT NUMBER
			DATE

**Appendix C:**

**Sequence of Sampling Events in 2010-2011**

TABLE C.1 Sequence of sampling activities at Montgomery City, Missouri, in 2010-2011.

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
10/18/10 13:30	MCSB01-S-32170	Soil	CPT	SB01	4	2257	10/18/10	Soil sampling at SB01 location.
10/18/10 13:33	MCSB01-S-32171	Soil	CPT	SB01	8	2257	10/18/10	
10/18/10 13:36	MCSB01-S-32172	Soil	CPT	SB01	12	2257	10/18/10	
10/18/10 13:38	MCSB01-S-32173	Soil	CPT	SB01	16	2257	10/18/10	Soil sampling at SB02 location.
10/18/10 14:10	MCSB02-S-32174	Soil	CPT	SB02	4	2257	10/18/10	
10/18/10 14:12	MCSB02-S-32175	Soil	CPT	SB02	8	2257	10/18/10	
10/18/10 14:14	MCSB02-S-32176	Soil	CPT	SB02	12	2257	10/18/10	Soil sampling at SB03 location.
10/18/10 14:17	MCSB02-S-32177	Soil	CPT	SB02	16	2257	10/18/10	
10/18/10 14:47	MCSB03-S-32178	Soil	CPT	SB03	4	2257	10/18/10	
10/18/10 14:50	MCSB03-S-32179	Soil	CPT	SB03	8	2257	10/18/10	Soil sampling at SB03 location.
10/18/10 14:53	MCSB03-S-32180	Soil	CPT	SB03	12	2257	10/18/10	
10/18/10 14:55	MCSB03-S-32181	Soil	CPT	SB03	16	2257	10/18/10	
10/18/10 14:56	MCSB03-S-32181D <sup>b</sup>	Soil	CPT	SB03	16	2257	10/18/10	Replicate of sample MCSB03-S-32181.
10/18/10 15:18	MCSB04-S-32182	Soil	CPT	SB04	4	2257	10/18/10	Soil sampling at SB04 location.
10/18/10 15:19	MCSB04-S-32183	Soil	CPT	SB04	8	2257	10/18/10	
10/18/10 15:22	MCSB04-S-32184	Soil	CPT	SB04	12	2258	10/18/10	
10/18/10 15:24	MCSB04-S-32185	Soil	CPT	SB04	16	2258	10/18/10	Soil sampling at SB05 location.
10/18/10 15:55	MCSB05-S-32186	Soil	CPT	SB05	4	2258	10/18/10	
10/18/10 15:56	MCSB05-S-32187	Soil	CPT	SB05	8	2258	10/18/10	
10/18/10 15:58	MCSB05-S-32188	Soil	CPT	SB05	12	2258	10/18/10	Soil sampling at SB06 location.
10/18/10 16:00	MCSB05-S-32189	Soil	CPT	SB05	16	2258	10/18/10	
10/18/10 16:25	MCSB06-S-32190	Soil	CPT	SB06	4	2258	10/18/10	
10/18/10 16:26	MCSB06-S-32191	Soil	CPT	SB06	8	2258	10/18/10	Soil sampling at SB06 location.
10/18/10 16:28	MCSB06-S-32192	Soil	CPT	SB06	12	2258	10/18/10	
10/18/10 16:31	MCSB06-S-32193	Soil	CPT	SB06	16	2258	10/18/10	
10/18/10 16:46	MCQCTB-S-32660 <sup>b</sup>	Soil	TB	QC	-	2258	10/18/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on chain-of-custody forms (COCs) 2257 and 2258.
10/18/10 16:52	MCSB07-S-32194	Soil	CPT	SB07	4	2258	10/18/10	Soil sampling at SB07 location.
10/18/10 16:53	MCSB07-S-32195	Soil	CPT	SB07	8	2258	10/18/10	
10/18/10 16:55	MCSB07-S-32196	Soil	CPT	SB07	12	2258	10/18/10	
10/18/10 16:57	MCSB07-S-32197	Soil	CPT	SB07	16	2258	10/18/10	Soil sampling at SB08 location.
10/18/10 17:17	MCSB08-S-32198	Soil	CPT	SB08	4	2259	10/19/10	
10/18/10 17:18	MCSB08-S-32199	Soil	CPT	SB08	8	2259	10/19/10	
10/18/10 17:20	MCSB08-S-32200	Soil	CPT	SB08	12	2259	10/19/10	Soil sampling at SB09 location.
10/18/10 17:21	MCSB08-S-32201	Soil	CPT	SB08	16	2259	10/19/10	
10/19/10 8:58	MCSB09-S-32202	Soil	CPT	SB09	4	2259	10/19/10	
10/19/10 8:59	MCSB09-S-32203	Soil	CPT	SB09	8	2259	10/19/10	Soil sampling at SB09 location.
10/19/10 9:01	MCSB09-S-32204	Soil	CPT	SB09	12	2259	10/19/10	
10/19/10 9:03	MCSB09-S-32205	Soil	CPT	SB09	16	2259	10/19/10	
10/19/10 9:09	MCQCTB-S-32661 <sup>b</sup>	Soil	TB	QC	-	2259	10/19/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 2259.



TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
10/19/10 9:27	MCSB10-S-32206	Soil	CPT	SB10	4	2259	10/19/10	Soil sampling at SB10 location.
10/19/10 9:31	MCSB10-S-32207	Soil	CPT	SB10	8	2259	10/19/10	
10/19/10 9:32	MCSB10-S-32208	Soil	CPT	SB10	12	2259	10/19/10	
10/19/10 9:35	MCSB10-S-32209	Soil	CPT	SB10	16	2259	10/19/10	
10/19/10 9:55	MCSB11-S-32210	Soil	CPT	SB11	4	2259	10/19/10	Soil sampling at SB11 location.
10/19/10 9:57	MCSB11-S-32211	Soil	CPT	SB11	8	2260	10/19/10	
10/19/10 9:59	MCSB11-S-32212	Soil	CPT	SB11	12	2260	10/19/10	
10/19/10 10:03	MCSB11-S-32213	Soil	CPT	SB11	16	2260	10/19/10	
10/19/10 10:04	MCSB11-S-32662	Soil	CPT	SB11	16.8	2260	10/19/10	Collected from moist end of core (at 16 ft 10 in).
10/19/10 10:23	MCSB11-S-32664	Soil	CPT	SB11	20	2260	10/19/10	
10/19/10 11:46	MCSB12-S-32214	Soil	CPT	SB12	6	2260	10/19/10	Soil sampling at SB12 location.
10/19/10 11:47	MCSB12-S-32215	Soil	CPT	SB12	8	2260	10/19/10	
10/19/10 11:51	MCSB12-S-32216	Soil	CPT	SB12	12	2260	10/19/10	
10/19/10 11:54	MCSB12-S-32217	Soil	CPT	SB12	16	2260	10/19/10	
10/19/10 13:23	MCSB13-S-32218	Soil	CPT	SB13	4	2260	10/19/10	Soil sampling at SB13 location.
10/19/10 13:27	MCSB13-S-32219	Soil	CPT	SB13	8	2260	10/19/10	
10/19/10 13:36	MCSB13-S-32220	Soil	CPT	SB13	12	2260	10/19/10	
10/19/10 13:41	MCSB13-S-32221	Soil	CPT	SB13	16	2260	10/19/10	
10/19/10 14:05	MCSB14-S-32222	Soil	CPT	SB14	4	2261	10/19/10	Soil sampling at SB14 location.
10/19/10 14:08	MCSB14-S-32223	Soil	CPT	SB14	8	2261	10/19/10	
10/19/10 14:09	MCSB14-S-32665 <sup>b</sup>	Soil	CPT	SB14	8	2261	10/19/10	Replicate of sample MCSB14-S-32223.
10/19/10 14:11	MCSB14-S-32224	Soil	CPT	SB14	12	2261	10/19/10	
10/19/10 14:12	MCQCTB-S-32666 <sup>b</sup>	Soil	TB	QC	–	2263	10/19/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COCs 2261 and 2266.
10/19/10 14:15	MCSB14-S-32225	Soil	CPT	SB14	16	2261	10/19/10	
10/19/10 14:37	MCSB15-S-32226	Soil	CPT	SB15	4	2261	10/19/10	Soil sampling at SB15 location.
10/19/10 14:39	MCSB15-S-32227	Soil	CPT	SB15	8	2261	10/19/10	
10/19/10 14:40	MCSB15-S-32228	Soil	CPT	SB15	12	2261	10/19/10	
10/19/10 14:42	MCSB15-S-32229	Soil	CPT	SB15	16	2261	10/19/10	
10/19/10 14:55	MCSB16-S-32230	Soil	CPT	SB16	4	2261	10/19/10	Soil sampling at SB16 location.
10/19/10 14:57	MCSB16-S-32231	Soil	CPT	SB16	8	2261	10/19/10	
10/19/10 14:59	MCSB16-S-32232	Soil	CPT	SB16	12	2261	10/19/10	
10/19/10 15:01	MCSB16-S-32233	Soil	CPT	SB16	16	2261	10/19/10	
10/19/10 15:21	MCSB17-S-32234	Soil	CPT	SB17	4	2261	10/19/10	Soil sampling at SB17 location.
10/19/10 15:23	MCSB17-S-32235	Soil	CPT	SB17	8	2261	10/19/10	
10/19/10 15:25	MCSB17-S-32236	Soil	CPT	SB17	12	2263	10/19/10	
10/19/10 15:27	MCSB17-S-32237	Soil	CPT	SB17	16	2263	10/19/10	
10/19/10 15:44	MCSB18-S-32238	Soil	CPT	SB18	4	2263	10/19/10	Soil sampling at SB18 location.
10/19/10 15:46	MCSB18-S-32239	Soil	CPT	SB18	8	2263	10/19/10	
10/19/10 15:49	MCSB18-S-32240	Soil	CPT	SB18	12	2263	10/19/10	
10/19/10 15:51	MCSB18-S-32241	Soil	CPT	SB18	16	2263	10/19/10	
10/19/10 16:12	MCSB19-S-32242	Soil	CPT	SB19	4	2263	10/19/10	Soil sampling at SB19 location.

TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
10/19/10 16:14	MCSB19-S-32243	Soil	CPT	SB19	8	2263	10/19/10	
10/19/10 16:17	MCSB19-S-32244	Soil	CPT	SB19	12	2263	10/19/10	
10/19/10 16:19	MCSB19-S-32245	Soil	CPT	SB19	16	2263	10/19/10	
10/19/10 16:40	MCSB20-S-32246	Soil	CPT	SB20	4	2264	10/20/10	Soil sampling at SB20 location.
10/19/10 16:42	MCSB20-S-32247	Soil	CPT	SB20	8	2264	10/20/10	
10/19/10 16:44	MCSB20-S-32248	Soil	CPT	SB20	12	2264	10/20/10	
10/19/10 16:46	MCSB20-S-32249	Soil	CPT	SB20	16	2264	10/20/10	
10/19/10 17:00	MCQCTB-S-32667 <sup>b</sup>	Soil	TB	QC	–	2260	10/19/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 2260.
10/19/10 17:26	MCSB21-S-32250	Soil	CPT	SB21	4	2264	10/20/10	Soil sampling at SB21 location.
10/19/10 17:28	MCSB21-S-32251	Soil	CPT	SB21	8	2264	10/20/10	
10/19/10 17:31	MCSB21-S-32252	Soil	CPT	SB21	12	2264	10/20/10	
10/19/10 17:33	MCSB21-S-32253	Soil	CPT	SB21	16	2264	10/20/10	
10/19/10 17:44	MCSB22-S-32254	Soil	CPT	SB22	4	2264	10/20/10	Soil sampling at SB22 location.
10/19/10 17:46	MCSB22-S-32255	Soil	CPT	SB22	8	2264	10/20/10	
10/19/10 17:47	MCSB22-S-32256	Soil	CPT	SB22	12	2264	10/20/10	
10/19/10 17:49	MCSB22-S-32257	Soil	CPT	SB22	16	2264	10/20/10	
10/20/10 8:40	MCQCTB-S-32668 <sup>b</sup>	Soil	TB	QC	–	3001	10/20/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COCs 2264 and 3001.
10/20/10 8:41	MCQCTB-S-32269 <sup>b</sup>	Soil	TB	QC	–	3002	10/20/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COCs 3002 and 3004.
10/20/10 8:49	MCSB23-S-32259	Soil	CPT	SB23	8	3001	10/20/10	Soil sampling at SB23 location.
10/20/10 8:50	MCSB23-S-32260	Soil	CPT	SB23	12	3001	10/20/10	
10/20/10 9:13	MCSB23-S-32261	Soil	CPT	SB23	16	3001	10/20/10	
10/20/10 9:22	MCSB23-S-32258	Soil	CPT	SB23	4	3001	10/20/10	
10/20/10 9:43	MCSB24-S-32262	Soil	CPT	SB24	4	3002	10/20/10	Soil sampling at SB24 location.
10/20/10 9:45	MCSB24-S-32263	Soil	CPT	SB24	8	3002	10/20/10	
10/20/10 9:48	MCSB24-S-32264	Soil	CPT	SB24	12	3002	10/20/10	
10/20/10 9:49	MCSB24-S-32265	Soil	CPT	SB24	16	3002	10/20/10	
10/20/10 10:04	MCSB24-W-32651	Water	CPT	SB24	20	3013	10/22/10	
10/20/10 10:04	MCSB24-S-32650	Soil	CPT	SB24	20	3002	10/20/10	
10/20/10 10:56	MCSB25-S-32266	Soil	CPT	SB25	4	3002	10/20/10	Soil sampling at SB25 location.
10/20/10 10:59	MCSB25-S-32267	Soil	CPT	SB25	8	3002	10/20/10	
10/20/10 11:03	MCSB25-S-32268	Soil	CPT	SB25	12	3002	10/20/10	
10/20/10 11:05	MCSB25-S-32269	Soil	CPT	SB25	16	3002	10/20/10	
10/20/10 11:11	MCSB25-S-32652	Soil	CPT	SB25	20	3002	10/20/10	
10/20/10 11:33	MCSB26-S-32270	Soil	CPT	SB26	4	3002	10/20/10	Soil sampling at SB26 location.
10/20/10 11:35	MCSB26-S-32271	Soil	CPT	SB26	8	3002	10/20/10	
10/20/10 11:37	MCSB26-S-32272	Soil	CPT	SB26	12	3002	10/20/10	
10/20/10 11:38	MCSB26-S-32653 <sup>b</sup>	Soil	CPT	SB26	12	3002	10/20/10	Replicate of sample MCSB26-S-32272.
10/20/10 11:39	MCSB26-S-32273	Soil	CPT	SB26	16	3004	10/20/10	

TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
10/20/10 11:57	MCSB27-S-32275	Soil	CPT	SB27	8	2265	10/20/10	Soil sampling at SB27 location.
10/20/10 11:59	MCSB27-S-32276	Soil	CPT	SB27	12	2265	10/20/10	
10/20/10 12:02	MCSB27-S-32277	Soil	CPT	SB27	16	2265	10/20/10	
10/20/10 12:17	MCSB27-S-32274	Soil	CPT	SB27	4	2265	10/20/10	
10/20/10 12:25	MCQCTB-S-32655 <sup>b</sup>	Soil	TB	QC	–	2265	10/20/10	
								Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 2265.
10/20/10 13:30	MCSB28-S-32278	Soil	CPT	SB28	4	2265	10/20/10	Soil sampling at SB28 location.
10/20/10 13:31	MCSB28-S-32279	Soil	CPT	SB28	8	2265	10/20/10	
10/20/10 13:33	MCSB28-S-32280	Soil	CPT	SB28	12	2265	10/20/10	Soil sampling at SB29 location.
10/20/10 13:35	MCSB28-S-32281	Soil	CPT	SB28	16	2265	10/20/10	
10/20/10 13:46	MCSB29-S-32282	Soil	CPT	SB29	4	2265	10/20/10	
10/20/10 13:47	MCSB29-S-32283	Soil	CPT	SB29	8	2265	10/20/10	
10/20/10 13:49	MCSB29-S-32284	Soil	CPT	SB29	12	2265	10/20/10	
10/20/10 13:53	MCSB29-S-32285	Soil	CPT	SB29	16	2265	10/20/10	
10/20/10 13:56	MCSB29-S-32656	Soil	CPT	SB29	20	2265	10/20/10	
10/20/10 14:20	MCSB30-S-32286	Soil	CPT	SB30	4	2265	10/20/10	
10/20/10 14:22	MCSB30-S-32287	Soil	CPT	SB30	8	2266	10/20/10	Soil sampling at SB30 location.
10/20/10 14:24	MCSB30-S-32288	Soil	CPT	SB30	12	2266	10/20/10	
10/20/10 14:27	MCSB30-S-32289	Soil	CPT	SB30	16	2266	10/20/10	
10/20/10 14:38	MCSB31-S-32290	Soil	CPT	SB31	4	2266	10/20/10	
10/20/10 14:40	MCSB31-S-32291	Soil	CPT	SB31	8	2266	10/20/10	
10/20/10 14:42	MCSB31-S-32292	Soil	CPT	SB31	12	2266	10/20/10	Soil sampling at SB31 location.
10/20/10 14:44	MCSB31-S-32293	Soil	CPT	SB31	16	2266	10/20/10	
10/20/10 14:50	MCQCTB-S-32657 <sup>b</sup>	Soil	TB	QC	–	2266	10/20/10	
								Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 2266.
10/20/10 16:55	MCSB32-S-32294	Soil	CPT	SB32	4	2267	10/21/10	Soil sampling at SB32 location.
10/20/10 17:03	MCSB32-S-32295	Soil	CPT	SB32	8	2267	10/21/10	
10/20/10 17:20	MCSB32-S-32296	Soil	CPT	SB32	12	2267	10/21/10	
10/20/10 17:45	MCSB32-S-32297	Soil	CPT	SB32	16	2267	10/21/10	
10/21/10 10:34	MCSB29-W-32649	Water	CPT	SB29	11.4-21.4	3013	10/22/10	Depth to water = 4.99 ft BGL. Sample from temporary 0.5-in., 10-ft screen in open borehole to 21.4 ft. Water came in overnight. Very cloudy, muddy, orange-tan.
10/21/10 10:53	MCSB33-S-32298	Soil	CPT	SB33	4	2267	10/21/10	Soil sampling at SB33 location.
10/21/10 10:59	MCSB33-S-32299	Soil	CPT	SB33	8	2267	10/21/10	
10/21/10 11:10	MCSB33-S-32300	Soil	CPT	SB33	12	2267	10/21/10	
10/21/10 11:27	MCSB33-S-32301	Soil	CPT	SB33	16	2267	10/21/10	
10/21/10 11:49	MCSB33-S-32658	Soil	CPT	SB33	20	2267	10/21/10	
10/21/10 13:42	MCSB34-S-32302	Soil	CPT	SB34	4	2267	10/21/10	
10/21/10 13:51	MCSB34-S-32303	Soil	CPT	SB34	8	2267	10/21/10	
10/21/10 14:06	MCSB34-S-32304	Soil	CPT	SB34	12	2267	10/21/10	
10/21/10 14:20	MCQCTB-S-32640 <sup>b</sup>	Soil	TB	QC	–	2267	10/21/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 2267.

TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
10/21/10 14:26	MCSB34-S-32305	Soil	CPT	SB34	16	2267	10/21/10	
10/21/10 15:07	MCSB34-S-32659	Soil	CPT	SB34	20	2267	10/21/10	
10/21/10 15:54	MCSB35-S-32306	Soil	CPT	SB35	4	2268	10/22/10	Soil sampling at SB35 location.
10/21/10 16:06	MCSB35-S-32307	Soil	CPT	SB35	8	2268	10/22/10	
10/21/10 16:15	MCSB35-S-32308	Soil	CPT	SB35	12	2268	10/22/10	
10/21/10 16:34	MCSB35-S-32309	Soil	CPT	SB35	16	2268	10/22/10	
10/21/10 16:42	MCSB24-W-32643	Water	CPT	SB24	8.3-18.3	3013	10/22/10	Depth to water = 4.79 ft BGL. Sample from temporary 1-in., 10-ft screen in open borehole to 18.3 ft. Water came in overnight. Opaque, dark chocolate brown.
10/21/10 16:58	MCSB35-S-32641	Soil	CPT	SB35	20	2268	10/22/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 2268.
10/21/10 17:05	MCQCTB-S-32642 <sup>b</sup>	Soil	TB	QC	-	2268	10/22/10	
10/21/10 17:22	MCQCTB-W-32645 <sup>b</sup>	Water	TB	QC	-	3013	10/22/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COCs 3013 and 3014.
10/22/10 8:27	MCPWS1-W-32630	Water	PW	PWS1	-	3014	10/22/10	Well PWS1 is at north end of town. Pump is running at approximately 300 gpm to supply system. Sampled from tap on pump outlet pipe at wellhead, prior to treatment.
10/22/10 8:54	MCPWS2-W-32631	Water	PW	PWS2	-	3014	10/22/10	Well PWS2 is across street from courthouse, center of town. Off when crew arrived. Purged for 12 min prior to sampling (approximately 3,600 gal). Sampled at tap on pump outlet pipe at wellhead.
10/22/10 9:16	MCPWS3-W-32632	Water	PW	PWS3	-	3014	10/22/10	Well PWS3 is in industrial park, south end of town. Off when crew arrived. Purged for 9 min prior to sampling (approximately 3,150 gal). Sampled at tap on pump outlet pipe at wellhead.
10/22/10 9:40	MCSB01-S-32310	Soil	CPT	SB01	20	2268	10/22/10	Sample of treated municipal water supply collected from cold water tap at sink in City Hall kitchen/break room. Collected after running tap for 9 min.
10/22/10 9:45	MCSB01-S-32311	Soil	CPT	SB01	24	2268	10/22/10	
10/22/10 9:48	MCTREAT-W-32634	Water	PW	City water supply	-	3014	10/22/10	
10/22/10 9:50	MCSB01-S-32312	Soil	CPT	SB01	28	2268	10/22/10	Private domestic well with existing pump. Sample collected from yard hydrant 27 ft southeast of well after purging of 22 gal (2 gpm for 11 min).
10/22/10 12:12	MCSB01-S-32313	Soil	CPT	SB01	32	2268	10/22/10	
10/22/10 12:18	MCHMEYER-W-32633	Water	DW	Hemeyer	-	3014	10/22/10	



TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
10/22/10 13:22	MCKCOBB-W-32635	Water	DW	Ken Cobb	–	3014	10/22/10	Private lawn and garden well. Sample collected from yard hydrant next to gravel drive on north side of house after purging of 230 gal (10 gpm for 23 min). Not used for approximately 6 weeks. Owner thinks well is 600-700 ft deep.
10/22/10 14:51	MCSB01-S-32314	Soil	CPT	SB01	36	2268	10/22/10	
10/22/10 14:57	MCSB01-S-32315	Soil	CPT	SB01	40	2268	10/22/10	
10/22/10 15:02	MCSB01-S-32316	Soil	CPT	SB01	44	2268	10/22/10	
10/22/10 15:08	MCSB01-S-32317	Soil	CPT	SB01	48	2268	10/22/10	
10/22/10 15:15	MCSB01-S-32318	Soil	CPT	SB01	52	2268	10/22/10	
10/22/10 15:43	MCSB01-S-32319	Soil	CPT	SB01	56	3008	10/25/10	
10/22/10 18:41	MCSB01-S-32320	Soil	CPT	SB01	57.5	3008	10/25/10	
10/23/10 10:09	MCSB01-W-32330	Water	CPT	SB01	52.5-57.5	3015	10/25/10	Temporary 0.5-in., 5-ft screen in open borehole. Rods left in overnight, then pulled back to open screen. Water cloudy tan.
10/23/10 10:37	MCQCTB-W-32331 <sup>b</sup>	Water	TB	QC	–	3015	10/25/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COCs 2270 and 3015.
10/23/10 10:39	MCQCTB-W-32332	Water	TB	QC	–			TestAmerica trip blank.
10/23/10 13:49	MCSB01-W-32646	Water	CPT	SB01	20-30	3015	10/25/10	Sampled inside crawler with rods in hole. Pulled up 10 ft to sample. Depth to water = 24 ft and rising. Very muddy orange-tan.
10/24/10 15:27	MCSB25-S-32340	Soil	CPT	SB25	20	3016	10/25/10	
10/24/10 15:30	MCSB25-S-32341	Soil	CPT	SB25	24	3016	10/25/10	
10/24/10 15:34	MCSB25-S-32342	Soil	CPT	SB25	28	3016	10/25/10	
10/24/10 15:35	MCSB25-S-32342D <sup>b</sup>	Soil	CPT	SB25	28	3016	10/25/10	Replicate of sample MCSB25-S-32342.
10/24/10 15:38	MCSB25-S-32343	Soil	CPT	SB25	32	3016	10/25/10	
10/24/10 15:42	MCSB25-S-32344	Soil	CPT	SB25	36	3016	10/25/10	
10/24/10 15:46	MCSB25-S-32345	Soil	CPT	SB25	40	3016	10/25/10	
10/24/10 15:51	MCSB25-S-32346	Soil	CPT	SB25	44	3016	10/25/10	
10/24/10 15:56	MCSB25-S-32347	Soil	CPT	SB25	48	3016	10/25/10	
10/24/10 15:57	MCQCTB-S-32348 <sup>b</sup>	Soil	TB	QC	–	3016	10/25/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COCs 3008 and 3016.
10/24/10 16:10	MCSB25-S-32349	Soil	CPT	SB25	52	3016	10/25/10	
10/25/10 8:57	MCQCTB-S-32359 <sup>b</sup>	Soil	TB	QC	–	2269	10/25/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 2269.
10/25/10 8:59	MCSB17-S-32350	Soil	CPT	SB17	20	2269	10/25/10	
10/25/10 9:27	MCSB17-S-32352	Soil	CPT	SB17	28	2269	10/25/10	
10/25/10 9:46	MCSB17-S-32353	Soil	CPT	SB17	32	2269	10/25/10	
10/25/10 9:50	MCSB17-S-32354	Soil	CPT	SB17	36	2269	10/25/10	
10/25/10 9:56	MCSB17-S-32355	Soil	CPT	SB17	40	2269	10/25/10	
10/25/10 10:13	MCSB17-S-32357	Soil	CPT	SB17	48	2269	10/25/10	

TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
10/25/10 10:18	MCSB17-S-32360	Soil	CPT	SB17	52	2269	10/25/10	
10/25/10 10:19	MCSB17-S-32361 <sup>b</sup>	Soil	CPT	SB17	52	2269	10/25/10	Replicate of sample MCSB17-S-32360.
10/25/10 10:26	MCSB17-S-32362	Soil	CPT	SB17	56	2269	10/25/10	Collected from second push hole.
10/25/10 11:56	MCSB17-S-32351	Soil	CPT	SB17	24	2269	10/25/10	Collected from second push hole.
10/25/10 12:12	MCSB17-S-32356	Soil	CPT	SB17	44	2269	10/25/10	
10/25/10 12:48	MCSB33-W-32636	Water	CPT/P	SB33	12-22	2270	10/25/10	Temporary piezometer, 1-in. diameter, 10-ft screen. Purged dry with Waterra pump, then sampled water accumulated overnight. Collected without further purging. Faintly cloudy. Field parameters taken after second recovery.
10/25/10 13:08	MCSB34-W-32637	Water	CPT/P	SB34	17-22	2270	10/25/10	Temporary piezometer, 0.5-in. diameter, 5-ft screen. Purged dry with Waterra pump, then sampled water accumulated overnight. Collected without further purging. Muddy orange-tan. Field parameters taken after second recovery.
10/25/10 13:23	MCSB11-W-32638	Water	CPT/P	SB11	15-25	2270	10/25/10	Temporary piezometer, 10-ft screen. Purged dry with Waterra pump, then sampled water accumulated overnight. Collected without further purging. Very light cloudy, tan-yellow. Field parameters taken after second recovery.
10/25/10 14:06	MCQCBR-W-32333 <sup>b</sup>	Water	RI	QC	-	2270	10/25/10	Rinsate of decontaminated sampling bailer after collection of sample MCSB11-W-32638.
10/25/10 16:07	MCSB36-S-32363	Soil	CPT	SB36	4	3005	10/25/10	Soil sampling at SB36 location.
10/25/10 16:11	MCSB36-S-32364	Soil	CPT	SB36	8	3005	10/25/10	
10/25/10 16:14	MCSB36-S-32365	Soil	CPT	SB36	12	3005	10/25/10	
10/25/10 16:17	MCSB36-S-32366	Soil	CPT	SB36	16	3005	10/25/10	
10/25/10 16:20	MCSB36-S-32367	Soil	CPT	SB36	20	3005	10/25/10	
10/25/10 16:24	MCSB36-S-32368	Soil	CPT	SB36	24	3005	10/25/10	
10/25/10 16:28	MCSB36-S-32369	Soil	CPT	SB36	28	3005	10/25/10	
10/25/10 16:32	MCSB36-S-32370	Soil	CPT	SB36	32	3005	10/25/10	
10/25/10 16:33	MCSB36-S-32370D <sup>b</sup>	Soil	CPT	SB36	32	3005	10/25/10	Replicate of sample MCSB36-S-32370.
10/25/10 16:38	MCSB36-S-32371	Soil	CPT	SB36	36	3005	10/25/10	
10/25/10 16:42	MCQCTB-S-32375 <sup>b</sup>	Soil	TB	QC	-	3005	10/25/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 3005.
10/25/10 16:44	MCSB36-S-32372	Soil	CPT	SB36	40	3005	10/25/10	
10/25/10 16:50	MCSB36-S-32373	Soil	CPT	SB36	44	3005	10/25/10	
10/25/10 16:54	MCSB36-S-32374	Soil	CPT	SB36	48	3005	10/25/10	
10/26/10 9:26	MCQCTB-S-32388 <sup>b</sup>	Soil	TB	QC	-	3006	10/26/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 3006.
10/26/10 9:29	MCSB09-S-32380	Soil	CPT	SB09	20	3006	10/26/10	Deeper soil sampling at SB09 location.
10/26/10 9:33	MCSB09-S-32381	Soil	CPT	SB09	24	3006	10/26/10	
10/26/10 9:34	MCSB09-S-32381D <sup>b</sup>	Soil	CPT	SB09	24	3006	10/26/10	Replicate of sample MCSB09-S-32381.

TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
10/26/10 9:37	MCSB09-S-32382	Soil	CPT	SB09	28	3006	10/26/10	
10/26/10 9:41	MCSB09-S-32383	Soil	CPT	SB09	32	3006	10/26/10	
10/26/10 9:58	MCSB09-S-32384	Soil	CPT	SB09	36	3006	10/26/10	
10/26/10 10:05	MCSB09-S-32385	Soil	CPT	SB09	40	3006	10/26/10	
10/26/10 10:11	MCSB09-S-32386	Soil	CPT	SB09	44	3006	10/26/10	
10/26/10 10:18	MCSB09-S-32387	Soil	CPT	SB09	48	3006	10/26/10	
10/26/10 10:28	MCSB09-S-32389	Soil	CPT	SB09	52	3006	10/26/10	
10/26/10 10:40	MCSB09-S-32390	Soil	CPT	SB09	56	3006	10/26/10	
10/26/10 11:06	MCSB09-S-32391	Soil	CPT	SB09	60	3006	10/26/10	
10/26/10 11:19	MCQCTB-S-32404 <sup>b</sup>	Soil	TB	QC	–	3007	10/26/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 3007. Deeper soil sampling at SB22 location.
10/26/10 14:07	MCSB22-S-32393	Soil	CPT	SB22	20	3007	10/26/10	
10/26/10 14:10	MCSB22-S-32394	Soil	CPT	SB22	24	3007	10/26/10	
10/26/10 14:14	MCSB22-S-32395	Soil	CPT	SB22	28	3007	10/26/10	
10/26/10 14:18	MCSB22-S-32396	Soil	CPT	SB22	32	3007	10/26/10	
10/26/10 14:23	MCSB22-S-32397	Soil	CPT	SB22	36	3007	10/26/10	
10/26/10 14:30	MCSB22-S-32398	Soil	CPT	SB22	40	3007	10/26/10	
10/26/10 14:37	MCSB22-S-32399	Soil	CPT	SB22	44	3007	10/26/10	
10/26/10 14:44	MCSB22-S-32400	Soil	CPT	SB22	48	3007	10/26/10	
10/26/10 14:45	MCSB22-S-32400D <sup>b</sup>	Soil	CPT	SB22	48	3007	10/26/10	Replicate of sample MCSB22-S-32400.
10/26/10 14:52	MCSB22-S-32401	Soil	CPT	SB22	52	3007	10/26/10	
10/26/10 15:01	MCSB22-S-32402	Soil	CPT	SB22	56	3007	10/26/10	
10/26/10 15:13	MCSB22-S-32403	Soil	CPT	SB22	60	3007	10/26/10	
10/27/10 10:58	MCSB10-W-32405	Water	CPT/P	SB10	8-18	3017	10/27/10	Temporary piezometer, 1-in. diameter, 10-ft screen. Purged dry with Waterra pump, then sampled water accumulated overnight. Collected without further purging. Very pale tan, slightly cloudy. Field parameters taken after second recovery.
10/27/10 12:28	MCSB27-W-32406	Water	CPT/P	SB27	41-51	3017	10/27/10	Temporary piezometer, 0.5-in. diameter, 10-ft screen. Water rising too slowly for purging. Water is almost clear. No field parameters.
10/27/10 15:45	MCQCTB-W-32407 <sup>b</sup>	Water	TB	QC	–	3017	10/27/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 3017.
10/27/10 16:17	MCCREEK-W-32408	Water	SW	CREEK	–	3017	10/27/10	Small surface drainage that runs along west edge of fairgrounds. Flow present after rains over the weekend from decontamination building to pond north of fairgrounds.
10/28/10 10:43	MCSB22-W-32409	Water	CPT/P	SB22D	57.2-67.2	3018	10/28/10	Temporary piezometer, 0.5-in. diameter, 10-ft screen. Water accumulated overnight sampled without purging. Depth to water = 7.49 ft.

TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
10/28/10 13:16	MCSB01-W-32410	Water	CPT/P	SB01	8-18	3018	10/28/10	Temporary piezometer, 1-in. diameter, 10-ft screen. Water accumulated overnight sampled without purging. Depth to water = 15.60 ft. Insufficient water for field parameters.
10/28/10 13:26	MCQCBR-W-32412 <sup>b</sup>	Water	RI	QC	–	3018	10/28/10	Rinsate of decontaminated sampling bailer after collection of sample MCSB01-W-32410.
10/28/10 13:54	MCSB01S-W-32411	Water	CPT/P	SB01S	20-30	3018	10/28/10	Temporary piezometer, 1-in. diameter, 10-ft screen. Water accumulated overnight sampled without purging. Depth to water = 3.14 ft.
10/28/10 15:30	MCSUBWAY-W-32413	Water	DW	Subway	–	3018	10/28/10	Subway private well. Depth to water = 42.82 ft. Depth of well = 180.82 ft. Pump and wiring disconnected approximately 13 yr ago and not used since. Installed about 18 yr ago.
10/28/10 16:36	MCQCTB-W-32414 <sup>b</sup>	Water	TB	QC	–	3018	10/28/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 3018.
10/29/10 9:25	MCDECON-W-32417 <sup>b</sup>	Water	RI	QC	–	2694	10/29/10	Rinsate of decontaminated bailer after collection of sample MCSB0157-W-32415.
10/29/10 9:30	MCHYD-W-32416 <sup>b</sup>	Water	FB	QC	–	2694	10/29/10	Field blank of city water from yard hydrant at fairgrounds, used for equipment decontamination.
10/29/10 9:55	MCSB0157-W-32415	Water	CPT/P	SB01D	52.5-57.5	2694	10/29/10	Temporary piezometer, 0.5-in. diameter, 5-ft screen. Water coming in very slowly. Sampled without purging after water accumulated overnight. Depth to water = 61.53 ft BGL.
10/29/10 10:00	MCQCTB-W-32418 <sup>b</sup>	Water	TB	QC	–	2694	10/29/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 2694.
11/15/10 10:40	MCSB36D-W-32420	Water	CPT/P	SB36D	42.2-52.2	2557	11/15/10	Temporary piezometer, 0.5-in. diameter, 10-ft screen. Very slow water accumulation. Sampled without purging after water accumulated over two weeks. Depth to water = 29.96 ft BGL. Level still rising when sampled.
11/15/10 11:29	MCSB36S-W-32421	Water	CPT/P	SB36S	15-25	2557	11/15/10	Temporary piezometer, 0.5-in. diameter, 10-ft screen. Very slow water accumulation. Sampled without purging after water accumulated over two weeks. Depth to water = 21.06 ft BGL. Water clear.
11/15/10 12:06	MCSB17D-W-32422	Water	CPT/P	SB17D	51.3-61.3	2557	11/15/10	Temporary piezometer, 0.5-in. diameter, 10-ft screen. Very slow water accumulation. Sampled without purging after water accumulated over two weeks. Depth to water = 9.33 ft BGL. Water clear.



TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
11/15/10 12:22	MCQCBR-W-32423 <sup>b</sup>	Water	RI	QC	–	2557	11/15/10	Rinsate of decontaminated bailer after collection of sample MCSB17D-W-32422.
11/15/10 13:04	MCSB09D-W-32424	Water	CPT/P	SB09D	58-63	2557	11/15/10	Temporary piezometer, 0.5-in. diameter, 5-ft screen. Very slow water accumulation. Sampled without purging after water accumulated over two weeks. Depth to water = 18.37 ft BGL. Water clear.
11/15/10 13:05	MCSB09D-W-32425 <sup>b</sup>	Water	CPT/P	SB09D	58-63	2557	11/15/10	Replicate of sample MCSB09D-W-32424.
11/15/10 13:27	MCSB22S-W-32426	Water	CPT/P	SB22S	18-28	2557	11/15/10	Temporary piezometer, 0.5-in. diameter, 10-ft screen. Very slow water accumulation. Sampled without purging after water accumulated over 10 days. Depth to water = 25.22 ft BGL. Water clear.
11/15/10 13:46	MCSB22D-W-32427	Water	CPT/P	SB22D	57.2-67.2	2557	11/15/10	Temporary piezometer, 0.5-in. diameter, 10-ft screen. Sampled without purging. Depth to water = 7.62 ft BGL. Water clear.
11/15/10 14:38	MCSB27S-W-32428	Water	CPT/P	SB27S	20-30	2557	11/15/10	Temporary piezometer, 0.5-in. diameter, 10-ft screen. Very slow water accumulation. Sampled without purging after water accumulated over two weeks. Depth to water = 23.06 ft BGL. Water clear.
11/15/10 15:55	MCQCTB-W-32429 <sup>b</sup>	Water	TB	QC	–	2557	11/15/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 2557.
11/30/10 10:17	MCSB09S-W-32430	Water	CPT/P	SB09S	18-28	2646	11/30/10	Temporary piezometer, 0.5-in. diameter, 10-ft screen. Sampled without purging after water accumulated over two weeks. Depth to water = 3.15 ft below top of casing (TOC).
11/30/10 11:04	MCSB17S-W-32431	Water	CPT/P	SB17S	18-28	2646	11/30/10	Temporary piezometer, 0.5-in. diameter, 10-ft screen. Sampled without purging after water accumulated over two weeks. Depth to water = 15.17 ft TOC.
11/30/10 13:25	MCQCTB-W-32432 <sup>b</sup>	Water	TB	QC	–	2646	11/30/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 2646.
11/30/10 14:52	MCSB37S-W-32433	Water	CPT/P	SB37S	15-25	2646	11/30/10	Temporary piezometer, 0.5-in. diameter, 10-ft screen. Installed this morning. Sampled without purging after water accumulated over a couple of hours. Depth to water = 3.40 ft TOC.
12/1/10 9:32	MCSB27-S-32440	Soil	CPT	SB27	20	4677	12/1/10	Deeper soil sampling at SB27 location.
12/1/10 9:40	MCSB27-S-32441	Soil	CPT	SB27	24	4677	12/1/10	
12/1/10 9:41	MCSB27-S-32447 <sup>b</sup>	Soil	CPT	SB27	24	4677	12/1/10	Replicate of sample MCSB27-S-32441.

TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
12/1/10 9:42	MCSB37D-W-32434	Water	CPT/P	SB37D	35.8-45.8	4656	12/1/10	Temporary piezometer, 0.5-in. diameter, 10-ft screen. Sampled without purging after water accumulated over 24 hr. Depth to water = 18.35 ft TOC.
12/1/10 9:45	MCSB27-S-32442	Soil	CPT	SB27	28	4677	12/1/10	
12/1/10 9:48	MCSB27-S-32443	Soil	CPT	SB27	32	4677	12/1/10	
12/1/10 9:53	MCSB27-S-32444	Soil	CPT	SB27	36	4677	12/1/10	
12/1/10 10:03	MCSB27-S-32445	Soil	CPT	SB27	40	4677	12/1/10	
12/1/10 10:10	MCSB27-S-32446	Soil	CPT	SB27	44	4677	12/1/10	
12/1/10 10:15	MCSB39D-W-32435	Water	CPT/P	SB39D	45.8-55.8	4656	12/1/10	Temporary piezometer, 0.5-in. diameter, 10-ft screen. Sampled without purging after water accumulated over 24 hr. Depth to water = 45.70 ft TOC.
12/1/10 10:20	MCSB27-S-32448	Soil	CPT	SB27	47	4677	12/1/10	
12/1/10 15:27	MCSB40-S-32449	Soil	CPT	SB40	4	4678	12/1/10	Soil sampling at SB40 location.
12/1/10 15:31	MCSB40-S-32450	Soil	CPT	SB40	8	4678	12/1/10	
12/1/10 15:35	MCSB40-S-32451	Soil	CPT	SB40	12	4678	12/1/10	
12/1/10 15:36	MCSB40-S-32461 <sup>b</sup>	Soil	CPT	SB40	12	4678	12/1/10	Replicate of sample MCSB40-S-32451.
12/1/10 15:37	MCSB40-S-32452	Soil	CPT	SB40	16	4678	12/1/10	
12/1/10 15:42	MCSB40-S-32453	Soil	CPT	SB40	20	4678	12/1/10	
12/1/10 15:44	MCSB40-S-32454	Soil	CPT	SB40	24	4678	12/1/10	
12/1/10 15:48	MCSB40-S-32455	Soil	CPT	SB40	28	4678	12/1/10	
12/1/10 15:54	MCSB40-S-32456	Soil	CPT	SB40	32	4678	12/1/10	
12/1/10 16:10	MCSB40-S-32457	Soil	CPT	SB40	36	4678	12/1/10	
12/1/10 16:15	MCSB40-S-32458	Soil	CPT	SB40	40	4678	12/1/10	
12/1/10 16:21	MCSB40-S-32459	Soil	CPT	SB40	44	4678	12/1/10	
12/1/10 16:26	MCSB40-S-32460	Soil	CPT	SB40	48	4678	12/1/10	
12/1/10 16:45	MCQCTB-S-32436 <sup>b</sup>	Soil	TB	QC	-	4678	12/1/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4678.
12/1/10 17:00	MCQCTB-W-32437 <sup>b</sup>	Water	TB	QC	-	4656	12/1/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4656.
12/1/10 17:06	MCQCTB-S-32438 <sup>b</sup>	Soil	TB	QC	-	4677	12/1/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4677.
12/2/10 11:16	MCSB41-S-32462	Soil	CPT	SB41	4	4654	12/2/10	Soil sampling at SB41 location.
12/2/10 11:19	MCSB41-S-32463	Soil	CPT	SB41	8	4654	12/2/10	
12/2/10 11:21	MCSB41-S-32464	Soil	CPT	SB41	12	4654	12/2/10	
12/2/10 11:23	MCSB41-S-32465	Soil	CPT	SB41	16	4654	12/2/10	
12/2/10 11:26	MCSB41-S-32466	Soil	CPT	SB41	20	4654	12/2/10	
12/2/10 11:30	MCSB41-S-32467	Soil	CPT	SB41	24	4654	12/2/10	
12/2/10 11:35	MCSB41-S-32468	Soil	CPT	SB41	28	4654	12/2/10	
12/2/10 11:36	MCSB41-S-32474 <sup>b</sup>	Soil	CPT	SB41	28	4654	12/2/10	Replicate of sample MCSB41-S-32468.
12/2/10 11:40	MCSB41-S-32469	Soil	CPT	SB41	32	4654	12/2/10	

TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
12/2/10 11:46	MCSB41-S-32470	Soil	CPT	SB41	36	4654	12/2/10	
12/2/10 11:51	MCSB41-S-32471	Soil	CPT	SB41	40	4654	12/2/10	
12/2/10 11:57	MCSB41-S-32472	Soil	CPT	SB41	44	4654	12/2/10	
12/2/10 12:04	MCSB41-S-32473	Soil	CPT	SB41	48	4654	12/2/10	
12/2/10 12:12	MCSB41-S-32475	Soil	CPT	SB41	52	4654	12/2/10	
12/2/10 12:21	MCSB41-S-32476	Soil	CPT	SB41	56	4654	12/2/10	
12/2/10 12:27	MCQCTB-S-32479 <sup>b</sup>	Soil	TB	QC	-	4654	12/2/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4654.
12/2/10 13:59	MCQCTB-S-32491 <sup>b</sup>	Soil	TB	QC	-	4655	12/2/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4655.
12/2/10 14:15	MCSB41M-W-32500	Water	CPT/P	SB41M	20-30	4660	12/2/10	Temporary piezometer, 0.5-in. diameter, 10-ft screen. Sampled without purging after water accumulated over a couple of hours. Depth to water = 4.60 ft TOC.
12/2/10 15:00	MCQCTB-W-32501 <sup>b</sup>	Water	TB	QC	-	4660	12/2/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water sample listed on COC 4660.
12/2/10 15:45	MCSB42-S-32477	Soil	CPT	SB42	4	4655	12/2/10	Soil sampling at SB42 location.
12/2/10 15:49	MCSB42-S-32478	Soil	CPT	SB42	8	4655	12/2/10	
12/2/10 15:51	MCSB42-S-32480	Soil	CPT	SB42	12	4655	12/2/10	
12/2/10 15:54	MCSB42-S-32481	Soil	CPT	SB42	16	4655	12/2/10	
12/2/10 15:55	MCSB42-S-32492 <sup>b</sup>	Soil	CPT	SB42	16	4655	12/2/10	Replicate of sample MCSB42-S-32481.
12/2/10 15:57	MCSB42-S-32482	Soil	CPT	SB42	20	4655	12/2/10	
12/2/10 16:00	MCSB42-S-32483	Soil	CPT	SB42	24	4655	12/2/10	
12/2/10 16:04	MCSB42-S-32484	Soil	CPT	SB42	28	4655	12/2/10	
12/2/10 16:08	MCSB42-S-32485	Soil	CPT	SB42	32	4655	12/2/10	
12/2/10 16:12	MCSB42-S-32486	Soil	CPT	SB42	36	4655	12/2/10	
12/2/10 16:17	MCSB42-S-32487	Soil	CPT	SB42	40	4655	12/2/10	
12/2/10 16:24	MCSB42-S-32488	Soil	CPT	SB42	44	4655	12/2/10	
12/2/10 16:31	MCSB42-S-32489	Soil	CPT	SB42	48	4655	12/2/10	
12/2/10 16:40	MCSB42-S-32490	Soil	CPT	SB42	52	4655	12/2/10	
12/3/10 15:36	MCSB44-S-32494	Soil	CPT	SB44	4	2647	12/3/10	Soil sampling at SB44 location.
12/3/10 15:38	MCSB44-S-32495	Soil	CPT	SB44	8	2647	12/3/10	
12/3/10 15:41	MCSB44-S-32496	Soil	CPT	SB44	12	2647	12/3/10	
12/3/10 15:44	MCSB44-S-32497	Soil	CPT	SB44	16	2647	12/3/10	
12/3/10 15:48	MCSB44-S-32498	Soil	CPT	SB44	20	2647	12/3/10	
12/3/10 15:57	MCSB44-S-32499	Soil	CPT	SB44	24	2647	12/3/10	
12/3/10 16:00	MCSB44-S-32510	Soil	CPT	SB44	28	2647	12/3/10	
12/3/10 16:05	MCSB44-S-32511	Soil	CPT	SB44	32	2647	12/3/10	
12/3/10 16:14	MCSB44-S-32512	Soil	CPT	SB44	36	2647	12/3/10	
12/3/10 16:15	MCSB44-S-32517 <sup>b</sup>	Soil	CPT	SB44	36	2647	12/3/10	Replicate of sample MCSB44-S-32512.
12/3/10 16:20	MCSB44-S-32513	Soil	CPT	SB44	40	2647	12/3/10	
12/3/10 16:26	MCSB44-S-32514	Soil	CPT	SB44	44	2647	12/3/10	

TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
12/3/10 16:33	MCSB44-S-32516	Soil	CPT	SB44	48	2647	12/3/10	
12/3/10 16:41	MCSB44-S-32518	Soil	CPT	SB44	52	2647	12/3/10	
12/3/10 16:52	MCSB44-S-32519	Soil	CPT	SB44	56	2647	12/3/10	
12/3/10 17:04	MCSB44-S-32520	Soil	CPT	SB44	60	3026	12/3/10	
12/3/10 18:20	MCQCTB-S-32515 <sup>b</sup>	Soil	TB	QC	–	2647	12/3/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COCs 2647 and 3026.
12/4/10 10:02	MCSB08-S-32540	Soil	CPT	SB08	20	4657	12/4/10	Deeper soil sampling at SB08 location.
12/4/10 10:06	MCSB08-S-32541	Soil	CPT	SB08	24	4657	12/4/10	
12/4/10 10:10	MCSB08-S-32542	Soil	CPT	SB08	28	4657	12/4/10	
12/4/10 10:14	MCSB08-S-32543	Soil	CPT	SB08	32	4657	12/4/10	
12/4/10 10:22	MCSB08-S-32544	Soil	CPT	SB08	36	4657	12/4/10	
12/4/10 10:27	MCSB08-S-32545	Soil	CPT	SB08	40	4657	12/4/10	
12/4/10 10:36	MCSB08-S-32546	Soil	CPT	SB08	44	4657	12/4/10	
12/4/10 10:43	MCSB08-S-32547	Soil	CPT	SB08	48	4657	12/4/10	
12/4/10 10:44	MCSB08-S-32549 <sup>b</sup>	Soil	CPT	SB08	48	4657	12/4/10	Replicate of sample MCSB08-S-32547.
12/4/10 10:52	MCSB08-S-32548	Soil	CPT	SB08	52	4657	12/4/10	
12/4/10 11:03	MCSB08-S-32550	Soil	CPT	SB08	56	4657	12/4/10	
12/4/10 12:00	MCQCTB-S-32534 <sup>b</sup>	Soil	TB	QC	–	4657	12/4/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4657.
12/4/10 13:29	MCQCTB-S-32536 <sup>b</sup>	Soil	TB	QC	–	4658	12/6/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4658.
12/4/10 13:37	MCSB46-S-32521	Soil	CPT	SB46	4	4658	12/6/10	
12/4/10 13:39	MCSB46-S-32522	Soil	CPT	SB46	8	4658	12/6/10	
12/4/10 13:41	MCSB46-S-32523	Soil	CPT	SB46	12	4658	12/6/10	
12/4/10 13:43	MCSB46-S-32524	Soil	CPT	SB46	16	4658	12/6/10	
12/4/10 13:45	MCSB46-S-32525	Soil	CPT	SB46	20	4658	12/6/10	
12/4/10 13:50	MCSB46-S-32526	Soil	CPT	SB46	24	4658	12/6/10	
12/4/10 13:51	MCSB46-S-32538 <sup>b</sup>	Soil	CPT	SB46	24	4658	12/6/10	Replicate of sample MCSB46-S-32526.
12/4/10 13:56	MCSB46-S-32527	Soil	CPT	SB46	28	4658	12/6/10	
12/4/10 14:22	MCSB46-S-32529	Soil	CPT	SB46	36	4658	12/6/10	
12/4/10 14:29	MCSB46-S-32530	Soil	CPT	SB46	40	4658	12/6/10	
12/4/10 14:41	MCSB46-S-32531	Soil	CPT	SB46	44	4658	12/6/10	
12/4/10 14:49	MCSB46-S-32532	Soil	CPT	SB46	48	4658	12/6/10	
12/4/10 14:59	MCSB46-S-32533	Soil	CPT	SB46	52	4658	12/6/10	
12/4/10 15:14	MCSB46-S-32535	Soil	CPT	SB46	54.5	4658	12/6/10	
12/5/10 9:29	MCQCTB-S-32539 <sup>b</sup>	Soil	TB	QC	–	4659	12/6/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4659.
12/5/10 10:49	MCSB41D-W-32439	Water	CPT/P	SB41D	48-58	4667	12/6/10	Depth to water = 54.91 ft from TOC. Sampled without purging after water accumulated on Dec. 2-5. Sample froze/broke during shipment and was not analyzed. Later resampled.



TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
12/5/10 11:10	MCSB42D-W-32502	Water	CPT/P	SB42D	47-57	4667	12/6/10	Depth to water = 49.43 ft from TOC. Sampled without purging after water accumulated on Dec. 2-5. Sample froze/broke during shipment and was not analyzed. Later resampled.
12/5/10 11:22	MCSB47-S-32551	Soil	CPT	SB47	4	4659	12/6/10	Soil sampling at SB47 location.
12/5/10 11:29	MCSB47-S-32552	Soil	CPT	SB47	8	4659	12/6/10	
12/5/10 11:34	MCSB47-S-32553	Soil	CPT	SB47	12	4659	12/6/10	
12/5/10 11:43	MCSB47-S-32554	Soil	CPT	SB47	16	4659	12/6/10	
12/5/10 11:45	MCSB43D-W-32503	Water	CPT/P	SB43D	37.4-47.4	4667	12/6/10	Depth to water = 6.91 ft from TOC. Sampled without purging after water accumulated on Dec. 3-5.
12/5/10 11:49	MCSB47-S-32555	Soil	CPT	SB47	20	4659	12/6/10	Replicate of sample MCSB47-S-32555.
12/5/10 11:50	MCSB47-S-32565 <sup>b</sup>	Soil	CPT	SB47	20	4659	12/6/10	
12/5/10 11:55	MCSB47-S-32556	Soil	CPT	SB47	24	4659	12/6/10	
12/5/10 11:59	MCSB47-S-32557	Soil	CPT	SB47	28	4659	12/6/10	
12/5/10 12:05	MCSB47-S-32558	Soil	CPT	SB47	32	4659	12/6/10	
12/5/10 12:10	MCSB47-S-32559	Soil	CPT	SB47	36	4659	12/6/10	
12/5/10 12:15	MCSB44D-W-32504	Water	CPT/P	SB44D	50-60	4667	12/6/10	
12/5/10 12:16	MCSB47-S-32560	Soil	CPT	SB47	40	4659	12/6/10	Depth to water = 17.3 ft from TOC. Sampled without purging after water accumulated on Dec. 4-5. Sample froze/broke during shipment and was not analyzed. Later resampled.
12/5/10 12:26	MCSB47-S-32561	Soil	CPT	SB47	44	4659	12/6/10	
12/5/10 12:32	MCSB47-S-32562	Soil	CPT	SB47	48	4659	12/6/10	
12/5/10 12:45	MCSB46M-W-32505	Water	CPT/P	SB46M	20-30	4667	12/6/10	
12/5/10 12:59	MCSB47-S-32564	Soil	CPT	SB47	56	4659	12/6/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4661.
12/5/10 13:29	MCQCTB-S-32581 <sup>b</sup>	Soil	TB	QC	-	4661	12/6/10	
12/5/10 14:00	MCSB46-S-32528	Soil	CPT	SB46	32	4659	12/6/10	Soil sampling at SB48 location.
12/5/10 16:22	MCSB48-S-32570	Soil	CPT	SB48	20	4661	12/6/10	
12/5/10 16:27	MCSB48-S-32571	Soil	CPT	SB48	24	4661	12/6/10	
12/5/10 16:36	MCSB48-S-32572	Soil	CPT	SB48	28	4661	12/6/10	
12/5/10 16:45	MCSB48-S-32573	Soil	CPT	SB48	32	4661	12/6/10	Replicate of sample MCSB48-S-32573.
12/5/10 16:46	MCSB48-S-32580 <sup>b</sup>	Soil	CPT	SB48	32	4661	12/6/10	
12/5/10 16:52	MCSB48-S-32574	Soil	CPT	SB48	36	4661	12/6/10	
12/5/10 17:00	MCSB48-S-32575	Soil	CPT	SB48	40	4661	12/6/10	
12/5/10 17:06	MCSB48-S-32576	Soil	CPT	SB48	44	4661	12/6/10	
12/5/10 17:16	MCSB48-S-32577	Soil	CPT	SB48	48	4661	12/6/10	
12/5/10 17:28	MCSB48-S-32578	Soil	CPT	SB48	52	4661	12/6/10	
12/6/10 9:40	MCQCTB-S-32593 <sup>b</sup>	Soil	TB	QC	-	4666	12/6/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4666.

TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
12/6/10 9:45	MCSB38D-W-32506	Water	CPT/P	SB38D	41.2-51.2	4667	12/6/10	Depth to water = 46.61 ft from TOC. Sampled without purging after water accumulated on Nov. 30-Dec. 6. Sample froze/broke during shipment and was not analyzed. Later resampled.
12/6/10 10:30	MCSB45D-W-32507	Water	CPT/P	SB45D	56-66	4667	12/6/10	Depth to water = 62.52 ft from TOC. Sampled without purging after water accumulated on Dec. 3-6. Sample froze/broke during shipment and was not analyzed. Later resampled.
12/6/10 10:48	MCSB08D-W-32508	Water	CPT/P	SB08D	47-57	4667	12/6/10	Depth to water = 35.11 ft from TOC. Sampled without purging after water accumulated on Dec. 4-6.
12/6/10 11:11	MCSB16-S-32582	Soil	CPT	SB16	20	4666	12/6/10	Replicate of sample MCSB16-S-32582.
12/6/10 11:12	MCSB16-S-32592 <sup>b</sup>	Soil	CPT	SB16	20	4666	12/6/10	
12/6/10 11:15	MCSB16-S-32583	Soil	CPT	SB16	24	4666	12/6/10	Depth to water = 4.95 ft from TOC. Sampled without purging after water accumulated on Dec. 5-6.
12/6/10 11:20	MCSB48D-W-32509	Water	CPT/P	SB48D	44-54	4667	12/6/10	
12/6/10 11:21	MCSB16-S-32584	Soil	CPT	SB16	28	4666	12/6/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4667.
12/6/10 11:28	MCSB16-S-32585	Soil	CPT	SB16	32	4666	12/6/10	
12/6/10 11:39	MCSB16-S-32586	Soil	CPT	SB16	36	4666	12/6/10	
12/6/10 11:43	MCSB16-S-32587	Soil	CPT	SB16	40	4666	12/6/10	
12/6/10 11:54	MCSB16-S-32588	Soil	CPT	SB16	44	4666	12/6/10	
12/6/10 12:03	MCSB16-S-32589	Soil	CPT	SB16	48	4666	12/6/10	
12/6/10 12:12	MCSB16-S-32590	Soil	CPT	SB16	52	4666	12/6/10	
12/6/10 12:19	MCSB16-S-32591	Soil	CPT	SB16	56	4666	12/6/10	
12/6/10 12:30	MCQCTB-W-32594 <sup>b</sup>	Water	TB	QC	-	4667	12/6/10	
12/7/10 10:35	MCSB38D-W-32599	Water	CPT/P	SB38D	41.2-51.2	3027	12/7/10	
12/7/10 11:11	MCSB46M-W-32597	Water	CPT/P	SB46M	20-30	3027	12/7/10	Resampling after prior sample froze during shipment.
12/7/10 11:30	MCSB45D-W-32598	Water	CPT/P	SB45D	56-66	3027	12/7/10	Resampling after prior sample froze during shipment.
12/7/10 11:50	MCSB41D-W-32595	Water	CPT/P	SB41D	48-58	3027	12/7/10	Resampling after prior sample froze during shipment.
12/7/10 12:06	MCSB42D-W-32596	Water	CPT/P	SB42D	47-57	3027	12/7/10	Resampling after prior sample froze during shipment.
12/7/10 12:40	MCSB46D-W-32600	Water	CPT/P	SB46D	44.5-54.5	3027	12/7/10	Depth to water = 49.27 ft from TOC. Sampled without purging after water accumulated on Dec. 4-7.

TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
12/7/10 12:52	MCSB40D-W-32601	Water	CPT/P	SB40D	43.3-53.3	3027	12/7/10	Depth to water = 47.43 ft from TOC. Sampled without purging after water accumulated on Dec. 1-7.
12/7/10 14:05	MCQCTB-W-32602 <sup>b</sup>	Water	TB	QC	–	3027	12/7/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 3027.
1/13/11 16:02	MCSB22S-W-32603	Water	CPT/P	SB22S	8-18	4801	1/14/11	Depth to water = 14.39 ft. Depth of well = 17.78 ft. Collected without purging. Water clear with small black-orange flecks. Insufficient water for field parameters.
1/13/11 16:33	MCSB22M-W-32604	Water	CPT/P	SB22M	18-28	4801	1/14/11	Depth to water = 15.77 ft. Depth of well = 29.9 ft. Collected without purging. Water pale, cloudy tan.
1/14/11 9:22	MCSB44M-W-32605	Water	CPT/P	SB44M	20-30	4801	1/14/11	Depth to water = 15.04 ft. Depth of well = 30.03 ft. Collected without purging. Water came in after last dry check on 12/7/10.
1/14/11 9:53	MCSB16D-W-32606	Water	CPT/P	SB16D	48-58	4801	1/14/11	Depth to water = 9.25 ft. Depth of well = 58.18 ft. Collected without purging. Water came in after last dry check on 12/7/10.
1/14/11 9:57	MCSB16D-W-32607 <sup>b</sup>	Water	CPT/P	SB16D	48-58	4801	1/14/11	Replicate of sample MCSB16D-W-32606.
1/14/11 10:19	MCSB48D-W-32608	Water	CPT/P	SB48D	44-54	4801	1/14/11	Depth to water = 8.75 ft. Depth of well = 53.68 ft. Collected without purging.
1/14/11 10:58	MCSB47D-W-32609	Water	CPT/P	SB47D	47-57	4801	1/14/11	Depth to water = 35.12 ft. Depth of well = 57.32 ft. Collected without purging. Water came in after last dry check on 12/7/10.
1/14/11 11:17	MCSB47S-W-32610	Water	CPT/P	SB47S	20-30	4801	1/14/11	Depth to water = 27.16 ft. Depth of well = 29.75 ft. Collected without purging. Water came in after last dry check on 12/7/10.
1/14/11 12:00	MCSB42S-W-32611	Water	CPT/P	SB42S	17-27	4801	1/14/11	Depth to water = 18.64 ft. Depth of well = 27.07 ft. Collected without purging. Water came in after last dry check on 12/7/10.
1/14/11 12:37	MCSB40M-W-32612	Water	CPT/P	SB40M	20-30	4801	1/14/11	Depth to water = 19.76 ft. Depth of well = 29.86 ft. Collected without purging. Water came in after last dry check on 12/7/10.
1/14/11 12:59	MCSB40S-W-32613	Water	CPT/P	SB40S	8-18	4801	1/14/11	Depth to water = 17.24 ft. Depth of well = 18.37 ft. Collected without purging. Water came in after last dry check on 12/7/10.
1/14/11 13:15	MCQCBR-W-32614 <sup>b</sup>	Water	RI	QC	–	4801	1/14/11	Rinsate of decontaminated bailer after collection of sample MCSB40S-W-32613.
1/14/11 13:45	MCSB38M-W-32615	Water	CPT/P	SB38M	15-25	4801	1/14/11	Depth to water = 18.48 ft. Depth of well = 25.26 ft. Collected without purging. Water came in after last dry check on 12/7/10.

TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
1/14/11 14:14	MCSB43M-W-32616	Water	CPT/P	SB43M	20-30	4801	1/14/11	Depth to water = 25.96 ft. Depth of well = 30.09 ft. Collected without purging. Water came in after last dry check on 12/7/10.
1/14/11 14:56	MCSB39S-W-32617	Water	CPT/P	SB39S	23-33	4802	1/14/11	Depth to water = 10.85 ft. Depth of well = 32.94 ft. Collected without purging. Water came in after last dry check on 12/7/10.
1/14/11 16:54	MCQCTB-W-32618 <sup>b</sup>	Water	TB	QC	-	4802	1/14/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COCs 4801 and 4802.
1/15/11 8:51	MCSB44S-W-32619	Water	CPT/P	SB44S	8-18	4817	1/17/11	Depth to water = 17.68 ft. Depth of well = 18.04 ft. Collected without purging. Water came in after last dry check on 12/7/10. Insufficient water for field parameters.
1/15/11 9:17	MCSB41S-W-32620	Water	CPT/P	SB41S	8-18	4817	1/17/11	Depth to water = 17.10 ft. Depth of well = 18.19 ft. Collected without purging. Water came in after last dry check on 12/7/10.
1/15/11 9:54	MCSB48S-W-32621	Water	CPT/P	SB48S	20-30	4817	1/17/11	Depth to water = 28.37 ft. Depth of well = 29.95 ft. Collected without purging. Water came in after last dry check on 12/7/10.
1/17/11 13:31	MCQCTB-W-32622 <sup>b</sup>	Water	TB	QC	-	4817	1/17/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4817.
2/26/11 15:09	MCSB08S-W-32566	Water	CPT/P	SB08S	20-30	4820	2/28/11	Depth to water = 7.13 ft. Depth of well = 29.85 ft. Water came in after last dry check on 1/13/11.
2/26/11 15:24	MCSB45S-W-32567	Water	CPT/P	SB45S	18-28	4820	2/28/11	Depth to water = 7.87 ft. Depth of well = 28.06 ft. Water faint gray-black. Color fades in later vials filled. Had approximately 9 ft of water on 1/13/11. Rose roughly 11 ft since.
2/26/11 15:54	MCSB16M-W-32568	Water	CPT/P	SB16M	20-30	4820	2/28/11	Depth to water = 8.61 ft. Depth of well = 29.93 ft. Orange sediment in first vial filled. Had approximately 7 ft water on 1/13/11. Rose roughly 14 ft since.
2/28/11 13:46	MCQCTB-W-32569 <sup>b</sup>	Water	TB	QC	-	4820	2/28/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4820.
3/23/11 15:38	MCQCTB-W-32627 <sup>b</sup>	Water	TB	QC	-	4837	3/23/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4837.
3/23/11 16:04	MCSB16S-W-32623	Water	CPT/P	SB16S	8-18	4837	3/23/11	Depth to water = 12.92 ft. Depth of well = 17.95 ft. First vial pale brown, remainder clear. Water has come in since installation on 12/6/10. Rose about 6 ft since 1/13/11.



TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
3/23/11 16:21	MCSB46S-W-32626	Water	CPT/P	SB46S	8-18	4837	3/23/11	Depth to water = 3.75 ft. Depth of well = 17.92 ft. First bottle filled has black material, remainder clear. Water has come in since installation on 12/5/10. Rose about 11 ft since 1/13/11.
3/23/11 16:44	MCSB38S-W-32624	Water	CPT/P	SB38S	10-15	4837	3/23/11	Depth to water = 4.23 ft. Depth of well = 15.16 ft. Water has come in since installation on 11/30/10. Rose about 8 ft since 1/13/11.
3/23/11 16:59	MCSB43S-W-32625	Water	CPT/P	SB43S	8-18	4837	3/23/11	Depth to water = 6.65 ft. Depth of well = 18.15 ft. Water has come in since installation on 12/3/10. Rose about 7 ft since 1/13/11.
4/5/11 12:10	MCSB33-W-32870	Water	CPT/P	SB33	12-22	4840	4/6/11	Depth to water = 7.16 ft. Depth of well = 25.93 ft. Water muddy brown-orange.
4/5/11 12:51	MCSB8S-W-32871	Water	CPT/P	SB08S	20-30	4840	4/6/11	Depth to water = 8.15 ft. Depth of well = 33.90 ft.
4/5/11 13:13	MCSB8D-W-32872	Water	CPT/P	SB08D	47-57	4840	4/6/11	Depth to water = 7.31 ft. Depth of well = 61.00 ft. Water clear.
4/5/11 13:15	MCSB8D-W-32873 <sup>b</sup>	Water	CPT/P	SB08D	47-57	4840	4/6/11	Replicate of sample MCSB8D-W-32872.
4/5/11 13:47	MCSB34-W-32874	Water	CPT/P	SB34	17-22	4840	4/6/11	Depth to water = 6.29 ft. Depth of well = 25.42 ft. Water muddy brown-orange.
4/5/11 14:11	MCSB9S-W-32875	Water	CPT/P	SB09S	18-28	4840	4/6/11	Depth to water = 4.50 ft. Depth of well = 30.77 ft. Water slightly cloudy tan, especially in bottom 6 in. of water tube.
4/5/11 14:39	MCSB9D-W-32876	Water	CPT/P	SB09D	58-63	4840	4/6/11	Depth to water not recorded. Depth of well not recorded.
4/5/11 15:05	MCSB48S-W-32877	Water	CPT/P	SB48S	20-30	4840	4/6/11	Depth to water = 10.60 ft. Depth of well = 34.24 ft. Water clear.
4/5/11 15:36	MCSB48D-W-32878	Water	CPT/P	SB48D	44-54	4840	4/6/11	Depth to water = 6.42 ft. Depth of well = 57.7 ft. Water muddy, chocolate milk, brown-tan.
4/5/11 16:29	MCSB1S-W-32879	Water	CPT/P	SB01M	20-30	4840	4/6/11	Depth to water = 5.32 ft. Depth of well = 33.17 ft. Water cloudy tan-orange to clear.
4/5/11 17:09	MCSB41S-W-32880	Water	CPT/P	SB41S	8-18	4840	4/6/11	Depth to water = 7.84 ft. Depth of well = 22.12 ft. Water clear.
4/5/11 17:41	MCSB41M-W-32881	Water	CPT/P	SB41M	20-30	4840	4/6/11	Depth to water = 5.99 ft. Depth of well = 34.04 ft. Water muddy to cloudy brown-orange.
4/5/11 18:08	MCSB41D-W-32882	Water	CPT/P	SB41D	48-58	4840	4/6/11	Depth to water = 5.77 ft. Depth of well = 61.76 ft. Water clear.
4/5/11 18:36	MCSB42S-W-32883	Water	CPT/P	SB42S	17-27	4840	4/6/11	Depth to water = 7.81 ft. Depth of well not recorded. Water clear.
4/5/11 19:08	MCSB42D-W-32884	Water	CPT/P	SB42D	47-57	4840	4/6/11	Depth to water = 6.80 ft. Depth of well = 61.60 ft. Water clear.
4/5/11 19:15	MCQCTB-W-32885 <sup>b</sup>	Water	TB	QC	-	4840	4/6/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4840.
4/6/11 9:45	MCSB47S-W-32910	Water	CPT/P	SB47S	20-30	4845	4/7/11	Depth to water = 7.15 ft. Depth of well = 33.90 ft.

TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
4/6/11 9:48	MCSB37S-W-32886	Water	CPT/P	SB37S	15-25	4842	4/7/11	Depth to water = 4.85 ft. Depth of well = 29.08 ft. Water muddy brown.
4/6/11 10:22	MCSB37D-W-32887	Water	CPT/P	SB37D	35.8-45.8	4842	4/7/11	Depth to water = 4.58 ft. Depth of well = 49.56 ft. Water muddy brown to cloudy.
4/6/11 10:23	MCSB47D-W-32911	Water	CPT/P	SB47D	47-57	4845	4/7/11	Depth to water = 7.70 ft. Depth of well = 60.85 ft.
4/6/11 10:38	MCSB46S-W-32912	Water	CPT/P	SB46S	8-18	4845	4/7/11	Depth to water = 8.27 ft. Depth of well = 22.02 ft.
4/6/11 10:56	MCSB38S-W-32888	Water	CPT/P	SB38S	10-15	4842	4/7/11	Depth to water = 8.85 ft. Depth of well = 19.15 ft. Water clear.
4/6/11 11:00	MCSB46M-W-32913	Water	CPT/P	SB46M	20-30	4847	4/7/11	Depth to water = 5.53 ft. Depth of well = 33.84 ft.
4/6/11 11:15	MCSB46D-W-32914	Water	CPT/P	SB46D	44.5-54.5	4847	4/7/11	Depth to water = 6.05 ft. Depth of well = 58.55 ft.
4/6/11 11:17	MCSB38M-W-32889	Water	CPT/P	SB38M	15-25	4842	4/7/11	Depth to water = 7.30 ft. Depth of well = 29.33 ft. Water clear.
4/6/11 11:43	MCSB38D-W-32890	Water	CPT/P	SB38D	41.2-51.2	4842	4/7/11	Depth to water = 6.23 ft. Depth of well = 55.02ft. Water clear.
4/6/11 11:45	MCSB16S-W-32915	Water	CPT/P	SB16S	8-18	4847	4/7/11	Depth to water = 11.91 ft. Depth of well = 21.94 ft.
4/6/11 12:16	MCSB29-W-32891	Water	CPT/P	SB29	12-22	4842	4/7/11	Depth to water = 6.12 ft. Depth of well = 25.40 ft. Water pale cloudy tan to clear.
4/6/11 12:38	MCSB16M-W-32916	Water	CPT/P	SB16M	20-30	4845	4/7/11	Depth to water = 7.53 ft. Depth of well = 33.95 ft.
4/6/11 12:50	MCSB16D-W-32917	Water	CPT/P	SB16D	48-58	4845	4/7/11	Depth to water = 6.69 ft. Depth of well = 62.02 ft.
4/6/11 13:08	MCSB17S-W-32918	Water	CPT/P	SB17S	18-28	4845	4/7/11	Depth to water = 7.52 ft. Depth of well = 31.75 ft.
4/6/11 13:15	MCSB17D-W-32919	Water	CPT/P	SB17D	51.3-61.3	4845	4/7/11	Depth to water = 8.03 ft. Depth of well = 64.83 ft.
4/6/11 13:16	MCSB17DDUP-W-32906 <sup>b</sup>	Water	CPT/P	SB17D	51.3-61.3	4847	4/7/11	Replicate of sample MCSB17D-W-32919.
4/6/11 13:38	MCSB11-W-32920	Water	CPT/P	SB11	15-25	4845	4/7/11	Depth to water = 7.47 ft. Depth of well = 29.60 ft.
4/6/11 13:45	MCSB10-W-32921	Water	CPT/P	SB10	8-18	4845	4/7/11	Depth to water = 4.95 ft. Depth of well = 20.45 ft.
4/6/11 13:56	MCSB44S-W-32922	Water	CPT/P	SB44S	8-18	4847	4/7/11	Depth to water = 7.58 ft. Depth of well = 22.26 ft.
4/6/11 13:58	MCSB27S-W-32892	Water	CPT/P	SB27S	20-30	4842	4/7/11	Depth to water = 6.18 ft. Depth of well = 33.36 ft. Water clear.
4/6/11 14:05	MCSB44M-W-32923	Water	CPT/P	SB44M	20-30	4847	4/7/11	Depth to water = 7.64 ft. Depth of well = 34.22 ft.
4/6/11 14:15	MCSB44D-W-32924	Water	CPT/P	SB44D	50-60	4847	4/7/11	Depth to water = 8.27 ft. Depth of well = 64.98 ft.
4/6/11 14:18	MCSB27D-W-32893	Water	CPT/P	SB27D	41-51	4842	4/7/11	Depth to water = 5.56 ft. Depth of well not recorded. Water clear.
4/6/11 14:30	MCSB24-W-32925	Water	CPT/P	SB24	8-18	4847	4/7/11	Depth to water = 5.46 ft. Depth of well = 21.85 ft.
4/6/11 14:40	MCSB22S-W-32926	Water	CPT/P	SB22S	8-18	4847	4/7/11	Depth to water = 8.84 ft. Depth of well = 22.31 ft.
4/6/11 14:48	MCSB22M-W-32927	Water	CPT/P	SB22M	18-28	4847	4/7/11	Depth to water = 9.95 ft. Depth of well = 34.33 ft.
4/6/11 14:50	MCSB43S-W-32894	Water	CPT/P	SB43S	8-18	4842	4/7/11	Depth to water = 10.61 ft. Depth of well = 22.25 ft. Water clear.
4/6/11 15:00	MCSB22D-W-32928	Water	CPT/P	SB22D	57.2-67.2	4847	4/7/11	Depth to water = 9.82 ft. Depth of well = 70.06 ft.
4/6/11 15:10	MCSB45S-W-32929	Water	CPT/P	SB45S	18-28	4847	4/7/11	Depth to water = 9.26 ft. Depth of well = 31.70 ft.
4/6/11 15:12	MCSB43M-W-32895	Water	CPT/P	SB43M	20-30	4842	4/7/11	Depth to water = 10.83 ft. Depth of well = 34.07 ft. Water clear.
4/6/11 15:14	MCSB43M-W-32896 <sup>b</sup>	Water	CPT/P	SB43M	20-30	4842	4/7/11	Replicate of sample MCSB43M-W-32895.
4/6/11 15:22	MCSB45D-W-32900	Water	CPT/P	SB45D	56-66	4847	4/7/11	Depth to water = 10.02 ft. Depth of well = 70.22 ft.
4/6/11 15:50	MCSB43D-W-32897	Water	CPT/P	SB43D	37.4-47.4	4842	4/7/11	Depth to water = 7.99 ft. Depth of well = 51.30 ft.

TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
4/6/11 15:50	MCSB36S-W-32901	Water	CPT/P	SB36S	15-25	4845	4/7/11	Depth to water = 5.92 ft. Depth of well = 28.67 ft.
4/6/11 15:56	MCSB36D-W-32902	Water	CPT/P	SB36D	42.2-52.2	4845	4/7/11	Depth to water = 5.95 ft. Depth of well = 55.85 ft.
4/6/11 16:12	MCSB40S-W-32903	Water	CPT/P	SB40S	8-18	4845	4/7/11	Depth to water = 8.39 ft. Depth of well = 22.39 ft.
4/6/11 16:22	MCSB40M-W-32904	Water	CPT/P	SB40M	20-30	4845	4/7/11	Depth to water = 8.15 ft. Depth of well = 34.11 ft.
4/6/11 16:27	MCSB39S-W-32898	Water	CPT/P	SB39S	23-33	4842	4/7/11	Depth to water = 8.00 ft. Depth of well = 36.30 ft. Water clear.
4/6/11 16:34	MCSB40D-W-32905	Water	CPT/P	SB40D	43.3-53.3	4845	4/7/11	Depth to water = 8.10 ft. Depth of well = 57.56 ft.
4/6/11 17:09	MCSB39D-W-32899	Water	CPT/P	SB39D	45.8-55.8	4842	4/7/11	Depth to water = 7.93 ft. Depth of well = 59.00 ft.
4/7/11 9:33	MCQCTB-W-32909 <sup>b</sup>	Water	TB	QC	-	4842	4/7/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4842.
4/7/11 10:22	MCQCTB-W-32907 <sup>b</sup>	Water	TB	QC	-	4847	4/7/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4847.
4/7/11 11:13	MCQCTB-W-32908 <sup>b</sup>	Water	TB	QC	-	4845	4/7/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4845.
5/10/11 10:31	MCQCTB-S-32963 <sup>b</sup>	Soil	TB	QC	-	4843	5/10/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4843.
5/10/11 10:54	MCSB50-S-32950	Soil	CPT	SB50	4	4843	5/10/11	Soil sampling at SB50 location.
5/10/11 10:58	MCSB50-S-32951	Soil	CPT	SB50	8	4843	5/10/11	
5/10/11 11:01	MCSB50-S-32952	Soil	CPT	SB50	12	4843	5/10/11	
5/10/11 11:03	MCSB50-S-32953	Soil	CPT	SB50	16	4843	5/10/11	
5/10/11 11:06	MCSB50-S-32954	Soil	CPT	SB50	20	4843	5/10/11	
5/10/11 11:10	MCSB50-S-32955	Soil	CPT	SB50	24	4843	5/10/11	
5/10/11 11:18	MCSB50-S-32956	Soil	CPT	SB50	28	4843	5/10/11	
5/10/11 11:19	MCSB50-S-32964 <sup>b</sup>	Soil	CPT	SB50	28	4843	5/10/11	Replicate of sample MCSB50-S-32956.
5/10/11 11:51	MCSB50-S-32958	Soil	CPT	SB50	36	4843	5/10/11	
5/10/11 11:58	MCSB50-S-32959	Soil	CPT	SB50	40	4843	5/10/11	
5/10/11 12:07	MCSB50-S-32960	Soil	CPT	SB50	44	4843	5/10/11	
5/10/11 12:13	MCSB50-S-32961	Soil	CPT	SB50	48	4843	5/10/11	
5/10/11 12:22	MCSB50-S-32962	Soil	CPT	SB50	52	4843	5/10/11	
5/10/11 12:32	MCSB50-S-32965	Soil	CPT	SB50	56	4843	5/10/11	
5/10/11 12:41	MCSB50-S-32966	Soil	CPT	SB50	60	4844	5/10/11	
5/10/11 13:00	MCSB50-S-32967	Soil	CPT	SB50	64	4844	5/10/11	Refusal at 64 ft BGL.
5/11/11 15:42	MCSB50-S-32957	Soil	CPT	SB50	32	4846	5/12/11	
5/12/11 8:47	MCQCTB-S-32944 <sup>b</sup>	Soil	TB	QC	-	4663	5/12/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4663.
5/12/11 8:55	MCSB49-S-32930	Soil	CPT	SB49	4	4663	5/12/11	Soil sampling at SB49 location.
5/12/11 8:57	MCSB49-S-32931	Soil	CPT	SB49	8	4663	5/12/11	
5/12/11 9:00	MCSB49-S-32932	Soil	CPT	SB49	12	4663	5/12/11	
5/12/11 9:02	MCSB49-S-32933	Soil	CPT	SB49	16	4663	5/12/11	
5/12/11 9:05	MCSB49-S-32934	Soil	CPT	SB49	20	4663	5/12/11	

TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
5/12/11 9:08	MCSB49-S-32935	Soil	CPT	SB49	24	4663	5/12/11	
5/12/11 9:12	MCSB49-S-32936	Soil	CPT	SB49	28	4663	5/12/11	
5/12/11 9:17	MCSB49-S-32937	Soil	CPT	SB49	32	4663	5/12/11	
5/12/11 9:22	MCSB49-S-32938	Soil	CPT	SB49	36	4663	5/12/11	
5/12/11 9:28	MCSB49-S-32939	Soil	CPT	SB49	40	4663	5/12/11	
5/12/11 9:29	MCSB49-S-32943 <sup>b</sup>	Soil	CPT	SB49	40	4663	5/12/11	Replicate of sample MCSB49-S-32939.
5/12/11 9:32	MCSB49-S-32940	Soil	CPT	SB49	44	4663	5/12/11	
5/12/11 9:33	MCSB49-S-32941	Soil	CPT	SB49	48	4663	5/12/11	
5/12/11 9:44	MCSB49-S-32942	Soil	CPT	SB49	52	4663	5/12/11	
5/12/11 9:51	MCSB49-S-32945	Soil	CPT	SB49	56	4664	5/12/11	
5/12/11 10:00	MCSB49-S-32946	Soil	CPT	SB49	59.5	4664	5/12/11	Refusal at 59.5 ft BGL.
5/13/11 13:58	MCSB49D-W-32628	Water	CPT/P	SB49D	49.5-59.5	4851	5/13/11	Depth to water = 54.58. Depth of well = 59.21. Installed on May 12. Water came in overnight.
5/13/11 14:10	MCSB01S-W-32419	Water	CPT/P	SB01S	8-18	4851	5/13/11	Depth to water = 2.73. Depth of well = 17.28. Installed on May 12. Water came in overnight.
5/13/11 14:35	MCSB54-S-33270	Soil	CPT	SB54	4	4848	5/13/11	Soil sampling at SB54 location.
5/13/11 14:46	MCSB54-S-33271	Soil	CPT	SB54	8	4848	5/13/11	
5/13/11 14:48	MCSB54-S-33272	Soil	CPT	SB54	12	4848	5/13/11	
5/13/11 14:51	MCSB54-S-33273	Soil	CPT	SB54	16	4848	5/13/11	
5/13/11 14:53	MCSB54-S-33274	Soil	CPT	SB54	20	4848	5/13/11	
5/13/11 14:54	MCSB54-S-33284 <sup>b</sup>	Soil	CPT	SB54	20	4848	5/13/11	Replicate of sample MCSB54-S-33274.
5/13/11 14:56	MCSB54-S-33275	Soil	CPT	SB54	24	4848	5/13/11	
5/13/11 14:59	MCSB54-S-33276	Soil	CPT	SB54	28	4848	5/13/11	
5/13/11 15:03	MCSB54-S-33277	Soil	CPT	SB54	32	4848	5/13/11	
5/13/11 15:08	MCSB54-S-33278	Soil	CPT	SB54	36	4848	5/13/11	
5/13/11 15:12	MCSB54-S-33279	Soil	CPT	SB54	40	4848	5/13/11	
5/13/11 15:20	MCSB54-S-33280	Soil	CPT	SB54	44	4848	5/13/11	
5/13/11 15:50	MCSB54-S-33281	Soil	CPT	SB54	48	4848	5/13/11	
5/13/11 16:00	MCQCTB-W-32629 <sup>b</sup>	Water	TB	QC	-	4851	5/13/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4851.
5/13/11 16:35	MCSB54-S-33282	Soil	CPT	SB54	52	4848	5/13/11	
5/13/11 16:42	MCQCTB-S-33285 <sup>b</sup>	Soil	TB	QC	-	4848	5/13/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4848.
5/14/11 10:40	MCSB01D-W-33286	Water	CPT/P	SB01D	47-57	4849	5/14/11	Depth to water = 18.34 ft. Depth of well = 49.02 ft.
5/14/11 10:54	MCSB54D-W-33287	Water	CPT/P	SB54D	42-52	4849	5/14/11	Depth to water = 9.20 ft. Depth of well = 58.62 ft.
5/14/11 11:32	MCSB54D-W-33288 <sup>b</sup>	Water	CPT/P	SB54D	42-52	4849	5/14/11	Replicate of sample MCSB54D-W-33287.
5/14/11 12:26	MCQCTB-W-33289 <sup>b</sup>	Water	TB	QC	-	4849	5/14/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4849.
5/16/11 9:30	MCSB49S-W-32968	Water	CPT/P	SB49S	8-18	4850	5/16/11	Depth to water = 15.31 ft. Depth of well = 18.60 ft. Installed 5/12/11. First water accumulated; dry when installed.



TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
5/16/11 9:45	MCSB50D-W-32947	Water	CPT/P	SB50D	47-57	4850	5/16/11	Depth to water = 54.76 ft. Depth of well = 58.29 ft. Depth to water = 34.04 ft. Depth of well = 51.53 ft. Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4850.
5/16/11 10:45	MCSB51D-W-32969	Water	CPT/P	SB51D	41-51	4850	5/16/11	
5/16/11 11:20	MCQCTB-W-32948 <sup>b</sup>	Water	TB	QC	-	4850	5/16/11	
5/17/11 9:30	MCSB52S-W-33297	Water	CPT/P	SB52S	8-18	4852	5/17/11	Depth to water = 3.72 ft TOC. Depth of well = 18.04 ft TOC. Installed 5/16/11. Water came in overnight. Collected with bailer.
5/17/11 9:52	MCSB52M-W-33298	Water	CPT/P	SB52M	20-30	4852	5/17/11	Depth to water = 19.54 ft. Depth of well = 30.10 ft. Installed 5/16/11. Water came in overnight.
5/17/11 10:02	MCSB52D-W-33299	Water	CPT/P	SB52D	40-50	4852	5/17/11	Depth to water = 44.45 ft. Depth of well = 50.76 ft. Installed 5/16/11. Water came in overnight. Collected with Waterra tube as bailer.
5/17/11 10:12	MCSB53D-W-33300	Water	CPT/P	SB53	43-53	4852	5/17/11	Depth to water = 4.95 ft. Depth of well = 53.50 ft. Installed 5/16/11. Water came in overnight. Collected with Waterra tube as bailer.
5/17/11 10:24	MCSB01M-W-33290	Water	CPT/P	SB01M	20-30	4852	5/17/11	Depth to water = 1.3 ft. Depth of well = 29.4 ft. Installed Oct. 2010. Collected with bailer.
5/17/11 10:31	MCSB01D-W-33291	Water	CPT/P	SB01D	47-57	4852	5/17/11	Depth to water = 18.08 ft. Depth of well = 42.01 ft. Sand/grout in casing when installed. Tried to clean out. Water level meter gets caught in casing. Installed 5/12/11. First sample on 5/14. Resampled today.
5/17/11 10:50	MCSB01S-W-33302	Water	CPT/P	SB01S	8-18	4852	5/17/11	Depth to water = 0.8 ft. Depth of well = 17.85 ft. Installed 5/12/11. First sampled on 5/13. Resampled today.
5/17/11 11:26	MCSB49D-W-33293	Water	CPT/P	SB49D	49.5-59.5	4852	5/17/11	Depth to water = 20.14 ft. Depth of well = 59.51 ft. Installed 5/12/11. First sampled on 5/13. Resampled today.
5/17/11 11:40	MCSB49S-W-33292	Water	CPT/P	SB49S	8-18	4852	5/17/11	Depth to water = 15.12 ft. Depth of well = 17.9 ft. Installed 5/12/11. First sampled on 5/16. Resampled today.
5/17/11 11:55	MCSB51D-W-33294	Water	CPT/P	SB51D	41-51	4852	5/17/11	Depth to water = 8.20 ft. Depth of well = 51.22 ft. Installed 5/15/11. First sampled on 5/16. Resampled today.
5/17/11 12:52	MCSB54D-W-33295	Water	CPT/P	SB54D	42-52	4852	5/17/11	Depth to water = not recorded. Depth of well not recorded. Installed 5/13/11. First sampled on 5/14. Resampled today.
5/17/11 13:05	MCSB50D-W-33296	Water	CPT/P	SB50D	47-57	4852	5/17/11	Depth to water = 52.03 ft. Depth of well = 56.9 ft. Installed 5/11/11. First sampled on 5/16. Resampled today.
5/17/11 13:10	MCSB50M-W-33301	Water	CPT/P	SB50M	20-30	4852	5/17/11	Depth to water = 28.8 ft. Depth of well = 29.5 ft. Installed 5/11/11. Water came in on 5/11-5/17.

TABLE C.1 (Cont.)

Sample Date and Time	Sample	Sample Medium	Sample Type	Location	Depth (ft BGL)	Chain of Custody	Shipping Date	Sample Description
5/17/11 15:00	MCQCTB-W-33303 <sup>b</sup>	Water	TB	QC	–	4852	5/17/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4852.
6/9/11 8:39	MCSB49M-W-33304	Water	CPT/P	SB49M	20-30	4803	6/9/11	Depth to water = 22.50 ft TOC. Depth of well not recorded. Installed 5/12/11. Water came in since then. Collected with bailer.
6/9/11 9:14	MCSB54M-W-33305	Water	CPT/P	SB54M	20-30	4803	6/9/11	Depth to water = 20.42 ft TOC. Depth of well = 29.62 ft. Installed 5/15/11. Water came in since then. Collected with bailer.
6/9/11 9:47	MCSB54S-W-33306	Water	CPT/P	SB54S	8-18	4803	6/9/11	Depth to water = 1.19 ft TOC. Depth of well = 17.62 ft. Installed 5/15/11. Water came in since then. Collected with bailer.
6/9/11 10:22	MCQCBR-W-33308 <sup>b</sup>	Water	RI	QC	–	4803	6/9/11	Rinsate of decontaminated bailer prior to sampling from SB53M and after SB54S.
6/9/11 10:34	MCSB53M-W-33307	Water	CPT/P	SB53M	20-30	4803	6/9/11	Depth to water = 25.50 ft TOC. Depth of well = 29.94 ft. Installed 5/15/11. Water came in since then. Collected with bailer. Water clear.
6/9/11 11:29	MCSB51M-W-33309	Water	CPT/P	SB51M	20-30	4803	6/9/11	Depth to water = 0.69 ft TOC. Depth of well not recorded. Installed 5/15/11. Water came in since then. Collected with bailer.
6/9/11 11:54	MCSB51S-W-33310	Water	CPT/P	SB51S	8-18	4803	6/9/11	Depth to water = 1.32 ft TOC. Depth of well = 17.67 ft. Installed 5/15/11. Water came in since then. Collected with bailer.
6/9/11 12:50	MCQCTB-W-33311 <sup>b</sup>	Water	TB	QC	–	4803	6/9/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4803.
9/1/11 16:00	MCSB50S-W-33312	Water	CPT/P	SB50S	8-18	4805	9/1/11	Depth to water = 15.39 ft TOC. Depth of well = 20.89 ft. Well was dry when last checked on 6/9/11. Collected without purging.
9/1/11 16:43	MCSB53S-W-33313	Water	CPT/P	SB53S	8-18	4805	9/1/11	Depth to water = 11.42 ft TOC. Depth of well = 17.60 ft. Well was dry when last checked on 6/9/11. Collected without purging.
9/1/11 16:50	MCQCTB-W-33314 <sup>b</sup>	Water	TB	QC	–	4805	9/1/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4805.

<sup>a</sup> Sample types: CPT, cone penetrometer; CPT/P, piezometer; DW, domestic well; PW, public well; RI, rinsate; SW, surface water; TB, trip blank.

<sup>b</sup> Quality control sample.

TABLE C.2 Record of private water well survey in fall 2010.

Well Owner	Property or Contact Address <sup>a</sup>	Use	Casing/Liner Depth (ft BGL)	Total Depth (ft BGL)	Distance from Former Facility (mi)	Comments
Bracht, E.	2305 Highview Rd. Mexico, MO 65265	Not in use	–	500 <sup>b</sup>	1.6	Argonne personnel viewed the property on 9/22/10. Mrs. Bracht was contacted by phone on 9/28/10. Residence has been vacant for several years. Well has 6-in. diameter and is north of the drive to the garage. Top of 6-in. casing is rusted through. Well was formerly used for domestic supply; public water line is across the street, but residence is not connected. Another older cistern/well lined with brick/stone is behind a small circular bin W of the house.
Brookman, D. and S.	J. Whyte 22 Countryview Ln.	Lawn and garden, car washing	213 <sup>b</sup>	610 <sup>b</sup>	1.6	Argonne personnel spoke to Mrs. Whyte at the property on 9/22/10. Well is on W side of a small apartment complex and is connected to three yard hydrants. Whyte residence and apartments are served by public water supply.
Cobb, K.	1100 S. Sturgeon St.	Lawn and garden	–	600-700 <sup>c</sup>	0.4	Argonne personnel contacted Mr. Cobb by phone on 10/4/10 and in person at the property on 10/22/10. Property has residence and landscape business. Well is just behind the house, next to the steps, in a flower bed. Well refurbished in 2003.
Dyke, G.	50 Old Williamsburg Rd.	Domestic	147 <sup>b</sup>	455 <sup>b</sup>	1.4	Argonne personnel spoke to Mr. Dyke at the property on 9/22/10. Well is at the W edge of the driveway, next to the house, under a small wishing well. Well is used for all domestic purposes, including drinking water.
Hemeyer, P. and S.	21 Deves Rd.	Domestic	320 <sup>b</sup>	680 <sup>b</sup>	0.8	Argonne personnel spoke to Mr. Hemeyer at the property on 9/22/10 and 10/22/10. Well is at SW corner of house, in the backyard. Property is about 2 acres. Well is used for all domestic purposes, including drinking water.
Hendricks, J.	56 Fordson Rd.	Domestic	480 <sup>b</sup>	507 <sup>b</sup>	1.6	Argonne personnel viewed the property on 9/22/10. Mrs. Hendricks was contacted by phone on 9/28/10. Well is in NW corner of property. Well is used for all domestic purposes, including drinking water.
High School	Montgomery County R-2 394 N. Hwy. 19	Irrigation	350 <sup>b</sup>	1,100 <sup>b</sup>	1.5	Well was formerly used for drinking water. School is now served by the public water supply. Information was obtained from Russell Burton, Montgomery City Utilities Dept., on 9/22/10.
Ice Plant (Algermissen)	W. Second St.	No well found	–	–	–	Industrial high-capacity well installed in 1938. Inspection of former ice plant location found no evidence of well or plant. Site has been a gravel parking lot for at least 20 yr. Lot is next to a small office building. Information obtained from Russell Burton, Montgomery City Utilities Dept., on 9/22/10.
Jorgesen, J. and N.	210 N. Eighth St. La Belle, MO 63347	Lawn and garden, livestock	126 <sup>b</sup>	545 <sup>b</sup>	1.2	Argonne personnel viewed the property on 9/22/10. Mr. Jorgesen was contacted by phone on 9/29/10. No residence is on the property; only out-buildings and paddocks. Property is rented for use as a pasture and riding area for horses. Well is behind a small fence, next to a shed near the gravel drive. Property is 19.5 acres. Well registered in July 2006. Property is on Blue Jay Rd.
Montgomery Salvage	D. and R. Reagan 1816 Hwy. 161	Domestic	300 <sup>b</sup>	500 <sup>b</sup>	1.4	Argonne personnel spoke to Mrs. Reagan at the property on 9/22/10. Well is just behind the truck shop. Well was drilled about 20 yr ago, when shop was built. Well is used for the shop and for drinking. Water is very hard. An older well (location uncertain) reportedly "went dry."
Subway	M. Sevier Warrenton, MO 63383	Inactive	–	180.8 <sup>d</sup>	0.35	M. Sevier was contacted by phone on 10/27/10, after well had been identified by Argonne personnel on 10/20/10. Well was used for all purposes at the restaurant, including drinking, until about 1997, when the restaurant was connected to the public water supply. Well was probably installed when restaurant was built in approximately 1992.
Vajzovic	L. Wick 15 Riddle Rd.	No well found	–	–	–	Argonne personnel viewed the property on 9/22/10. L. Wick was contacted by phone on 9/28/10. Wick has owned the property since 1998. Wick has never seen or known of a domestic well on the property. Residence is served by public water supply.

<sup>a</sup> Montgomery City, MO 63361, unless noted.

<sup>b</sup> Information from MDNR records.

<sup>c</sup> Information from well owner.

<sup>d</sup> Measured by Argonne.

**Appendix D:**  
**Soil Sampling Data**



TABLE D.1 Results from the AGEM Laboratory for headspace analyses of soil samples for qualitative evaluation of the distribution of carbon tetrachloride and chloroform.<sup>a</sup>

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration (µg/kg)	
							Carbon Tetrachloride	Chloroform
SB01	MCSB01-S-32170	10/18/10	13:30	4	10/19/10	18:13	ND <sup>b</sup>	ND
SB01	MCSB01-S-32171	10/18/10	13:33	8	10/19/10	19:15	ND	ND
SB01	MCSB01-S-32172	10/18/10	13:36	12	10/19/10	17:32	390	17
SB01	MCSB01-S-32173	10/18/10	13:38	16	10/19/10	20:18	> 1,000 <sup>c</sup>	85
SB01	MCSB01-S-32310	10/22/10	9:40	20	10/25/10	21:13	> 1,000	96
SB01	MCSB01-S-32311	10/22/10	9:45	24	10/25/10	10:58	689	51
SB01	MCSB01-S-32312	10/22/10	9:50	28	10/25/10	21:33	> 1,000	86
SB01	MCSB01-S-32313	10/22/10	12:12	32	10/25/10	22:36	> 1,000	75
SB01	MCSB01-S-32314	10/22/10	14:51	36	10/25/10	19:50	> 1,000	60
SB01	MCSB01-S-32315	10/22/10	14:57	40	10/25/10	20:53	87	3.0
SB01	MCSB01-S-32316	10/22/10	15:02	44	10/25/10	20:10	71	1.7
SB01	MCSB01-S-32317	10/22/10	15:08	48	10/25/10	21:55	234	5.3
SB01	MCSB01-S-32318	10/22/10	15:15	52	10/26/10	18:00	251	5.4
SB01	MCSB01-S-32319	10/22/10	15:43	56	10/26/10	15:54	61	1.5
SB01	MCSB01-S-32320	10/22/10	18:41	57.5	10/26/10	16:16	183	142
SB02	MCSB02-S-32174	10/18/10	14:10	4	10/19/10	17:10	ND	ND
SB02	MCSB02-S-32175	10/18/10	14:12	8	10/19/10	18:55	ND	ND
SB02	MCSB02-S-32176	10/18/10	14:14	12	10/19/10	19:58	106	6.7
SB02	MCSB02-S-32177	10/18/10	14:17	16	10/19/10	15:27	223	6.3
SB03	MCSB03-S-32178	10/18/10	14:47	4	10/19/10	17:53	ND	ND
SB03	MCSB03-S-32179	10/18/10	14:50	8	10/19/10	16:29	ND	ND
SB03	MCSB03-S-32180	10/18/10	14:53	12	10/19/10	16:07	0.1	ND
SB03	MCSB03-S-32181	10/18/10	14:55	16	10/19/10	19:38	ND	ND
SB03	MCSB03-S-32181D <sup>d</sup>	10/18/10	14:56	16	10/19/10	16:50	ND	ND
SB04	MCSB04-S-32182	10/18/10	15:18	4	10/19/10	18:35	ND	ND
SB04	MCSB04-S-32183	10/18/10	15:19	8	10/19/10	15:47	ND	ND
SB04	MCSB04-S-32184	10/18/10	15:22	12	10/19/10	20:40	0.2	ND
SB04	MCSB04-S-32185	10/18/10	15:24	16	10/19/10	23:48	0.8	0.8
SB05	MCSB05-S-32186	10/18/10	15:55	4	10/20/10	12:51	ND	ND
SB05	MCSB05-S-32187	10/18/10	15:56	8	10/19/10	22:03	ND	ND
SB05	MCSB05-S-32188	10/18/10	15:58	12	10/19/10	21:01	ND	ND
SB05	MCSB05-S-32189	10/18/10	16:00	16	10/19/10	21:43	ND	ND
SB06	MCSB06-S-32190	10/18/10	16:25	4	10/19/10	23:26	ND	ND
SB06	MCSB06-S-32191	10/18/10	16:26	8	10/19/10	22:24	ND	ND
SB06	MCSB06-S-32192	10/18/10	16:28	12	10/19/10	23:06	ND	1.6
SB06	MCSB06-S-32193	10/18/10	16:31	16	10/20/10	1:11	ND	ND
SB07	MCSB07-S-32194	10/18/10	16:52	4	10/20/10	12:09	0.4	ND
SB07	MCSB07-S-32195	10/18/10	16:53	8	10/19/10	22:46	0.2	ND
SB07	MCSB07-S-32196	10/18/10	16:55	12	10/20/10	1:54	2.2	ND
SB07	MCSB07-S-32197	10/18/10	16:57	16	10/19/10	21:21	0.6	ND
SB08	MCSB08-S-32198	10/18/10	17:17	4	10/20/10	17:26	5.3	1.2
SB08	MCSB08-S-32199	10/18/10	17:18	8	10/20/10	15:21	ND	ND
SB08	MCSB08-S-32200	10/18/10	17:20	12	10/20/10	15:01	522	45
SB08	MCSB08-S-32201	10/18/10	17:21	16	10/20/10	15:43	264	9.5

TABLE D.1 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration (µg/kg)	
							Carbon Tetrachloride	Chloroform
SB08	MCSB08-S-32540	12/4/10	10:02	20	12/8/10	11:40	205	7.7
SB08	MCSB08-S-32541	12/4/10	10:06	24	12/8/10	10:23	75	2.3
SB08	MCSB08-S-32542	12/4/10	10:10	28	12/8/10	10:43	64	1.6
SB08	MCSB08-S-32543	12/4/10	10:14	32	12/8/10	11:46	ND	ND
SB08	MCSB08-S-32544	12/4/10	10:22	36	12/8/10	14:14	203	3.2
SB08	MCSB08-S-32545	12/4/10	10:27	40	12/8/10	13:33	29	ND
SB08	MCSB08-S-32546	12/4/10	10:36	44	12/7/10	22:54	21	ND
SB08	MCSB08-S-32547	12/4/10	10:43	48	12/7/10	23:16	43	0.9
SB08	MCSB08-S-32549 <sup>d</sup>	12/4/10	10:44	48	12/8/10	13:54	60	1.1
SB08	MCSB08-S-32548	12/4/10	10:52	52	12/7/10	22:33	66	0.8
SB08	MCSB08-S-32550	12/4/10	11:03	56	12/8/10	11:26	28	ND
SB09	MCSB09-S-32202	10/19/10	8:58	4	10/20/10	17:06	34	9.7
SB09	MCSB09-S-32203	10/19/10	8:59	8	10/20/10	16:03	47	12
SB09	MCSB09-S-32204	10/19/10	9:01	12	10/20/10	16:23	35	3.2
SB09	MCSB09-S-32205	10/19/10	9:03	16	10/20/10	17:48	129	2.8
SB09	MCSB09-S-32380	10/26/10	9:29	20	10/28/10	2:15	209	85
SB09	MCSB09-S-32381	10/26/10	9:33	24	10/28/10	5:23	72	37
SB09	MCSB09-S-32381D <sup>d</sup>	10/26/10	9:34	24	10/28/10	3:17	80	38
SB09	MCSB09-S-32382	10/26/10	9:37	28	10/28/10	1:53	32	23
SB09	MCSB09-S-32383	10/26/10	9:41	32	10/28/10	3:58	70	34
SB09	MCSB09-S-32384	10/26/10	9:58	36	10/28/10	2:55	24	11
SB09	MCSB09-S-32385	10/26/10	10:05	40	10/28/10	6:03	1.7	2.9
SB09	MCSB09-S-32386	10/26/10	10:11	44	10/28/10	4:20	0.1	1.9
SB09	MCSB09-S-32387	10/26/10	10:18	48	10/28/10	1:32	ND	3.0
SB09	MCSB09-S-32389	10/26/10	10:28	52	10/28/10	4:40	ND	2.2
SB09	MCSB09-S-32390	10/26/10	10:40	56	10/28/10	2:35	0.2	4.3
SB09	MCSB09-S-32391	10/26/10	11:06	60	10/28/10	3:38	7.1	6.9
SB10	MCSB10-S-32206	10/19/10	9:27	4	10/20/10	18:09	ND	ND
SB10	MCSB10-S-32207	10/19/10	9:31	8	10/20/10	18:29	ND	ND
SB10	MCSB10-S-32208	10/19/10	9:32	12	10/20/10	14:40	0.2	ND
SB10	MCSB10-S-32209	10/19/10	9:35	16	10/20/10	16:45	0.2	ND
SB11	MCSB11-S-32210	10/19/10	9:55	4	10/20/10	14:18	ND	ND
SB11	MCSB11-S-32211	10/19/10	9:57	8	10/20/10	19:32	ND	ND
SB11	MCSB11-S-32212	10/19/10	9:59	12	10/20/10	21:59	2.3	1.0
SB11	MCSB11-S-32213	10/19/10	10:03	16	10/20/10	22:19	45	3.7
SB11	MCSB11-S-32662	10/19/10	10:04	16.8	10/20/10	22:40	40	3.2
SB11	MCSB11-S-32664	10/19/10	10:23	20	10/20/10	23:02	59	4.4
SB12	MCSB12-S-32214	10/19/10	11:46	6	10/20/10	19:54	ND	ND
SB12	MCSB12-S-32215	10/19/10	11:47	8	10/20/10	20:34	22	1.7
SB12	MCSB12-S-32216	10/19/10	11:51	12	10/20/10	18:51	0.3	ND
SB12	MCSB12-S-32217	10/19/10	11:54	16	10/20/10	20:14	ND	ND
SB13	MCSB13-S-32218	10/19/10	13:23	4	10/20/10	21:37	ND	ND
SB13	MCSB13-S-32219	10/19/10	13:27	8	10/20/10	21:17	42	2.4
SB13	MCSB13-S-32220	10/19/10	13:36	12	10/20/10	19:11	0.7	ND
SB13	MCSB13-S-32221	10/19/10	13:41	16	10/20/10	20:56	ND	ND
SB14	MCSB14-S-32222	10/19/10	14:05	4	10/21/10	14:47	ND	ND
SB14	MCSB14-S-32223	10/19/10	14:08	8	10/21/10	19:38	ND	ND

TABLE D.1 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration (µg/kg)	
							Carbon Tetrachloride	Chloroform
SB14	MCSB14-S-32665 <sup>d</sup>	10/19/10	14:09	8	10/21/10	19:18	ND	ND
SB14	MCSB14-S-32224	10/19/10	14:11	12	10/21/10	18:35	15	1.6
SB14	MCSB14-S-32225	10/19/10	14:15	16	10/21/10	15:07	24	1.9
SB15	MCSB15-S-32226	10/19/10	14:37	4	10/21/10	18:58	0.3	ND
SB15	MCSB15-S-32227	10/19/10	14:39	8	10/21/10	15:49	ND	ND
SB15	MCSB15-S-32228	10/19/10	14:40	12	10/21/10	15:27	27	1.8
SB15	MCSB15-S-32229	10/19/10	14:42	16	10/21/10	16:10	56	2.3
SB16	MCSB16-S-32230	10/19/10	14:55	4	10/21/10	18:15	0.3	ND
SB16	MCSB16-S-32231	10/19/10	14:57	8	10/21/10	16:52	ND	ND
SB16	MCSB16-S-32232	10/19/10	14:59	12	10/21/10	17:55	17	2.0
SB16	MCSB16-S-32233	10/19/10	15:01	16	10/21/10	17:12	43	2.6
SB16	MCSB16-S-32582	12/6/10	11:11	20	12/7/10	16:37	0.3	ND
SB16	MCSB16-S-32592 <sup>d</sup>	12/6/10	11:12	20	12/7/10	17:40	34	1.6
SB16	MCSB16-S-32583	12/6/10	11:15	24	12/7/10	16:17	10	ND
SB16	MCSB16-S-32584	12/6/10	11:21	28	12/7/10	15:35	3.8	ND
SB16	MCSB16-S-32585	12/6/10	11:28	32	12/7/10	18:23	28	0.9
SB16	MCSB16-S-32586	12/6/10	11:39	36	12/7/10	18:02	3.9	ND
SB16	MCSB16-S-32587	12/6/10	11:43	40	12/7/10	15:57	0.1	ND
SB16	MCSB16-S-32588	12/6/10	11:54	44	12/7/10	17:00	ND	ND
SB16	MCSB16-S-32589	12/6/10	12:03	48	12/7/10	17:20	ND	ND
SB16	MCSB16-S-32590	12/6/10	12:12	52	12/7/10	18:43	ND	ND
SB17	MCSB17-S-32234	10/19/10	15:21	4	10/21/10	13:44	0.2	ND
SB17	MCSB17-S-32235	10/19/10	15:23	8	10/21/10	13:22	12	2.4
SB17	MCSB17-S-32236	10/19/10	15:25	12	10/21/10	1:07	373	8.5
SB17	MCSB17-S-32237	10/19/10	15:27	16	10/21/10	17:33	48	2.2
SB17	MCSB17-S-32350	10/25/10	8:59	20	10/26/10	21:30	0.4	ND
SB17	MCSB17-S-32351	10/25/10	11:56	24	10/26/10	23:56	0.4	ND
SB17	MCSB17-S-32352	10/25/10	9:27	28	10/26/10	21:08	0.3	ND
SB17	MCSB17-S-32353	10/25/10	9:46	32	10/26/10	22:10	0.5	ND
SB17	MCSB17-S-32354	10/25/10	9:50	36	10/26/10	20:27	0.4	ND
SB17	MCSB17-S-32355	10/25/10	9:56	40	10/27/10	20:19	9.7	11
SB17	MCSB17-S-32356	10/25/10	12:12	44	10/26/10	20:47	ND	ND
SB17	MCSB17-S-32357	10/25/10	10:13	48	10/26/10	19:45	2.4	0.9
SB17	MCSB17-S-32360	10/25/10	10:18	52	10/26/10	21:50	4.2	ND
SB17	MCSB17-S-32361 <sup>d</sup>	10/25/10	10:19	52	10/26/10	20:05	3.3	ND
SB17	MCSB17-S-32362	10/25/10	10:26	56	10/27/10	2:01	5.6	ND
SB18	MCSB18-S-32238	10/19/10	15:44	4	10/20/10	23:42	ND	ND
SB18	MCSB18-S-32239	10/19/10	15:46	8	10/21/10	12:04	ND	ND
SB18	MCSB18-S-32240	10/19/10	15:49	12	10/21/10	16:30	ND	ND
SB18	MCSB18-S-32241	10/19/10	15:51	16	10/21/10	12:25	71	2.7
SB19	MCSB19-S-32242	10/19/10	16:12	4	10/21/10	14:25	ND	ND
SB19	MCSB19-S-32243	10/19/10	16:14	8	10/21/10	14:04	ND	ND
SB19	MCSB19-S-32244	10/19/10	16:17	12	10/20/10	23:22	0.8	ND
SB19	MCSB19-S-32245	10/19/10	16:19	16	10/21/10	12:45	3.0	1.0
SB20	MCSB20-S-32246	10/19/10	16:40	4	10/23/10	12:06	ND	ND
SB20	MCSB20-S-32247	10/19/10	16:42	8	10/22/10	18:10	ND	ND
SB20	MCSB20-S-32248	10/19/10	16:44	12	10/22/10	17:28	ND	ND

TABLE D.1 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration (µg/kg)	
							Carbon Tetrachloride	Chloroform
SB20	MCSB20-S-32249	10/19/10	16:46	16	10/23/10	18:03	7.7	0.8
SB21	MCSB21-S-32250	10/19/10	17:26	4	10/22/10	19:33	ND	ND
SB21	MCSB21-S-32251	10/19/10	17:28	8	10/22/10	18:53	ND	ND
SB21	MCSB21-S-32252	10/19/10	17:31	12	10/22/10	22:01	0.1	ND
SB21	MCSB21-S-32253	10/19/10	17:33	16	10/22/10	23:24	ND	ND
SB22	MCSB22-S-32254	10/19/10	17:44	4	10/23/10	17:00	ND	ND
SB22	MCSB22-S-32255	10/19/10	17:46	8	10/22/10	19:13	ND	ND
SB22	MCSB22-S-32256	10/19/10	17:47	12	10/22/10	18:31	ND	ND
SB22	MCSB22-S-32257	10/19/10	17:49	16	10/22/10	17:50	ND	ND
SB22	MCSB22-S-32393	10/26/10	14:07	20	10/27/10	23:07	ND	2.8
SB22	MCSB22-S-32394	10/26/10	14:10	24	10/27/10	22:45	ND	2.0
SB22	MCSB22-S-32395	10/26/10	14:14	28	10/27/10	22:04	ND	2.0
SB22	MCSB22-S-32396	10/26/10	14:18	32	10/27/10	21:42	ND	1.4
SB22	MCSB22-S-32397	10/26/10	14:23	36	10/28/10	12:50	ND	2.0
SB22	MCSB22-S-32398	10/26/10	14:30	40	10/27/10	21:22	ND	3.4
SB22	MCSB22-S-32399	10/26/10	14:37	44	10/27/10	22:24	0.2	2.8
SB22	MCSB22-S-32400	10/26/10	14:44	48	10/27/10	23:27	1.4	2.4
SB22	MCSB22-S-32400D <sup>d</sup>	10/26/10	14:45	48	10/28/10	1:12	1.4	3.5
SB22	MCSB22-S-32401	10/26/10	14:52	52	10/27/10	23:47	1.5	3.9
SB22	MCSB22-S-32402	10/26/10	15:01	56	10/28/10	12:30	1.6	2.5
SB22	MCSB22-S-32403	10/26/10	15:13	60	10/28/10	12:09	4.3	3.5
SB23	MCSB23-S-32258	10/20/10	9:22	4	10/23/10	18:25	ND	ND
SB23	MCSB23-S-32259	10/20/10	8:49	8	10/22/10	23:03	ND	ND
SB23	MCSB23-S-32260	10/20/10	8:50	12	10/23/10	17:22	ND	ND
SB23	MCSB23-S-32261	10/20/10	9:13	16	10/22/10	23:44	ND	ND
SB24	MCSB24-S-32262	10/20/10	9:43	4	10/22/10	15:45	ND	ND
SB24	MCSB24-S-32263	10/20/10	9:45	8	10/22/10	12:11	ND	ND
SB24	MCSB24-S-32264	10/20/10	9:48	12	10/22/10	14:42	ND	ND
SB24	MCSB24-S-32265	10/20/10	9:49	16	10/21/10	22:06	ND	ND
SB24	MCSB24-S-32650	10/20/10	10:04	20	10/23/10	12:26	13	ND
SB25	MCSB25-S-32266	10/20/10	10:56	4	10/21/10	23:08	ND	ND
SB25	MCSB25-S-32267	10/20/10	10:59	8	10/22/10	13:59	0.2	ND
SB25	MCSB25-S-32268	10/20/10	11:03	12	10/21/10	21:03	22	3.3
SB25	MCSB25-S-32269	10/20/10	11:05	16	10/22/10	17:08	119	4.0
SB25	MCSB25-S-32340	10/24/10	15:27	20	10/26/10	15:34	178	6.3
SB25	MCSB25-S-32652 <sup>d</sup>	10/20/10	11:11	20	10/22/10	14:20	135	4.4
SB25	MCSB25-S-32341	10/24/10	15:30	24	10/26/10	18:22	177	6.0
SB25	MCSB25-S-32342	10/24/10	15:34	28	10/26/10	15:14	106	3.2
SB25	MCSB25-S-32342D <sup>d</sup>	10/24/10	15:35	28	10/26/10	17:39	96	2.9
SB25	MCSB25-S-32343	10/24/10	15:38	32	10/26/10	16:37	78	2.3
SB25	MCSB25-S-32344	10/24/10	15:42	36	10/26/10	14:52	41	1.0
SB25	MCSB25-S-32345	10/24/10	15:46	40	10/26/10	19:24	0.2	ND
SB25	MCSB25-S-32346	10/24/10	15:51	44	10/26/10	19:02	5.0	ND
SB25	MCSB25-S-32347	10/24/10	15:56	48	10/26/10	18:42	7.8	ND
SB25	MCSB25-S-32349	10/24/10	16:10	52	10/26/10	17:19	8.2	ND
SB26	MCSB26-S-32270	10/20/10	11:33	4	10/22/10	13:39	ND	ND
SB26	MCSB26-S-32271	10/20/10	11:35	8	10/22/10	15:02	ND	ND



TABLE D.1 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration (µg/kg)	
							Carbon Tetrachloride	Chloroform
SB26	MCSB26-S-32272	10/20/10	11:37	12	10/21/10	23:29	8.3	1.1
SB26	MCSB26-S-32653 <sup>d</sup>	10/20/10	11:38	12	10/21/10	22:26	9.0	1.2
SB26	MCSB26-S-32273	10/20/10	11:39	16	10/21/10	21:44	24	1.5
SB27	MCSB27-S-32274	10/20/10	12:17	4	10/22/10	20:58	0.2	ND
SB27	MCSB27-S-32275	10/20/10	11:57	8	10/22/10	21:39	50	7.4
SB27	MCSB27-S-32276	10/20/10	11:59	12	10/22/10	20:36	2.1	ND
SB27	MCSB27-S-32277	10/20/10	12:02	16	10/23/10	15:58	3.4	ND
SB27	MCSB27-S-32440	12/1/10	9:32	20	12/2/10	22:49	ND	ND
SB27	MCSB27-S-32441	12/1/10	9:40	24	12/2/10	23:51	ND	ND
SB27	MCSB27-S-32447 <sup>d</sup>	12/1/10	9:41	24	12/3/10	12:13	ND	ND
SB27	MCSB27-S-32442	12/1/10	9:45	28	12/2/10	22:28	ND	ND
SB27	MCSB27-S-32443	12/1/10	9:48	32	12/3/10	1:36	ND	ND
SB27	MCSB27-S-32444	12/1/10	9:53	36	12/2/10	23:11	ND	ND
SB27	MCSB27-S-32445	12/1/10	10:03	40	12/2/10	22:08	ND	ND
SB27	MCSB27-S-32446	12/1/10	10:10	44	12/3/10	12:54	ND	ND
SB27	MCSB27-S-32448	12/1/10	10:20	47	12/3/10	12:34	ND	ND
SB28	MCSB28-S-32278	10/20/10	13:30	4	10/22/10	22:41	ND	ND
SB28	MCSB28-S-32279	10/20/10	13:31	8	10/23/10	17:43	ND	ND
SB28	MCSB28-S-32280	10/20/10	13:33	12	10/22/10	19:55	1.9	0.8
SB28	MCSB28-S-32281	10/20/10	13:35	16	10/23/10	18:45	5.0	0.9
SB29	MCSB29-S-32282	10/20/10	13:46	4	10/22/10	22:21	ND	ND
SB29	MCSB29-S-32283	10/20/10	13:47	8	10/23/10	16:20	1.3	ND
SB29	MCSB29-S-32284	10/20/10	13:49	12	10/23/10	19:06	9.4	ND
SB29	MCSB29-S-32285	10/20/10	13:53	16	10/22/10	20:16	7.8	ND
SB29	MCSB29-S-32656	10/20/10	13:56	20	10/23/10	16:40	1.8	ND
SB30	MCSB30-S-32286	10/20/10	14:20	4	10/22/10	21:18	ND	ND
SB30	MCSB30-S-32287	10/20/10	14:22	8	10/21/10	23:49	ND	ND
SB30	MCSB30-S-32288	10/20/10	14:24	12	10/22/10	16:25	6.6	ND
SB30	MCSB30-S-32289	10/20/10	14:27	16	10/21/10	22:46	17	1.0
SB31	MCSB31-S-32290	10/20/10	14:38	4	10/22/10	15:22	ND	ND
SB31	MCSB31-S-32291	10/20/10	14:40	8	10/22/10	16:05	ND	ND
SB31	MCSB31-S-32292	10/20/10	14:42	12	10/22/10	13:17	1.4	ND
SB31	MCSB31-S-32293	10/20/10	14:44	16	10/22/10	16:47	24	1.6
SB32	MCSB32-S-32294	10/20/10	16:55	4	10/23/10	21:33	ND	ND
SB32	MCSB32-S-32295	10/20/10	17:03	8	10/24/10	1:01	ND	ND
SB32	MCSB32-S-32296	10/20/10	17:20	12	10/24/10	1:44	308	13
SB32	MCSB32-S-32297	10/20/10	17:45	16	10/23/10	21:53	> 1,000	93
SB33	MCSB33-S-32298	10/21/10	10:53	4	10/23/10	21:11	ND	ND
SB33	MCSB33-S-32299	10/21/10	10:59	8	10/24/10	2:24	ND	ND
SB33	MCSB33-S-32300	10/21/10	11:10	12	10/23/10	23:38	77	3.1
SB33	MCSB33-S-32301	10/21/10	11:27	16	10/23/10	22:56	23	1.4
SB33	MCSB33-S-32658	10/21/10	11:49	20	10/23/10	22:14	76	2.2
SB34	MCSB34-S-32302	10/21/10	13:42	4	10/23/10	22:36	1.2	ND
SB34	MCSB34-S-32303	10/21/10	13:51	8	10/23/10	23:59	0.8	ND
SB34	MCSB34-S-32304	10/21/10	14:06	12	10/23/10	23:16	4.9	1.7

TABLE D.1 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration (µg/kg)	
							Carbon Tetrachloride	Chloroform
SB34	MCSB34-S-32305	10/21/10	14:26	16	10/24/10	12:19	3.0	1.3
SB34	MCSB34-S-32659	10/21/10	15:07	20	10/23/10	20:08	2.0	0.7
SB35	MCSB35-S-32306	10/21/10	15:54	4	10/25/10	18:25	3.2	ND
SB35	MCSB35-S-32307	10/21/10	16:06	8	10/25/10	19:08	2.6	ND
SB35	MCSB35-S-32308	10/21/10	16:15	12	10/25/10	18:47	70	4.2
SB35	MCSB35-S-32309	10/21/10	16:34	16	10/25/10	20:31	2.5	ND
SB35	MCSB35-S-32641	10/21/10	16:58	20	10/25/10	19:28	0.2	ND
SB36	MCSB36-S-32363	10/25/10	16:07	4	10/26/10	23:35	ND	ND
SB36	MCSB36-S-32364	10/25/10	16:11	8	10/27/10	19:37	ND	0.8
SB36	MCSB36-S-32365	10/25/10	16:14	12	10/27/10	1:40	ND	ND
SB36	MCSB36-S-32366	10/25/10	16:17	16	10/27/10	12:58	ND	ND
SB36	MCSB36-S-32367	10/25/10	16:20	20	10/26/10	22:53	ND	ND
SB36	MCSB36-S-32368	10/25/10	16:24	24	10/27/10	20:39	ND	2.1
SB36	MCSB36-S-32369	10/25/10	16:28	28	10/27/10	1:19	ND	ND
SB36	MCSB36-S-32370	10/25/10	16:32	32	10/27/10	19:59	0.1	ND
SB36	MCSB36-S-32370D <sup>d</sup>	10/25/10	16:33	32	10/27/10	21:01	ND	2.2
SB36	MCSB36-S-32371	10/25/10	16:38	36	10/27/10	12:38	ND	ND
SB36	MCSB36-S-32372	10/25/10	16:44	40	10/26/10	23:13	ND	ND
SB36	MCSB36-S-32373	10/25/10	16:50	44	10/26/10	22:32	ND	ND
SB36	MCSB36-S-32374	10/25/10	16:54	48	10/27/10	12:16	ND	ND
SB40	MCSB40-S-32449	12/1/10	15:27	4	12/2/10	18:18	ND	ND
SB40	MCSB40-S-32450	12/1/10	15:31	8	12/2/10	20:03	ND	ND
SB40	MCSB40-S-32451	12/1/10	15:35	12	12/2/10	21:05	ND	ND
SB40	MCSB40-S-32461 <sup>d</sup>	12/1/10	15:36	12	12/2/10	18:38	ND	ND
SB40	MCSB40-S-32452	12/1/10	15:37	16	12/2/10	21:26	ND	ND
SB40	MCSB40-S-32453	12/1/10	15:42	20	12/2/10	19:41	ND	ND
SB40	MCSB40-S-32454	12/1/10	15:44	24	12/2/10	17:57	ND	ND
SB40	MCSB40-S-32455	12/1/10	15:48	28	12/2/10	20:43	ND	ND
SB40	MCSB40-S-32456	12/1/10	15:54	32	12/2/10	23:31	ND	ND
SB40	MCSB40-S-32457	12/1/10	16:10	36	12/2/10	21:46	ND	ND
SB40	MCSB40-S-32458	12/1/10	16:15	40	12/2/10	19:00	ND	ND
SB40	MCSB40-S-32459	12/1/10	16:21	44	12/2/10	19:20	ND	ND
SB40	MCSB40-S-32460	12/1/10	16:26	48	12/2/10	20:23	ND	ND
SB41	MCSB41-S-32462	12/2/10	11:16	4	12/3/10	15:08	ND	ND
SB41	MCSB41-S-32463	12/2/10	11:19	8	12/3/10	17:54	ND	ND
SB41	MCSB41-S-32464	12/2/10	11:21	12	12/3/10	17:34	0.2	ND
SB41	MCSB41-S-32465	12/2/10	11:23	16	12/3/10	19:19	63	2.6
SB41	MCSB41-S-32466	12/2/10	11:26	20	12/3/10	15:28	166	4.3
SB41	MCSB41-S-32467	12/2/10	11:30	24	12/3/10	16:11	13	ND
SB41	MCSB41-S-32468	12/2/10	11:35	28	12/3/10	16:51	514	33
SB41	MCSB41-S-32474 <sup>d</sup>	12/2/10	11:36	28	12/3/10	14:46	43	ND
SB41	MCSB41-S-32469	12/2/10	11:40	32	12/3/10	15:49	103	2.4
SB41	MCSB41-S-32470	12/2/10	11:46	36	12/3/10	18:36	175	5.6
SB41	MCSB41-S-32471	12/2/10	11:51	40	12/3/10	18:57	4.6	ND
SB41	MCSB41-S-32472	12/2/10	11:57	44	12/3/10	16:31	0.3	ND
SB41	MCSB41-S-32473	12/2/10	12:04	48	12/3/10	17:13	1.0	ND
SB41	MCSB41-S-32475	12/2/10	12:12	52	12/3/10	18:16	0.5	ND
SB41	MCSB41-S-32476	12/2/10	12:21	56	12/3/10	19:39	0.1	ND

TABLE D.1 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration (µg/kg)	
							Carbon Tetrachloride	Chloroform
SB42	MCSB42-S-32477	12/2/10	15:45	4	12/3/10	21:24	ND	ND
SB42	MCSB42-S-32478	12/2/10	15:49	8	12/3/10	21:02	ND	ND
SB42	MCSB42-S-32480	12/2/10	15:51	12	12/3/10	20:42	123	7.0
SB42	MCSB42-S-32481	12/2/10	15:54	16	12/3/10	21:44	209	7.3
SB42	MCSB42-S-32492 <sup>d</sup>	12/2/10	15:55	16	12/3/10	19:59	213	7.8
SB42	MCSB42-S-32482	12/2/10	15:57	20	12/3/10	23:50	289	9.7
SB42	MCSB42-S-32483	12/2/10	16:00	24	12/4/10	12:32	178	6.2
SB42	MCSB42-S-32484	12/2/10	16:04	28	12/3/10	22:05	127	5.4
SB42	MCSB42-S-32485	12/2/10	16:08	32	12/3/10	22:27	121	5.9
SB42	MCSB42-S-32486	12/2/10	16:12	36	12/3/10	20:22	35	1.7
SB42	MCSB42-S-32487	12/2/10	16:17	40	12/4/10	12:53	0.4	ND
SB42	MCSB42-S-32488	12/2/10	16:24	44	12/4/10	12:10	1.9	ND
SB42	MCSB42-S-32489	12/2/10	16:31	48	12/3/10	22:47	ND	ND
SB42	MCSB42-S-32490	12/2/10	16:40	52	12/3/10	23:08	5.1	ND
SB44	MCSB44-S-32494	12/3/10	15:36	4	12/4/10	21:54	ND	ND
SB44	MCSB44-S-32495	12/3/10	15:38	8	12/4/10	17:01	ND	ND
SB44	MCSB44-S-32496	12/3/10	15:41	12	12/4/10	17:43	ND	ND
SB44	MCSB44-S-32497	12/3/10	15:44	16	12/4/10	19:28	ND	ND
SB44	MCSB44-S-32498	12/3/10	15:48	20	12/4/10	18:46	ND	ND
SB44	MCSB44-S-32499	12/3/10	15:57	24	12/4/10	16:40	ND	ND
SB44	MCSB44-S-32510	12/3/10	16:00	28	12/4/10	20:09	ND	ND
SB44	MCSB44-S-32511	12/3/10	16:05	32	12/4/10	15:58	ND	ND
SB44	MCSB44-S-32512	12/3/10	16:14	36	12/4/10	18:03	ND	ND
SB44	MCSB44-S-32517 <sup>d</sup>	12/3/10	16:15	36	12/4/10	16:20	0.1	ND
SB44	MCSB44-S-32513	12/3/10	16:20	40	12/4/10	18:25	ND	ND
SB44	MCSB44-S-32514	12/3/10	16:26	44	12/4/10	21:11	ND	ND
SB44	MCSB44-S-32516	12/3/10	16:33	48	12/4/10	20:51	ND	ND
SB44	MCSB44-S-32518	12/3/10	16:41	52	12/4/10	17:23	ND	ND
SB44	MCSB44-S-32519	12/3/10	16:52	56	12/4/10	19:06	0.4	ND
SB44	MCSB44-S-32520	12/3/10	17:04	60	12/4/10	20:31	0.4	ND
SB46	MCSB46-S-32521	12/4/10	13:37	4	12/8/10	22:54	ND	ND
SB46	MCSB46-S-32522	12/4/10	13:39	8	12/9/10	1:20	ND	ND
SB46	MCSB46-S-32523	12/4/10	13:41	12	12/8/10	21:52	9.1	ND
SB46	MCSB46-S-32524	12/4/10	13:43	16	12/8/10	22:12	26	ND
SB46	MCSB46-S-32525	12/4/10	13:45	20	12/9/10	12:17	170	2.8
SB46	MCSB46-S-32526	12/4/10	13:50	24	12/8/10	23:37	43	1.3
SB46	MCSB46-S-32538 <sup>d</sup>	12/4/10	13:51	24	12/9/10	12:39	48	1.2
SB46	MCSB46-S-32527	12/4/10	13:56	28	12/9/10	1:42	67	1.4
SB46	MCSB46-S-32528	12/5/10	14:00	32	12/9/10	2:02	32	0.8
SB46	MCSB46-S-32529	12/4/10	14:22	36	12/8/10	21:09	3.8	ND
SB46	MCSB46-S-32530	12/4/10	14:29	40	12/9/10	1:00	0.2	ND
SB46	MCSB46-S-32531	12/4/10	14:41	44	12/8/10	22:34	0.2	ND
SB46	MCSB46-S-32532	12/4/10	14:49	48	12/8/10	23:15	363	3.1
SB46	MCSB46-S-32533	12/4/10	14:59	52	12/8/10	23:57	597	8.0
SB46	MCSB46-S-32535	12/4/10	15:14	54.5	12/8/10	21:31	423	3.2
SB47	MCSB47-S-32551	12/5/10	11:22	4	12/9/10	6:34	ND	ND
SB47	MCSB47-S-32552	12/5/10	11:29	8	12/9/10	2:45	ND	ND
SB47	MCSB47-S-32553	12/5/10	11:34	12	12/9/10	5:53	353	4.2
SB47	MCSB47-S-32554	12/5/10	11:43	16	12/9/10	4:08	422	3.4
SB47	MCSB47-S-32555	12/5/10	11:49	20	12/9/10	5:11	74	ND

TABLE D.1 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration (µg/kg)	
							Carbon Tetrachloride	Chloroform
SB47	MCSB47-S-32565 <sup>d</sup>	12/5/10	11:50	20	12/9/10	4:50	317	2.4
SB47	MCSB47-S-32556	12/5/10	11:55	24	12/9/10	4:28	462	4.5
SB47	MCSB47-S-32557	12/5/10	11:59	28	12/9/10	3:47	120	ND
SB47	MCSB47-S-32558	12/5/10	12:05	32	12/9/10	6:56	675	7.0
SB47	MCSB47-S-32559	12/5/10	12:10	36	12/9/10	2:23	ND	ND
SB47	MCSB47-S-32560	12/5/10	12:16	40	12/9/10	5:31	ND	ND
SB47	MCSB47-S-32561	12/5/10	12:26	44	12/9/10	3:05	ND	ND
SB47	MCSB47-S-32562	12/5/10	12:32	48	12/9/10	6:13	13	ND
SB47	MCSB47-S-32564	12/5/10	12:59	56	12/9/10	3:25	2.5	ND
SB48	MCSB48-S-32570	12/5/10	16:22	20	12/7/10	22:13	30	ND
SB48	MCSB48-S-32571	12/5/10	16:27	24	12/7/10	19:46	150	2.9
SB48	MCSB48-S-32572	12/5/10	16:36	28	12/7/10	19:05	151	2.7
SB48	MCSB48-S-32573	12/5/10	16:45	32	12/7/10	21:51	54	0.8
SB48	MCSB48-S-32580 <sup>d</sup>	12/5/10	16:46	32	12/7/10	19:25	79	1.4
SB48	MCSB48-S-32574	12/5/10	16:52	36	12/7/10	20:48	45	0.8
SB48	MCSB48-S-32575	12/5/10	17:00	40	12/7/10	21:31	12	ND
SB48	MCSB48-S-32576	12/5/10	17:06	44	12/7/10	20:28	5.0	ND
SB48	MCSB48-S-32577	12/5/10	17:16	48	12/7/10	21:10	ND	ND
SB48	MCSB48-S-32578	12/5/10	17:28	52	12/7/10	20:08	6.0	ND
SB49	MCSB49-S-32930	5/12/11	8:55	4	5/13/11	18:35	ND	ND
SB49	MCSB49-S-32931	5/12/11	8:57	8	5/13/11	20:40	0.1	ND
SB49	MCSB49-S-32932	5/12/11	9:00	12	5/13/11	15:07	ND	ND
SB49	MCSB49-S-32933	5/12/11	9:02	16	5/13/11	16:50	0.1	ND
SB49	MCSB49-S-32934	5/12/11	9:05	20	5/13/11	14:45	ND	ND
SB49	MCSB49-S-32935	5/12/11	9:08	24	5/13/11	20:20	0.2	ND
SB49	MCSB49-S-32936	5/12/11	9:12	28	5/13/11	15:47	0.1	ND
SB49	MCSB49-S-32937	5/12/11	9:17	32	5/13/11	19:18	0.2	ND
SB49	MCSB49-S-32938	5/12/11	9:22	36	5/13/11	19:38	ND	ND
SB49	MCSB49-S-32939	5/12/11	9:28	40	5/13/11	17:53	ND	ND
SB49	MCSB49-S-32943 <sup>d</sup>	5/12/11	9:29	40	5/13/11	16:09	ND	ND
SB49	MCSB49-S-32940	5/12/11	9:32	44	5/13/11	17:32	0.1	ND
SB49	MCSB49-S-32941	5/12/11	9:33	48	5/13/11	15:27	0.1	ND
SB49	MCSB49-S-32942	5/12/11	9:44	52	5/13/11	16:30	0.1	ND
SB49	MCSB49-S-32945	5/12/11	9:51	56	5/13/11	17:12	0.1	ND
SB49	MCSB49-S-32946	5/12/11	10:00	59.5	5/13/11	18:55	ND	ND
SB50	MCSB50-S-32950	5/10/11	10:54	4	5/11/11	22:07	0.4	ND
SB50	MCSB50-S-32951	5/10/11	10:58	8	5/11/11	19:20	0.3	ND
SB50	MCSB50-S-32952	5/10/11	11:01	12	5/11/11	23:30	0.2	ND
SB50	MCSB50-S-32953	5/10/11	11:03	16	5/11/11	21:25	5.7	ND
SB50	MCSB50-S-32954	5/10/11	11:06	20	5/12/11	12:55	1.6	ND
SB50	MCSB50-S-32955	5/10/11	11:10	24	5/12/11	12:33	2.2	ND
SB50	MCSB50-S-32956	5/10/11	11:18	28	5/11/11	22:50	1.1	ND
SB50	MCSB50-S-32964 <sup>d</sup>	5/10/11	11:19	28	5/11/11	19:42	1.9	ND
SB50	MCSB50-S-32957	5/11/11	15:42	32	5/13/11	18:15	11	ND
SB50	MCSB50-S-32958	5/10/11	11:51	36	5/11/11	20:22	94	ND
SB50	MCSB50-S-32959	5/10/11	11:58	40	5/11/11	20:02	412	ND
SB50	MCSB50-S-32960	5/10/11	12:07	44	5/11/11	22:28	105	ND
SB50	MCSB50-S-32961	5/10/11	12:13	48	5/11/11	23:52	337	ND
SB50	MCSB50-S-32962	5/10/11	12:22	52	5/11/11	21:05	67	ND
SB50	MCSB50-S-32965	5/10/11	12:32	56	5/11/11	20:44	75	ND



TABLE D.1 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration (µg/kg)	
							Carbon Tetrachloride	Chloroform
SB50	MCSB50-S-32966	5/10/11	12:41	60	5/11/11	21:47	48	ND
SB50	MCSB50-S-32967	5/10/11	13:00	64	5/12/11	12:13	11	ND
SB54	MCSB54-S-33270	5/13/11	14:35	4	5/14/11	16:11	ND	ND
SB54	MCSB54-S-33271	5/13/11	14:46	8	5/14/11	20:00	0.1	ND
SB54	MCSB54-S-33272	5/13/11	14:48	12	5/14/11	17:55	ND	ND
SB54	MCSB54-S-33273	5/13/11	14:51	16	5/14/11	16:52	ND	ND
SB54	MCSB54-S-33274	5/13/11	14:53	20	5/14/11	17:34	ND	ND
SB54	MCSB54-S-33284 <sup>d</sup>	5/13/11	14:54	20	5/14/11	15:49	ND	ND
SB54	MCSB54-S-33275	5/13/11	14:56	24	5/14/11	18:57	ND	ND
SB54	MCSB54-S-33276	5/13/11	14:59	28	5/14/11	16:32	0.3	ND
SB54	MCSB54-S-33277	5/13/11	15:03	32	5/14/11	18:17	ND	ND
SB54	MCSB54-S-33278	5/13/11	15:08	36	5/14/11	17:14	ND	ND
SB54	MCSB54-S-33279	5/13/11	15:12	40	5/14/11	18:37	ND	ND
SB54	MCSB54-S-33280	5/13/11	15:20	44	5/14/11	19:20	ND	ND
SB54	MCSB54-S-33281	5/13/11	15:50	48	5/14/11	20:22	0.2	ND
SB54	MCSB54-S-33282	5/13/11	16:35	52	5/14/11	19:40	ND	ND
QC	MCQCTB-S-32660	10/18/10	16:46	–	10/20/10	8:43	ND	ND
QC	MCQCTB-S-32661	10/19/10	9:09	–	10/21/10	20:41	ND	ND
QC	MCQCTB-S-32666	10/19/10	14:12	–	10/21/10	20:00	ND	ND
QC	MCQCTB-S-32667	10/19/10	17:00	–	10/21/10	20:21	ND	ND
QC	MCQCTB-S-32668	10/20/10	8:40	–	10/23/10	20:30	ND	ND
QC	MCQCTB-S-32269	10/20/10	8:41	–	NA <sup>e</sup>		NA	NA
QC	MCQCTB-S-32655	10/20/10	12:25	–	10/23/10	19:28	ND	ND
QC	MCQCTB-S-32657	10/20/10	14:50	–	10/23/10	19:48	ND	ND
QC	MCQCTB-S-32640	10/21/10	14:20	–	10/24/10	3:07	ND	ND
QC	MCQCTB-S-32642	10/21/10	17:05	–	10/25/10	23:39	ND	ND
QC	MCQCTB-S-32348	10/24/10	15:57	–	NA		NA	NA
QC	MCQCTB-S-32359	10/25/10	8:57	–	NA		NA	NA
QC	MCQCTB-S-32375	10/25/10	16:42	–	NA		NA	NA
QC	MCQCTB-S-32388	10/26/10	9:26	–	NA		NA	NA
QC	MCQCTB-S-32404	10/26/10	11:19	–	NA		NA	NA
QC	MCQCTB-S-32436	12/1/10	16:45	–	12/3/10	2:39	ND	ND
QC	MCQCTB-S-32438	12/1/10	17:06	–	12/3/10	2:19	ND	ND
QC	MCQCTB-S-32479	12/2/10	12:27	–	12/4/10	1:35	ND	ND
QC	MCQCTB-S-32491	12/2/10	13:59	–	12/4/10	1:55	ND	ND
QC	MCQCTB-S-32515	12/3/10	18:20	–	12/4/10	22:14	ND	ND
QC	MCQCTB-S-32534	12/4/10	12:00	–	12/8/10	14:56	ND	ND
QC	MCQCTB-S-32536	12/4/10	13:29	–	12/8/10	20:49	ND	ND
QC	MCQCTB-S-32539	12/5/10	9:29	–	12/9/10	7:16	ND	ND
QC	MCQCTB-S-32581	12/5/10	13:29	–	12/8/10	20:29	ND	ND
QC	MCQCTB-S-32593	12/6/10	9:40	–	12/8/10	20:06	ND	ND
QC	MCQCTB-S-32963	5/10/11	10:31	–	5/12/11	1:36	0.2	ND
QC	MCQCTB-S-32944	5/12/11	8:47	–	5/13/11	21:23	ND	ND
QC	MCQCTB-S-33285	5/13/11	16:42	–	5/14/11	21:03	0.3	ND

TABLE D.1 (Cont.)

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- a Soil samples were analyzed at the AGEM Laboratory, Argonne, Illinois, by modified EPA Method 5021 (headspace analysis by gas chromatography with electron capture detection [GC-ECD]).
- b ND, not detected at an instrument detection limit of 0.1 µg/kg for carbon tetrachloride or 0.75 µg/kg for chloroform.
- c Outside the headspace method calibration range.
- d Quality control replicate sample.
- e NA, trip blank was not analyzed by the headspace method.

TABLE D.2 Results from the AGEM Laboratory for purge-and-trap analyses of soil samples for quantitative evaluation of the distribution of carbon tetrachloride and chloroform.<sup>a</sup>

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration (µg/kg)	
							Carbon Tetrachloride	Chloroform
SB01	MCSB01-S-32170	10/18/10	13:30	4	10/20/10	19:18	ND <sup>b</sup>	ND
SB01	MCSB01-S-32171	10/18/10	13:33	8	10/20/10	21:49	ND	ND
SB01	MCSB01-S-32172	10/18/10	13:36	12	10/20/10	14:16	338	19
SB01	MCSB01-S-32173	10/18/10	13:38	16	10/20/10	21:19	2,353	111
SB01	MCSB01-S-32310	10/22/10	9:40	20	10/26/10	16:14	1,751	86
SB01	MCSB01-S-32311	10/22/10	9:45	24	10/26/10	18:44	1,095	55
SB01	MCSB01-S-32311DUP <sup>c</sup>	10/22/10	9:45	24	10/26/10	22:15	1,140	61
SB01	MCSB01-S-32312	10/22/10	9:50	28	10/26/10	16:44	1,400	59
SB01	MCSB01-S-32313	10/22/10	12:12	32	10/26/10	17:14	1,522	46
SB01	MCSB01-S-32313DUP <sup>c</sup>	10/22/10	12:12	32	10/26/10	17:44	1,373	43
SB01	MCSB01-S-32314	10/22/10	14:51	36	10/26/10	15:44	1,125	44
SB01	MCSB01-S-32315	10/22/10	14:57	40	11/1/10	18:45	87	3.1 J <sup>d</sup>
SB01	MCSB01-S-32316	10/22/10	15:02	44	11/1/10	19:45	78	ND
SB01	MCSB01-S-32317	10/22/10	15:08	48	11/1/10	20:16	229	5.1 J
SB01	MCSB01-S-32318	10/22/10	15:15	52	11/1/10	17:09	120	8.2 J
SB01	MCSB01-S-32319	10/22/10	15:43	56	11/1/10	15:10	23	2.4 J
SB01	MCSB01-S-32320	10/22/10	18:41	57.5	11/1/10	15:39	56	197
SB01	MCSB01-S-32320D <sup>c</sup>	10/22/10	18:41	57.5	11/1/10	16:39	4.1 J	92
SB02	MCSB02-S-32174	10/18/10	14:10	4	10/20/10	17:47	ND	ND
SB02	MCSB02-S-32175	10/18/10	14:12	8	10/20/10	20:19	ND	ND
SB02	MCSB02-S-32176	10/18/10	14:14	12	10/20/10	15:16	90	6.7 J
SB02	MCSB02-S-32177	10/18/10	14:17	16	10/20/10	14:46	207	6.8 J
SB03	MCSB03-S-32178	10/18/10	14:47	4	10/20/10	18:48	ND	ND
SB03	MCSB03-S-32179	10/18/10	14:50	8	10/20/10	16:47	ND	ND
SB03	MCSB03-S-32180	10/18/10	14:53	12	10/20/10	16:17	ND	ND
SB03	MCSB03-S-32181	10/18/10	14:55	16	10/20/10	17:17	8.1 J	ND
SB03	MCSB03-S-32181D <sup>c</sup>	10/18/10	14:56	16	10/20/10	22:20	8.5 J	ND
SB04	MCSB04-S-32182	10/18/10	15:18	4	10/20/10	19:48	ND	ND
SB04	MCSB04-S-32183	10/18/10	15:19	8	10/20/10	15:47	ND	ND
SB04	MCSB04-S-32184	10/18/10	15:22	12	10/20/10	22:50	ND	ND
SB04	MCSB04-S-32185	10/18/10	15:24	16	10/21/10	16:13	ND	ND
SB05	MCSB05-S-32186	10/18/10	15:55	4	10/25/10	13:14	ND	ND
SB05	MCSB05-S-32187	10/18/10	15:56	8	10/21/10	13:42	ND	ND
SB05	MCSB05-S-32188	10/18/10	15:58	12	10/20/10	23:20	ND	ND
SB05	MCSB05-S-32189	10/18/10	16:00	16	10/21/10	13:12	ND	ND
SB06	MCSB06-S-32190	10/18/10	16:25	4	10/21/10	15:43	ND	ND
SB06	MCSB06-S-32191	10/18/10	16:26	8	10/21/10	14:12	ND	ND
SB06	MCSB06-S-32192	10/18/10	16:28	12	10/21/10	15:13	ND	ND
SB06	MCSB06-S-32193	10/18/10	16:31	16	10/21/10	17:44	ND	ND
SB07	MCSB07-S-32194	10/18/10	16:52	4	10/21/10	16:44	ND	ND
SB07	MCSB07-S-32195	10/18/10	16:53	8	10/21/10	14:43	ND	ND
SB07	MCSB07-S-32196	10/18/10	16:55	12	10/21/10	19:15	ND	ND
SB07	MCSB07-S-32197	10/18/10	16:57	16	10/20/10	23:50	ND	ND
SB08	MCSB08-S-32198	10/18/10	17:17	4	10/22/10	13:19	ND	ND
SB08	MCSB08-S-32199	10/18/10	17:18	8	10/21/10	21:47	ND	ND
SB08	MCSB08-S-32200	10/18/10	17:20	12	10/21/10	21:17	473	40
SB08	MCSB08-S-32201	10/18/10	17:21	16	10/21/10	22:17	263	10
SB08	MCSB08-S-32540	12/4/10	10:02	20	12/10/10	13:41	157	9.4 J
SB08	MCSB08-S-32541	12/4/10	10:06	24	12/11/10	5:14	162	6.8 J
SB08	MCSB08-S-32541DUP <sup>c</sup>	12/4/10	10:06	24	12/11/10	5:44	172	7.4 J

TABLE D.2 (Cont.)

Location	Sample	Sample Date and Time	Depth (ft BGL)	Analysis Date and Time	Concentration (µg/kg)			
					Carbon Tetrachloride	Chloroform		
SB08	MCSB08-S-32542	12/4/10	10:10	28	12/10/10	13:11	120	7.5 J
SB08	MCSB08-S-32543	12/4/10	10:14	32	12/10/10	16:10	219	8.9 J
SB08	MCSB08-S-32543DUP <sup>c</sup>	12/4/10	10:14	32	12/10/10	16:40	229	9.5 J
SB08	MCSB08-S-32544	12/4/10	10:22	36	12/10/10	15:10	221	6.4 J
SB08	MCSB08-S-32545	12/4/10	10:27	40	12/10/10	17:10	52	3.1 J
SB08	MCSB08-S-32546	12/4/10	10:36	44	12/11/10	4:14	75	3.1 J
SB08	MCSB08-S-32547	12/4/10	10:43	48	12/11/10	4:44	128	4.2 J
SB08	MCSB08-S-32549 <sup>c</sup>	12/4/10	10:44	48	12/10/10	17:39	96	4.4 J
SB08	MCSB08-S-32548	12/4/10	10:52	52	12/11/10	3:44	246	5.8 J
SB08	MCSB08-S-32550	12/4/10	11:03	56	12/10/10	15:40	189	5.0 J
SB09	MCSB09-S-32202	10/19/10	8:58	4	10/22/10	12:49	11	11
SB09	MCSB09-S-32203	10/19/10	8:59	8	10/21/10	22:47	38	11
SB09	MCSB09-S-32204	10/19/10	9:01	12	10/21/10	23:18	40	4.1 J
SB09	MCSB09-S-32205	10/19/10	9:03	16	10/22/10	13:50	44	4.0 J
SB09	MCSB09-S-32380	10/26/10	9:29	20	11/3/10	13:18	178	2.7 J
SB09	MCSB09-S-32381	10/26/10	9:33	24	11/3/10	15:18	66	ND
SB09	MCSB09-S-32381D <sup>c</sup>	10/26/10	9:34	24	11/3/10	18:49	61	ND
SB09	MCSB09-S-32382	10/26/10	9:37	28	11/3/10	12:48	30	ND
SB09	MCSB09-S-32383	10/26/10	9:41	32	11/3/10	16:18	64	ND
SB09	MCSB09-S-32384	10/26/10	9:58	36	11/3/10	15:48	16	ND
SB09	MCSB09-S-32385	10/26/10	10:05	40	11/3/10	18:19	ND	ND
SB09	MCSB09-S-32386	10/26/10	10:11	44	11/3/10	17:19	ND	ND
SB09	MCSB09-S-32387	10/26/10	10:18	48	11/3/10	12:18	ND	ND
SB09	MCSB09-S-32389	10/26/10	10:28	52	11/3/10	17:49	ND	ND
SB09	MCSB09-S-32390	10/26/10	10:40	56	11/3/10	13:48	ND	ND
SB09	MCSB09-S-32390DUP <sup>c</sup>	10/26/10	10:40	56	11/3/10	14:18	ND	ND
SB09	MCSB09-S-32391	10/26/10	11:06	60	11/3/10	16:48	4.4 J	ND
SB10	MCSB10-S-32206	10/19/10	9:27	4	10/22/10	14:20	ND	ND
SB10	MCSB10-S-32207	10/19/10	9:31	8	10/22/10	14:50	ND	ND
SB10	MCSB10-S-32208	10/19/10	9:32	12	10/21/10	20:46	ND	ND
SB10	MCSB10-S-32209	10/19/10	9:35	16	10/21/10	23:48	ND	ND
SB11	MCSB11-S-32210	10/19/10	9:55	4	10/21/10	19:46	ND	ND
SB11	MCSB11-S-32211	10/19/10	9:57	8	10/22/10	17:20	ND	ND
SB11	MCSB11-S-32212	10/19/10	9:59	12	10/22/10	17:31	1.5 J	ND
SB11	MCSB11-S-32213	10/19/10	10:03	16	10/22/10	18:01	38	3.8 J
SB11	MCSB11-S-32662	10/19/10	10:04	16.8	10/22/10	18:31	42	4.1 J
SB11	MCSB11-S-32664	10/19/10	10:23	20	10/22/10	19:01	35	3.2 J
SB11	MCSB11-S-32664DUP <sup>c</sup>	10/19/10	10:23	20	10/22/10	19:31	39	3.6 J
SB12	MCSB12-S-32214	10/19/10	11:46	6	10/22/10	17:50	ND	ND
SB12	MCSB12-S-32215	10/19/10	11:47	8	10/22/10	18:50	ND	ND
SB12	MCSB12-S-32216	10/19/10	11:51	12	10/22/10	15:20	ND	ND
SB12	MCSB12-S-32216DUP <sup>c</sup>	10/19/10	11:51	12	10/22/10	15:50	ND	ND
SB12	MCSB12-S-32217	10/19/10	11:54	16	10/22/10	18:20	20	2.9 J
SB13	MCSB13-S-32218	10/19/10	13:23	4	10/22/10	17:01	ND	ND
SB13	MCSB13-S-32219	10/19/10	13:27	8	10/22/10	16:31	ND	ND
SB13	MCSB13-S-32220	10/19/10	13:36	12	10/22/10	16:50	ND	ND
SB13	MCSB13-S-32221	10/19/10	13:41	16	10/22/10	19:20	10	2.3 J
SB14	MCSB14-S-32222	10/19/10	14:05	4	10/25/10	15:15	ND	ND
SB14	MCSB14-S-32223	10/19/10	14:08	8	10/26/10	19:45	6.1 J	16
SB14	MCSB14-S-32665 <sup>c</sup>	10/19/10	14:09	8	10/26/10	19:15	ND	ND
SB14	MCSB14-S-32224	10/19/10	14:11	12	10/26/10	12:43	4.6 J	ND
SB14	MCSB14-S-32225	10/19/10	14:15	16	10/25/10	16:16	7.2 J	2.6 J



TABLE D.2 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration (µg/kg)	
							Carbon Tetrachloride	Chloroform
SB15	MCSB15-S-32226	10/19/10	14:37	4	10/26/10	13:13	ND	ND
SB15	MCSB15-S-32227	10/19/10	14:39	8	10/27/10	10:49	ND	ND
SB15	MCSB15-S-32228	10/19/10	14:40	12	10/25/10	16:46	9.6 J	3.2 J
SB15	MCSB15-S-32229	10/19/10	14:42	16	10/27/10	11:49	29	2.6 J
SB16	MCSB16-S-32230	10/19/10	14:55	4	10/26/10	12:13	ND	ND
SB16	MCSB16-S-32231	10/19/10	14:57	8	10/26/10	10:13	ND	ND
SB16	MCSB16-S-32232	10/19/10	14:59	12	10/26/10	11:43	5.6 J	2.0 J
SB16	MCSB16-S-32233	10/19/10	15:01	16	10/26/10	10:43	13	2.8 J
SB16	MCSB16-S-32582	12/6/10	11:11	20	12/10/10	5:57	33	3.4 J
SB16	MCSB16-S-32592 <sup>c</sup>	12/6/10	11:12	20	12/10/10	7:27	32	3.6 J
SB16	MCSB16-S-32583	12/6/10	11:15	24	12/10/10	5:27	70	4.0 J
SB16	MCSB16-S-32584	12/6/10	11:21	28	12/10/10	4:57	113	3.4 J
SB16	MCSB16-S-32585	12/6/10	11:28	32	12/10/10	8:57	25	2.0 J
SB16	MCSB16-S-32586	12/6/10	11:39	36	12/10/10	7:57	15	1.9 J
SB16	MCSB16-S-32587	12/6/10	11:43	40	12/9/10	19:38	ND	ND
SB16	MCSB16-S-32588	12/6/10	11:54	44	12/10/10	6:27	ND	ND
SB16	MCSB16-S-32589	12/6/10	12:03	48	12/10/10	6:57	ND	ND
SB16	MCSB16-S-32590	12/6/10	12:12	52	12/10/10	9:27	ND	ND
SB16	MCSB16-S-32591	12/6/10	12:19	56	12/14/10	1:17	ND	ND
SB17	MCSB17-S-32234	10/19/10	15:21	4	10/25/10	13:44	ND	ND
SB17	MCSB17-S-32235	10/19/10	15:23	8	10/22/10	23:01	11	2.2 J
SB17	MCSB17-S-32236	10/19/10	15:25	12	10/22/10	22:31	376	9.6 J
SB17	MCSB17-S-32237	10/19/10	15:27	16	10/26/10	11:13	23	1.8 J
SB17	MCSB17-S-32350	10/25/10	8:59	20	11/2/10	15:06	28	2.0 J
SB17	MCSB17-S-32351	10/25/10	11:56	24	11/2/10	19:36	27	2.4 J
SB17	MCSB17-S-32352	10/25/10	9:27	28	11/2/10	13:05	27	2.0 J
SB17	MCSB17-S-32353	10/25/10	9:46	32	11/2/10	13:36	34	2.4 J
SB17	MCSB17-S-32353DUP <sup>c</sup>	10/25/10	9:46	32	11/2/10	14:06	40	2.4 J
SB17	MCSB17-S-32354	10/25/10	9:50	36	11/2/10	12:05	26	ND
SB17	MCSB17-S-32355	10/25/10	9:56	40	11/3/10	10:52	6.7 J	1.7 J
SB17	MCSB17-S-32356	10/25/10	12:12	44	11/2/10	12:35	3.4 J	ND
SB17	MCSB17-S-32357	10/25/10	10:13	48	11/2/10	11:04	96	ND
SB17	MCSB17-S-32360	10/25/10	10:18	52	11/2/10	16:06	304	2.4 J
SB17	MCSB17-S-32361 <sup>c</sup>	10/25/10	10:19	52	11/2/10	11:34	325	2.7 J
SB17	MCSB17-S-32362	10/25/10	10:26	56	11/2/10	18:36	413	3.4 J
SB18	MCSB18-S-32238	10/19/10	15:44	4	10/22/10	20:31	ND	ND
SB18	MCSB18-S-32239	10/19/10	15:46	8	10/22/10	21:01	ND	ND
SB18	MCSB18-S-32240	10/19/10	15:49	12	10/25/10	18:16	3.6 J	ND
SB18	MCSB18-S-32240DUP <sup>c</sup>	10/19/10	15:49	12	10/26/10	9:13	3.8 J	ND
SB18	MCSB18-S-32241	10/19/10	15:51	16	10/22/10	21:31	69	3.0 J
SB19	MCSB19-S-32242	10/19/10	16:12	4	10/27/10	11:19	ND	ND
SB19	MCSB19-S-32243	10/19/10	16:14	8	10/25/10	14:15	ND	ND
SB19	MCSB19-S-32244	10/19/10	16:17	12	10/22/10	20:01	ND	ND
SB19	MCSB19-S-32245	10/19/10	16:19	16	10/22/10	22:01	ND	ND
SB20	MCSB20-S-32246	10/19/10	16:40	4	10/28/10	17:49	ND	ND
SB20	MCSB20-S-32247	10/19/10	16:42	8	10/27/10	17:40	ND	ND
SB20	MCSB20-S-32248	10/19/10	16:44	12	10/27/10	16:40	ND	ND
SB20	MCSB20-S-32249	10/19/10	16:46	16	10/29/10	11:26	8.2 J	ND
SB21	MCSB21-S-32250	10/19/10	17:26	4	10/27/10	20:10	ND	ND
SB21	MCSB21-S-32251	10/19/10	17:28	8	10/27/10	19:10	ND	ND
SB21	MCSB21-S-32252	10/19/10	17:31	12	10/29/10	8:55	ND	ND
SB21	MCSB21-S-32253	10/19/10	17:33	16	10/27/10	12:19	2.6 J	ND

TABLE D.2 (Cont.)

Location	Sample	Sample Date and Time	Depth (ft BGL)	Analysis Date and Time	Concentration (µg/kg)			
					Carbon Tetrachloride	Chloroform		
SB22	MCSB22-S-32254	10/19/10	17:44	4	10/28/10	18:49	ND	ND
SB22	MCSB22-S-32255	10/19/10	17:46	8	10/27/10	19:40	ND	ND
SB22	MCSB22-S-32256	10/19/10	17:47	12	10/27/10	18:10	ND	ND
SB22	MCSB22-S-32257	10/19/10	17:49	16	10/27/10	17:10	ND	ND
SB22	MCSB22-S-32393	10/26/10	14:07	20	11/3/10	15:50	ND	ND
SB22	MCSB22-S-32394	10/26/10	14:10	24	11/3/10	15:20	ND	ND
SB22	MCSB22-S-32395	10/26/10	14:14	28	11/3/10	14:21	ND	ND
SB22	MCSB22-S-32396	10/26/10	14:18	32	11/3/10	12:51	ND	ND
SB22	MCSB22-S-32396DUP <sup>c</sup>	10/26/10	14:18	32	11/3/10	13:21	ND	ND
SB22	MCSB22-S-32397	10/26/10	14:23	36	11/3/10	11:18	ND	ND
SB22	MCSB22-S-32398	10/26/10	14:30	40	11/3/10	12:21	ND	ND
SB22	MCSB22-S-32399	10/26/10	14:37	44	11/3/10	14:51	ND	ND
SB22	MCSB22-S-32400	10/26/10	14:44	48	11/3/10	16:20	ND	ND
SB22	MCSB22-S-32400D <sup>c</sup>	10/26/10	14:45	48	11/3/10	11:48	ND	ND
SB22	MCSB22-S-32401	10/26/10	14:52	52	11/3/10	16:49	ND	ND
SB22	MCSB22-S-32402	10/26/10	15:01	56	11/3/10	17:49	ND	ND
SB22	MCSB22-S-32403	10/26/10	15:13	60	11/3/10	17:19	ND	ND
SB23	MCSB23-S-32258	10/20/10	9:22	4	10/29/10	11:56	ND	ND
SB23	MCSB23-S-32259	10/20/10	8:49	8	10/27/10	22:18	ND	ND
SB23	MCSB23-S-32260	10/20/10	8:50	12	10/28/10	16:19	ND	ND
SB23	MCSB23-S-32261	10/20/10	9:13	16	10/28/10	17:19	ND	ND
SB24	MCSB24-S-32262	10/20/10	9:43	4	10/27/10	13:09	ND	ND
SB24	MCSB24-S-32263	10/20/10	9:45	8	10/27/10	15:47	ND	ND
SB24	MCSB24-S-32264	10/20/10	9:48	12	10/27/10	11:30	ND	ND
SB24	MCSB24-S-32265	10/20/10	9:49	16	10/26/10	21:45	ND	ND
SB24	MCSB24-S-32650	10/20/10	10:04	20	10/26/10	20:45	ND	ND
SB25	MCSB25-S-32266	10/20/10	10:56	4	10/27/10	13:18	ND	ND
SB25	MCSB25-S-32266DUP <sup>c</sup>	10/20/10	10:56	4	10/27/10	13:48	ND	ND
SB25	MCSB25-S-32267	10/20/10	10:59	8	10/27/10	17:17	ND	ND
SB25	MCSB25-S-32268	10/20/10	11:03	12	10/26/10	20:15	16	3.2 J
SB25	MCSB25-S-32269	10/20/10	11:05	16	10/27/10	16:10	126	4.1 J
SB25	MCSB25-S-32340	10/24/10	15:27	20	11/1/10	14:40	78	10
SB25	MCSB25-S-32652 <sup>c</sup>	10/20/10	11:11	20	10/27/10	11:00	134	4.2 J
SB25	MCSB25-S-32341	10/24/10	15:30	24	11/1/10	17:38	93	8.9 J
SB25	MCSB25-S-32342	10/24/10	15:34	28	11/1/10	21:16	94	2.9 J
SB25	MCSB25-S-32342D <sup>c</sup>	10/24/10	15:35	28	11/1/10	20:37	47	4.4 J
SB25	MCSB25-S-32343	10/24/10	15:38	32	11/1/10	16:09	32	3.3 J
SB25	MCSB25-S-32344	10/24/10	15:42	36	11/1/10	20:46	38	ND
SB25	MCSB25-S-32345	10/24/10	15:46	40	11/1/10	19:37	ND	ND
SB25	MCSB25-S-32346	10/24/10	15:51	44	11/1/10	19:08	ND	ND
SB25	MCSB25-S-32347	10/24/10	15:56	48	11/1/10	18:38	ND	ND
SB25	MCSB25-S-32349	10/24/10	16:10	52	11/1/10	20:07	3.5 J	ND
SB26	MCSB26-S-32270	10/20/10	11:33	4	10/27/10	16:47	ND	ND
SB26	MCSB26-S-32271	10/20/10	11:35	8	10/27/10	12:09	ND	ND
SB26	MCSB26-S-32272	10/20/10	11:37	12	10/27/10	14:48	2.9 J	ND
SB26	MCSB26-S-32653 <sup>c</sup>	10/20/10	11:38	12	10/27/10	23:17	ND	ND
SB26	MCSB26-S-32273	10/20/10	11:39	16	10/26/10	21:15	14	ND
SB27	MCSB27-S-32274	10/20/10	12:17	4	10/27/10	18:16	ND	ND
SB27	MCSB27-S-32275	10/20/10	11:57	8	10/27/10	19:16	12	6.6 J
SB27	MCSB27-S-32276	10/20/10	11:59	12	10/27/10	22:10	2.0 J	ND
SB27	MCSB27-S-32277	10/20/10	12:02	16	10/28/10	18:19	3.8 J	ND
SB27	MCSB27-S-32440	12/1/10	9:32	20	12/3/10	9:40	ND	ND
SB27	MCSB27-S-32441	12/1/10	9:40	24	12/6/10	12:26	ND	ND
SB27	MCSB27-S-32447 <sup>c</sup>	12/1/10	9:41	24	12/6/10	12:56	ND	ND
SB27	MCSB27-S-32442	12/1/10	9:45	28	12/3/10	9:10	ND	ND

TABLE D.2 (Cont.)

Location	Sample	Sample Date and Time	Depth (ft BGL)	Analysis Date and Time	Concentration (µg/kg)			
					Carbon Tetrachloride	Chloroform		
SB27	MCSB27-S-32443	12/1/10	9:48	32	12/6/10	1:56	ND	ND
SB27	MCSB27-S-32444	12/1/10	9:53	36	12/6/10	11:26	ND	ND
SB27	MCSB27-S-32445	12/1/10	10:03	40	12/3/10	8:40	ND	ND
SB27	MCSB27-S-32446	12/1/10	10:10	44	12/6/10	2:26	ND	ND
SB27	MCSB27-S-32448	12/1/10	10:20	47	12/6/10	1:26	ND	ND
SB28	MCSB28-S-32278	10/20/10	13:30	4	10/29/10	8:25	ND	ND
SB28	MCSB28-S-32279	10/20/10	13:31	8	10/28/10	16:49	ND	ND
SB28	MCSB28-S-32280	10/20/10	13:33	12	10/27/10	20:40	ND	ND
SB28	MCSB28-S-32281	10/20/10	13:35	16	10/29/10	14:08	ND	ND
SB29	MCSB29-S-32282	10/20/10	13:46	4	10/27/10	21:40	ND	ND
SB29	MCSB29-S-32283	10/20/10	13:47	8	10/27/10	21:18	ND	ND
SB29	MCSB29-S-32284	10/20/10	13:49	12	10/29/10	14:38	7.7 J	ND
SB29	MCSB29-S-32285	10/20/10	13:53	16	10/27/10	21:10	4.7 J	ND
SB29	MCSB29-S-32656	10/20/10	13:56	20	10/29/10	9:55	ND	ND
SB30	MCSB30-S-32286	10/20/10	14:20	4	10/29/10	9:25	ND	ND
SB30	MCSB30-S-32287	10/20/10	14:22	8	10/27/10	15:17	ND	ND
SB30	MCSB30-S-32288	10/20/10	14:24	12	10/27/10	15:09	ND	ND
SB30	MCSB30-S-32289	10/20/10	14:27	16	10/27/10	12:48	5.5 J	ND
SB31	MCSB31-S-32290	10/20/10	14:38	4	10/27/10	12:39	ND	ND
SB31	MCSB31-S-32291	10/20/10	14:40	8	10/27/10	13:39	ND	ND
SB31	MCSB31-S-32291DUP <sup>c</sup>	10/20/10	14:40	8	10/27/10	14:09	ND	ND
SB31	MCSB31-S-32292	10/20/10	14:42	12	10/27/10	16:17	ND	ND
SB31	MCSB31-S-32293	10/20/10	14:44	16	10/27/10	15:40	22	ND
SB32	MCSB32-S-32294	10/20/10	16:55	4	10/29/10	10:26	ND	ND
SB32	MCSB32-S-32295	10/20/10	17:03	8	10/30/10	12:33	ND	ND
SB32	MCSB32-S-32296	10/20/10	17:20	12	10/29/10	19:11	263	12
SB32	MCSB32-S-32297	10/20/10	17:45	16	10/25/10	12:44	2,412	133
SB32	MCSB32-S-32297DUP <sup>c</sup>	10/20/10	17:45	16	10/25/10	12:13	2,280	104
SB33	MCSB33-S-32298	10/21/10	10:53	4	10/29/10	18:36	ND	ND
SB33	MCSB33-S-32299	10/21/10	10:59	8	10/30/10	14:04	ND	ND
SB33	MCSB33-S-32300	10/21/10	11:10	12	10/29/10	15:37	43	6.9 J
SB33	MCSB33-S-32301	10/21/10	11:27	16	10/29/10	19:05	9.0 J	2.9 J
SB33	MCSB33-S-32658	10/21/10	11:49	20	10/29/10	9:55	ND	ND
SB34	MCSB34-S-32302	10/21/10	13:42	4	10/29/10	16:37	ND	ND
SB34	MCSB34-S-32302DUP <sup>c</sup>	10/21/10	13:42	4	10/29/10	17:06	ND	ND
SB34	MCSB34-S-32303	10/21/10	13:51	8	10/29/10	16:03	ND	ND
SB34	MCSB34-S-32304	10/21/10	14:06	12	10/29/10	19:35	ND	2.9 J
SB34	MCSB34-S-32305	10/21/10	14:26	16	10/30/10	13:05	2.4 J	ND
SB34	MCSB34-S-32659	10/21/10	15:07	20	10/29/10	18:06	ND	ND
SB35	MCSB35-S-32306	10/21/10	15:54	4	10/29/10	20:05	ND	ND
SB35	MCSB35-S-32307	10/21/10	16:06	8	10/30/10	14:35	ND	ND
SB35	MCSB35-S-32307DUP <sup>c</sup>	10/21/10	16:06	8	11/1/10	8:15	ND	ND
SB35	MCSB35-S-32308	10/21/10	16:15	12	10/29/10	20:35	31	8.5 J
SB35	MCSB35-S-32309	10/21/10	16:34	16	11/1/10	19:15	2.0 J	ND
SB35	MCSB35-S-32641	10/21/10	16:58	20	11/1/10	18:15	ND	ND
SB36	MCSB36-S-32363	10/25/10	16:07	4	11/2/10	19:06	ND	ND
SB36	MCSB36-S-32364	10/25/10	16:11	8	11/2/10	21:36	ND	ND
SB36	MCSB36-S-32365	10/25/10	16:14	12	11/2/10	18:06	ND	ND
SB36	MCSB36-S-32366	10/25/10	16:17	16	11/2/10	21:06	ND	ND
SB36	MCSB36-S-32367	10/25/10	16:20	20	11/2/10	17:06	ND	ND
SB36	MCSB36-S-32368	10/25/10	16:24	24	11/3/10	11:21	ND	ND

TABLE D.2 (Cont.)

Location	Sample	Sample Date and Time	Depth (ft BGL)	Analysis Date and Time	Concentration (µg/kg)			
					Carbon Tetrachloride	Chloroform		
SB36	MCSB36-S-32369	10/25/10	16:28	28	11/2/10	15:36	ND	ND
SB36	MCSB36-S-32370	10/25/10	16:32	32	11/2/10	22:06	ND	ND
SB36	MCSB36-S-32370D <sup>c</sup>	10/25/10	16:33	32	11/3/10	11:51	ND	ND
SB36	MCSB36-S-32371	10/25/10	16:38	36	11/2/10	20:36	ND	ND
SB36	MCSB36-S-32372	10/25/10	16:44	40	11/2/10	17:36	ND	ND
SB36	MCSB36-S-32373	10/25/10	16:50	44	11/2/10	16:36	ND	ND
SB36	MCSB36-S-32374	10/25/10	16:54	48	11/2/10	20:06	ND	ND
SB40	MCSB40-S-32449	12/1/10	15:27	4	12/3/10	2:39	ND	ND
SB40	MCSB40-S-32450	12/1/10	15:31	8	12/3/10	5:09	ND	ND
SB40	MCSB40-S-32450DUP <sup>c</sup>	12/1/10	15:31	8	12/3/10	5:39	ND	ND
SB40	MCSB40-S-32451	12/1/10	15:35	12	12/3/10	7:10	ND	ND
SB40	MCSB40-S-32461 <sup>c</sup>	12/1/10	15:36	12	12/3/10	3:09	ND	ND
SB40	MCSB40-S-32452	12/1/10	15:37	16	12/3/10	7:40	ND	ND
SB40	MCSB40-S-32453	12/1/10	15:42	20	12/3/10	4:39	ND	ND
SB40	MCSB40-S-32454	12/1/10	15:44	24	12/3/10	2:08	ND	ND
SB40	MCSB40-S-32455	12/1/10	15:48	28	12/3/10	6:40	ND	ND
SB40	MCSB40-S-32456	12/1/10	15:54	32	12/6/10	11:56	ND	ND
SB40	MCSB40-S-32457	12/1/10	16:10	36	12/3/10	8:10	ND	ND
SB40	MCSB40-S-32458	12/1/10	16:15	40	12/3/10	3:39	ND	ND
SB40	MCSB40-S-32459	12/1/10	16:21	44	12/3/10	4:09	ND	ND
SB40	MCSB40-S-32460	12/1/10	16:26	48	12/3/10	6:09	ND	ND
SB41	MCSB41-S-32462	12/2/10	11:16	4	12/6/10	3:57	ND	ND
SB41	MCSB41-S-32463	12/2/10	11:19	8	12/6/10	8:28	ND	ND
SB41	MCSB41-S-32464	12/2/10	11:21	12	12/6/10	7:58	ND	ND
SB41	MCSB41-S-32465	12/2/10	11:23	16	12/7/10	7:12	65	2.7 J
SB41	MCSB41-S-32466	12/2/10	11:26	20	12/6/10	4:27	891	34
SB41	MCSB41-S-32467	12/2/10	11:30	24	12/7/10	5:41	1,110	44
SB41	MCSB41-S-32468	12/2/10	11:35	28	12/6/10	6:58	1,489	54
SB41	MCSB41-S-32474 <sup>c</sup>	12/2/10	11:36	28	12/7/10	6:11	1,217	50
SB41	MCSB41-S-32469	12/2/10	11:40	32	12/6/10	4:57	388	14
SB41	MCSB41-S-32470	12/2/10	11:46	36	12/6/10	9:59	236	8.0 J
SB41	MCSB41-S-32471	12/2/10	11:51	40	12/7/10	6:41	4.8 J	ND
SB41	MCSB41-S-32472	12/2/10	11:57	44	12/6/10	5:57	ND	ND
SB41	MCSB41-S-32473	12/2/10	12:04	48	12/6/10	7:28	1.7 J	ND
SB41	MCSB41-S-32475	12/2/10	12:12	52	12/6/10	8:58	ND	ND
SB41	MCSB41-S-32475DUP <sup>c</sup>	12/2/10	12:12	52	12/6/10	9:29	ND	ND
SB41	MCSB41-S-32476	12/2/10	12:21	56	12/7/10	7:42	ND	ND
SB42	MCSB42-S-32477	12/2/10	15:45	4	12/8/10	13:25	ND	ND
SB42	MCSB42-S-32478	12/2/10	15:49	8	12/8/10	12:25	ND	ND
SB42	MCSB42-S-32478DUP <sup>c</sup>	12/2/10	15:49	8	12/8/10	12:55	ND	ND
SB42	MCSB42-S-32480	12/2/10	15:51	12	12/8/10	11:55	48	4.5 J
SB42	MCSB42-S-32481	12/2/10	15:54	16	12/8/10	13:55	72	4.7 J
SB42	MCSB42-S-32492 <sup>c</sup>	12/2/10	15:55	16	12/7/10	8:12	154	5.5 J
SB42	MCSB42-S-32482	12/2/10	15:57	20	12/8/10	16:24	91	5.7 J
SB42	MCSB42-S-32483	12/2/10	16:00	24	12/8/10	17:23	79	4.9 J
SB42	MCSB42-S-32484	12/2/10	16:04	28	12/8/10	14:24	64	4.7 J
SB42	MCSB42-S-32485	12/2/10	16:08	32	12/8/10	15:54	40	3.4 J
SB42	MCSB42-S-32486	12/2/10	16:12	36	12/8/10	11:25	15	ND
SB42	MCSB42-S-32487	12/2/10	16:17	40	12/9/10	18:22	ND	ND
SB42	MCSB42-S-32487DUP <sup>c</sup>	12/2/10	16:17	40	12/8/10	17:53	ND	ND
SB42	MCSB42-S-32488	12/2/10	16:24	44	12/8/10	16:53	ND	ND
SB42	MCSB42-S-32489	12/2/10	16:31	48	12/8/10	15:24	ND	ND
SB42	MCSB42-S-32490	12/2/10	16:40	52	12/13/10	8:31	4.5 J	ND
SB44	MCSB44-S-32494	12/3/10	15:36	4	12/9/10	18:09	ND	ND
SB44	MCSB44-S-32494DUP <sup>c</sup>	12/3/10	15:36	4	12/9/10	18:39	ND	ND
SB44	MCSB44-S-32495	12/3/10	15:38	8	12/9/10	20:53	ND	ND



TABLE D.2 (Cont.)

Location	Sample	Sample Date and Time	Depth (ft BGL)	Analysis Date and Time	Concentration (µg/kg)			
					Carbon Tetrachloride	Chloroform		
SB44	MCSB44-S-32496	12/3/10	15:41	12	12/10/10	12:23	ND	ND
SB44	MCSB44-S-32497	12/3/10	15:44	16	12/9/10	15:10	ND	ND
SB44	MCSB44-S-32498	12/3/10	15:48	20	12/9/10	14:10	ND	ND
SB44	MCSB44-S-32499	12/3/10	15:57	24	12/9/10	20:23	ND	ND
SB44	MCSB44-S-32510	12/3/10	16:00	28	12/9/10	15:40	ND	ND
SB44	MCSB44-S-32511	12/3/10	16:05	32	12/9/10	19:23	ND	ND
SB44	MCSB44-S-32512	12/3/10	16:14	36	12/9/10	13:41	ND	ND
SB44	MCSB44-S-32517 <sup>c</sup>	12/3/10	16:15	36	12/9/10	19:53	ND	ND
SB44	MCSB44-S-32513	12/3/10	16:20	40	12/14/10	5:19	ND	ND
SB44	MCSB44-S-32514	12/3/10	16:26	44	12/9/10	17:39	ND	ND
SB44	MCSB44-S-32516	12/3/10	16:33	48	12/9/10	17:09	ND	ND
SB44	MCSB44-S-32518	12/3/10	16:41	52	12/9/10	23:53	ND	ND
SB44	MCSB44-S-32519	12/3/10	16:52	56	12/10/10	12:11	ND	ND
SB44	MCSB44-S-32520	12/3/10	17:04	60	12/9/10	16:10	3.7 J	ND
SB46	MCSB46-S-32521	12/4/10	13:37	4	12/13/10	15:32	ND	ND
SB46	MCSB46-S-32522	12/4/10	13:39	8	12/14/10	7:19	ND	ND
SB46	MCSB46-S-32523	12/4/10	13:41	12	12/13/10	3:30	22	2.0 J
SB46	MCSB46-S-32524	12/4/10	13:43	16	12/13/10	4:00	121	3.2 J
SB46	MCSB46-S-32525	12/4/10	13:45	20	12/13/10	8:01	93	3.0 J
SB46	MCSB46-S-32526	12/4/10	13:50	24	12/13/10	7:01	42	1.7 J
SB46	MCSB46-S-32538 <sup>c</sup>	12/4/10	13:51	24	12/13/10	9:01	40	2.0 J
SB46	MCSB46-S-32538DUP <sup>c</sup>	12/4/10	13:51	24	12/13/10	9:31	35	2.0 J
SB46	MCSB46-S-32527	12/4/10	13:56	28	12/13/10	17:32	25	ND
SB46	MCSB46-S-32528	12/5/10	14:00	32	12/13/10	18:02	12	ND
SB46	MCSB46-S-32529	12/4/10	14:22	36	12/13/10	2:30	8.4 J	ND
SB46	MCSB46-S-32530	12/4/10	14:29	40	12/13/10	20:01	ND	ND
SB46	MCSB46-S-32531	12/4/10	14:41	44	12/13/10	4:30	ND	1.7 J
SB46	MCSB46-S-32532	12/4/10	14:49	48	12/13/10	6:30	358	4.1 J
SB46	MCSB46-S-32533	12/4/10	14:59	52	12/13/10	7:31	882	9.1 J
SB46	MCSB46-S-32535	12/4/10	15:14	54.5	12/13/10	3:00	1,068	11
SB47	MCSB47-S-32551	12/5/10	11:22	4	12/14/10	3:48	ND	ND
SB47	MCSB47-S-32552	12/5/10	11:29	8	12/14/10	7:49	ND	ND
SB47	MCSB47-S-32553	12/5/10	11:34	12	12/14/10	11:47	386	3.3 J
SB47	MCSB47-S-32554	12/5/10	11:43	16	12/13/10	20:31	507	6.4 J
SB47	MCSB47-S-32555	12/5/10	11:49	20	12/13/10	22:01	402	5.6 J
SB47	MCSB47-S-32565 <sup>c</sup>	12/5/10	11:50	20	12/13/10	21:31	403	6.0 J
SB47	MCSB47-S-32556	12/5/10	11:55	24	12/14/10	8:20	451	4.0 J
SB47	MCSB47-S-32557	12/5/10	11:59	28	12/14/10	1:48	902	7.3 J
SB47	MCSB47-S-32557DUP <sup>c</sup>	12/5/10	11:59	28	12/14/10	2:18	952	8.1 J
SB47	MCSB47-S-32558	12/5/10	12:05	32	12/13/10	17:02	387	6.0 J
SB47	MCSB47-S-32559	12/5/10	12:10	36	12/13/10	19:01	ND	ND
SB47	MCSB47-S-32560	12/5/10	12:16	40	12/14/10	11:17	ND	ND
SB47	MCSB47-S-32561	12/5/10	12:26	44	12/14/10	12:17	ND	ND
SB47	MCSB47-S-32562	12/5/10	12:32	48	12/14/10	3:18	11	ND
SB47	MCSB47-S-32564	12/5/10	12:59	56	12/14/10	12:47	2.7 J	ND
SB48	MCSB48-S-32570	12/5/10	16:22	20	12/11/10	3:14	226	7.1 J
SB48	MCSB48-S-32571	12/5/10	16:27	24	12/11/10	11:13	230	7.2 J
SB48	MCSB48-S-32572	12/5/10	16:36	28	12/10/10	9:57	246	7.4 J
SB48	MCSB48-S-32572DUP <sup>c</sup>	12/5/10	16:36	28	12/10/10	10:27	259	7.8 J
SB48	MCSB48-S-32573	12/5/10	16:45	32	12/11/10	2:44	214	6.4 J
SB48	MCSB48-S-32580 <sup>c</sup>	12/5/10	16:46	32	12/11/10	10:43	219	5.9 J
SB48	MCSB48-S-32574	12/5/10	16:52	36	12/11/10	12:43	116	4.0 J
SB48	MCSB48-S-32575	12/5/10	17:00	40	12/11/10	1:43	38	2.6 J
SB48	MCSB48-S-32576	12/5/10	17:06	44	12/11/10	12:13	9.9 J	1.8 J
SB48	MCSB48-S-32577	12/5/10	17:16	48	12/11/10	1:13	11	1.6 J
SB48	MCSB48-S-32578	12/5/10	17:28	52	12/11/10	11:43	9.9 J	1.7 J

TABLE D.2 (Cont.)

Location	Sample	Sample Date and Time	Depth (ft BGL)	Analysis Date and Time	Concentration (µg/kg)			
					Carbon Tetrachloride	Chloroform		
SB49	MCSB49-S-32930	5/12/11	8:55	4	5/16/11	16:40	ND	ND
SB49	MCSB49-S-32931	5/12/11	8:57	8	5/16/11	20:04	ND	ND
SB49	MCSB49-S-32932	5/12/11	9:00	12	5/16/11	11:20	ND	ND
SB49	MCSB49-S-32933	5/12/11	9:02	16	5/16/11	13:46	ND	ND
SB49	MCSB49-S-32934	5/12/11	9:05	20	5/16/11	10:51	ND	ND
SB49	MCSB49-S-32935	5/12/11	9:08	24	5/16/11	19:35	ND	ND
SB49	MCSB49-S-32936	5/12/11	9:12	28	5/16/11	12:18	ND	ND
SB49	MCSB49-S-32937	5/12/11	9:17	32	5/16/11	18:37	ND	ND
SB49	MCSB49-S-32938	5/12/11	9:22	36	5/16/11	19:06	ND	ND
SB49	MCSB49-S-32939	5/12/11	9:28	40	5/16/11	15:42	ND	ND
SB49	MCSB49-S-32943 <sup>c</sup>	5/12/11	9:29	40	5/16/11	12:48	ND	ND
SB49	MCSB49-S-32940	5/12/11	9:32	44	5/16/11	15:13	ND	ND
SB49	MCSB49-S-32941	5/12/11	9:33	48	5/16/11	11:49	ND	ND
SB49	MCSB49-S-32942	5/12/11	9:44	52	5/16/11	13:17	ND	ND
SB49	MCSB49-S-32945	5/12/11	9:51	56	5/16/11	14:44	ND	ND
SB49	MCSB49-S-32946	5/12/11	10:00	59.5	5/16/11	17:09	ND	ND
SB49	MCSB49-S-32946DUP <sup>c</sup>	5/12/11	10:00	59.5	5/16/11	17:39	ND	ND
SB50	MCSB50-S-32950	5/10/11	10:54	4	5/12/11	19:08	ND	ND
SB50	MCSB50-S-32951	5/10/11	10:58	8	5/12/11	14:27	ND	ND
SB50	MCSB50-S-32952	5/10/11	11:01	12	5/12/11	18:39	ND	ND
SB50	MCSB50-S-32952DUP <sup>c</sup>	5/10/11	11:01	12	5/12/11	19:09	ND	ND
SB50	MCSB50-S-32953	5/10/11	11:03	16	5/12/11	17:35	ND	ND
SB50	MCSB50-S-32954	5/10/11	11:06	20	5/12/11	11:47	ND	ND
SB50	MCSB50-S-32954DUP <sup>c</sup>	5/10/11	11:06	20	5/12/11	12:18	ND	ND
SB50	MCSB50-S-32955	5/10/11	11:10	24	5/12/11	11:17	ND	ND
SB50	MCSB50-S-32956	5/10/11	11:18	28	5/12/11	18:08	ND	1.3 J
SB50	MCSB50-S-32964 <sup>c</sup>	5/10/11	11:19	28	5/12/11	14:59	ND	ND
SB50	MCSB50-S-32957	5/11/11	15:42	32	5/16/11	16:11	5.9 J	ND
SB50	MCSB50-S-32958	5/10/11	11:51	36	5/12/11	16:01	132	3.6 J
SB50	MCSB50-S-32959	5/10/11	11:58	40	5/12/11	15:30	596	5.9 J
SB50	MCSB50-S-32960	5/10/11	12:07	44	5/12/11	19:38	282	1.7 J
SB50	MCSB50-S-32961	5/10/11	12:13	48	5/12/11	19:39	325	1.6 J
SB50	MCSB50-S-32962	5/10/11	12:22	52	5/12/11	17:04	134	4.6 J
SB50	MCSB50-S-32965	5/10/11	12:32	56	5/12/11	16:32	132	3.8 J
SB50	MCSB50-S-32966	5/10/11	12:41	60	5/12/11	18:36	71	ND
SB50	MCSB50-S-32967	5/10/11	13:00	64	5/12/11	10:47	20	ND
SB54	MCSB54-S-33270	5/13/11	14:35	4	5/16/11	21:31	ND	ND
SB54	MCSB54-S-33270DUP <sup>c</sup>	5/13/11	14:35	4	5/16/11	22:01	ND	ND
SB54	MCSB54-S-33271	5/13/11	14:46	8	5/17/11	16:15	ND	ND
SB54	MCSB54-S-33272	5/13/11	14:48	12	5/17/11	12:51	ND	ND
SB54	MCSB54-S-33273	5/13/11	14:51	16	5/17/11	11:24	ND	ND
SB54	MCSB54-S-33274	5/13/11	14:53	20	5/17/11	12:22	ND	ND
SB54	MCSB54-S-33284 <sup>c</sup>	5/13/11	14:54	20	5/16/11	21:02	ND	ND
SB54	MCSB54-S-33275	5/13/11	14:56	24	5/17/11	14:48	ND	ND
SB54	MCSB54-S-33276	5/13/11	14:59	28	5/17/11	10:55	ND	ND
SB54	MCSB54-S-33277	5/13/11	15:03	32	5/17/11	13:20	ND	ND
SB54	MCSB54-S-33278	5/13/11	15:08	36	5/17/11	11:53	ND	ND
SB54	MCSB54-S-33279	5/13/11	15:12	40	5/17/11	13:49	ND	ND
SB54	MCSB54-S-33280	5/13/11	15:20	44	5/17/11	15:17	ND	ND
SB54	MCSB54-S-33281	5/13/11	15:50	48	5/17/11	16:44	ND	ND
SB54	MCSB54-S-33281DUP <sup>c</sup>	5/13/11	15:50	48	5/17/11	17:13	ND	ND
SB54	MCSB54-S-33282	5/13/11	16:35	52	5/17/11	15:46	ND	ND
QC	MCQCTB-S-32660	10/18/10	16:46	-	10/21/10	18:15	ND	ND
QC	MCQCTB-S-32661	10/19/10	9:09	-	11/4/10	11:31	ND	ND
QC	MCQCTB-S-32666	10/19/10	14:12	-	11/4/10	12:31	ND	ND
QC	MCQCTB-S-32667	10/19/10	17:00	-	11/4/10	8:01	ND	ND
QC	MCQCTB-S-32668	10/20/10	8:40	-	11/3/10	19:49	ND	ND

TABLE D.2 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration (µg/kg)	
							Carbon Tetrachloride	Chloroform
QC	MCQCTB-S-32269	10/20/10	8:41	-	11/3/10	19:19	ND	ND
QC	MCQCTB-S-32655	10/20/10	12:25	-	11/3/10	20:19	ND	ND
QC	MCQCTB-S-32657	10/20/10	14:50	-	10/29/10	15:08	ND	ND
QC	MCQCTB-S-32640	10/21/10	14:20	-	10/30/10	13:34	ND	ND
QC	MCQCTB-S-32642	10/21/10	17:05	-	11/3/10	19:47	ND	ND
QC	MCQCTB-S-32348	10/24/10	15:57	-	11/4/10	9:02	ND	ND
QC	MCQCTB-S-32359	10/25/10	8:57	-	11/3/10	19:17	ND	ND
QC	MCQCTB-S-32375	10/25/10	16:42	-	11/4/10	8:32	ND	ND
QC	MCQCTB-S-32388	10/26/10	9:26	-	11/4/10	12:01	ND	ND
QC	MCQCTB-S-32404	10/26/10	11:19	-	11/3/10	18:48	ND	ND
QC	MCQCTB-S-32436	12/1/10	16:45	-	12/6/10	10:59	ND	ND
QC	MCQCTB-S-32438	12/1/10	17:06	-	12/6/10	10:29	ND	ND
QC	MCQCTB-S-32479	12/2/10	12:27	-	12/9/10	3:50	ND	ND
QC	MCQCTB-S-32491	12/2/10	13:59	-	12/9/10	18:53	ND	ND
QC	MCQCTB-S-32515	12/3/10	18:20	-	12/14/10	5:49	ND	ND
QC	MCQCTB-S-32534	12/4/10	12:00	-	12/14/10	6:19	ND	2.0 J
QC	MCQCTB-S-32536	12/4/10	13:29	-	12/13/10	5:30	ND	ND
QC	MCQCTB-S-32539	12/5/10	9:29	-	12/14/10	4:18	ND	ND
QC	MCQCTB-S-32581	12/5/10	13:29	-	12/13/10	5:00	ND	ND
QC	MCQCTB-S-32593	12/6/10	9:40	-	12/10/10	18:09	ND	ND
QC	MCQCTB-S-32963	5/10/11	10:31	-	5/12/11	12:48	ND	ND
QC	MCQCTB-S-32944	5/12/11	8:47	-	5/16/11	20:33	ND	ND
QC	MCQCTB-S-33285	5/13/11	16:42	-	5/17/11	17:43	ND	ND

- <sup>a</sup> Soil samples were analyzed at the AGEM Laboratory, Argonne, Illinois, by modified EPA Methods 5030B and 8260B (purge-and-trap method by gas chromatography-mass spectrometry [GC-MS]).
- <sup>b</sup> ND, not detected at an instrument detection limit of 1 µg/kg.
- <sup>c</sup> Quality control laboratory duplicate or quality control replicate.
- <sup>d</sup> Qualifier J indicates an estimated concentration below the purge-and-trap method quantitation limit of 10 µg/kg.

TABLE D.3 Grain size analysis for soil samples.<sup>a</sup>

Location	Sample	Depth Interval (ft BGL)	Percent Passing through Sieve of Indicated Size														Composition (%)				Bulk Dry Density (lb/ft <sup>3</sup> )	Moisture Content (%)	Specific Gravity	Total Organic Carbon (%)	Porosity (%)	Hydraulic Conductivity (cm/sec)	
			3/4 in.	1/2 in.	3/8 in.	#4	#10	#18	#35	#40	#60	#100	#120	#140	#200	#230	#270	Gravel	Sand	Silt							Clay
SB01	MCSB01-S-29199	15.0-15.4	100.0	100.0	100.0	99.6	98.7	97.2	94.5	93.5	88.4	81.4	79.3	77.2	72.5	70.3	68.5	0.4	27.1	34.5	38.0	129.63	8.14	2.57	0.35	-	-
SB01	MCSB01-S-29200	23.0-23.4	100.0	100.0	100.0	100.0	99.4	97.7	94.8	93.8	88.6	81.5	79.3	72.2	72.6	70.5	68.7	0.0	27.4	37.1	35.5	126.73	8.69	2.54	0.29	-	-
SB01	MCSB01-S-29201	35.0-35.4	100.0	100.0	100.0	100.0	99.7	98.9	96.6	95.8	91.3	84.9	82.9	80.9	76.5	74.3	72.3	0.0	23.5	36.2	40.3	126.45	11.47	2.61	0.35	-	-
SB01	MCSB01-S-29202	42.0-42.4	100.0	100.0	100.0	100.0	99.7	99.2	97.9	97.3	93.9	89.3	88.1	86.9	84.3	82.9	81.8	0.0	15.7	31.0	53.3	117.28	15.87	2.58	0.52	-	-
SB01	MCSB01-S-29203	57.5-58.0	100.0	100.0	100.0	100.0	99.9	98.6	95.9	94.9	88.0	78.0	75.7	73.6	69.4	67.6	66.3	0.0	30.6	33.0	36.4	117.08	15.15	2.60	0.46	-	-
SB17	MCSB17-S-20212	12.0-12.4	100.0	100.0	100.0	100.0	99.7	99.0	97.2	96.4	92.6	87.3	85.8	84.2	80.6	78.8	77.5	0.0	19.4	34.2	46.4	123.31	11.79	2.60	0.35	-	-
SB17	MCSB17-S-20213	22.0-22.4	100.0	100.0	100.0	100.0	99.2	97.7	95.0	94.1	88.9	82.0	80.0	77.9	73.4	71.3	69.5	0.0	26.6	35.9	37.5	128.16	10.48	2.62	0.46	-	-
SB17	MCSB17-S-29214	30.0-30.4	100.0	100.0	100.0	100.0	99.5	98.3	95.6	94.6	89.3	82.0	79.9	77.8	73.1	70.9	69.1	0.0	26.9	36.7	36.4	129.89	9.78	2.61	0.41	-	-
SB17	MCSB17-S-29215	47.6-48.0	100.0	100.0	100.0	98.4	98.2	97.2	95.1	94.4	90.4	84.6	83.2	81.7	78.6	77.1	75.8	1.6	19.8	34.8	43.8	123.87	12.49	2.64	0.41	-	-
SB17	MCSB17-S-29216	53.0-53.4	100.0	100.0	100.0	99.7	99.7	99.6	99.4	99.3	98.9	97.9	97.6	97.2	96.3	95.7	95.0	0.3	3.4	47.4	48.9	110.97	19.19	2.59	0.41	-	-
SB22	MCSB22-S-29204	12.0-12.4	100.0	100.0	100.0	100.0	99.9	99.1	97.3	96.7	92.7	87.3	85.8	83.4	79.3	77.3	76.4	0.0	20.7	39.2	40.1	115.78	16.59	2.63	0.46	-	-
SB22	MCSB22-S-29205	24.0-24.4	100.0	100.0	100.0	100.0	99.9	98.9	96.8	92.3	86.7	85.4	82.9	80.6	77.8	76.5	75.6	0.0	22.2	39.7	38.1	117.14	13.63	2.61	0.46	-	3.91 x 10 <sup>-8</sup>
SB22	MCSB22-S-29206	45.0-45.4	100.0	100.0	100.0	100.0	99.9	99.3	97.8	97.1	92.7	87.7	86.7	85.2	81.5	80.7	79.7	0.0	18.5	29.1	52.4	105.77	21.58	2.65	0.70	-	-
SB22	MCSB22-S-29207	61.0-61.4	100.0	100.0	100.0	99.9	99.8	99.5	99.0	98.8	97.9	96.2	95.8	95.5	94.2	93.7	93.2	0.1	5.7	47.5	46.7	117.52	15.72	2.59	0.63	-	-
SB25	MCSB25-S-29208	18.0-18.4	100.0	96.4	96.4	96.0	95.2	93.2	90.2	89.3	84.0	76.7	74.4	72.2	67.4	66.3	65.3	4.0	28.6	31.8	35.6	128.50	7.26	2.62	0.52	-	-
SB25	MCSB25-S-29209	25.6-26.0	100.0	100.0	100.0	99.4	99.0	97.0	93.5	92.4	84.9	76.8	74.9	71.9	65.4	63.1	61.9	0.6	34.0	32.1	33.3	125.74	11.02	2.63	0.52	-	-
SB25	MCSB25-S-29210	39.0-39.4	100.0	100.0	100.0	99.2	98.4	98.0	97.0	96.5	93.8	89.7	88.9	87.6	84.6	83.8	83.1	0.8	14.6	14.6	70.0	120.26	14.61	2.59	0.75	-	-
SB25	MCSB25-S-29211	49.0-49.4	100.0	98.9	98.9	96.9	96.6	93.1	88.6	87.5	71.9	67.9	67.0	65.1	64.5	64.2	64.0	3.1	32.4	30.6	33.9	127.52	7.47	2.57	0.52	-	-
SB49	MCSB49-S-30670	15.0-15.4	100.0	100.0	100.0	100.0	99.1	97.7	94.7	93.7	88.0	80.6	78.4	76.2	72.0	71.9	71.9	0.0	28.0	34.8	37.2	113.0	4.0	2.61	0.64	30.6	3.10 x 10 <sup>-8</sup>
SB49	MCSB49-S-30671	27.0-27.4	100.0	100.0	100.0	99.5	98.8	97.0	94.0	92.9	87.2	79.6	77.6	75.3	70.9	70.7	70.7	0.5	28.6	31.9	39.0	117.8	16.2	2.61	0.58	27.7	4.33 x 10 <sup>-8</sup>
SB49	MCSB49-S-30672	35.0-35.4	100.0	100.0	100.0	100.0	99.5	98.3	95.6	94.6	89.4	82.5	80.4	78.3	74.1	73.9	73.9	0.0	25.9	35.3	38.8	112.4	18.4	2.61	0.70	31.0	5.29 x 10 <sup>-8</sup>
SB49	MCSB49-S-30673	44.6-45.0	100.0	100.0	100.0	100.0	99.9	99.4	97.7	97.1	94.0	90.0	89.0	88.0	85.8	85.7	85.7	0.0	14.2	29.1	56.7	104.6	24.3	2.58	0.99	35.0	1.04 x 10 <sup>-7</sup>
SB49	MCSB49-S-30674	55.0-55.4	100.0	100.0	100.0	99.6	99.3	98.5	97.8	97.7	96.8	95.2	94.5	93.9	92.1	90.8	89.5	0.4	7.5	42.1	50.0	103.2	22.6	2.63	0.81	37.1	5.80 x 10 <sup>-8</sup>
SB50	MCSB50-S-30675	11.0-11.4	100.0	100.0	100.0	100.0	99.8	99.5	98.7	98.4	96.6	94.0	93.3	92.5	90.6	89.5	88.3	0.0	9.4	43.9	46.7	100.4	24.2	2.63	0.70	38.8	6.71 x 10 <sup>-8</sup>
SB50	MCSB50-S-30676	24.5-25.4	100.0	100.0	100.0	99.5	98.6	96.8	94.0	93.1	87.9	80.9	79.0	76.9	72.3	70.1	68.0	0.5	27.2	34.8	37.5	117.3	16.5	2.63	0.41	28.5	9.67 x 10 <sup>-8</sup>
SB50	MCSB50-S-30677	38.0-38.4	100.0	100.0	100.0	100.0	99.8	98.9	96.7	95.9	91.2	84.5	83.0	81.7	76.9	74.8	72.7	0.0	23.1	38.1	38.8	115.4	19.6	2.62	0.46	29.4	7.46 x 10 <sup>-8</sup>
SB50	MCSB50-S-30678	51.0-51.4	100.0	100.0	100.0	99.8	99.5	98.5	96.4	95.6	91.4	85.6	84.2	82.6	79.3	77.6	75.9	0.2	20.5	34.3	45.0	98.6	24.6	2.59	0.41	39.0	4.43 x 10 <sup>-8</sup>
SB50	MCSB50-S-30679	58.6-59.0	100.0	100.0	100.0	99.8	99.7	99.5	99.1	99.0	98.1	96.2	95.5	94.9	93.6	92.8	91.9	0.2	6.2	46.8	46.8	112.9	18.3	2.58	0.52	29.9	3.65 x 10 <sup>-8</sup>

<sup>a</sup> Analyses were by Alfred Benesch and Company, Lincoln, Nebraska, with ASTM D442-90 "Method for Particle Size Analysis of Soils," and ASTM D854 "Standard Test Method for Specific Gravity of Soil Solids by Water Pycnometer." Bulk density and porosity were determined by the "Volumetric and Displacement Method" of the Corps of Engineers, EM1110-2-1906, Appendix II, Unit Weights, Void Ratio, and Porosity. Total organic carbon in soil was determined by SW-846 Method 9060 at AgSource Laboratories, Lincoln, Nebraska.



**Appendix E:**

**Lithologic Logs and Electronic Cone Penetrometer Logs**

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**Argonne National Laboratory**

**Boring ID: SB01**

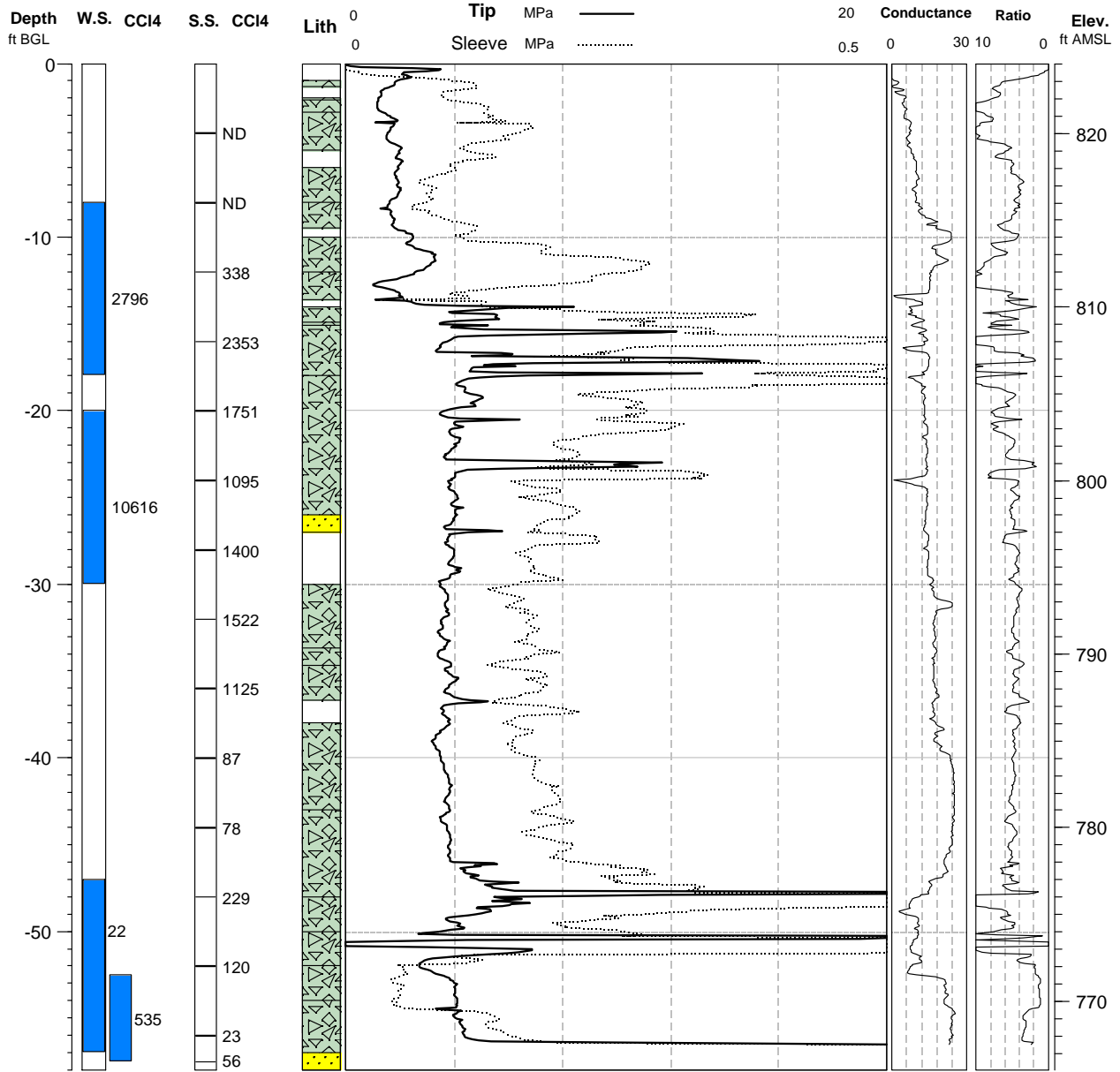
**Project: Montgomery City, MO**

**Elevation: 824.03 ft**

**Geologist: Bob Sedivy**

**Depth: 58 ft BGL**

**Log Date: 10/23/2010**



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



**Argonne National Laboratory**

**Well ID: SB01**

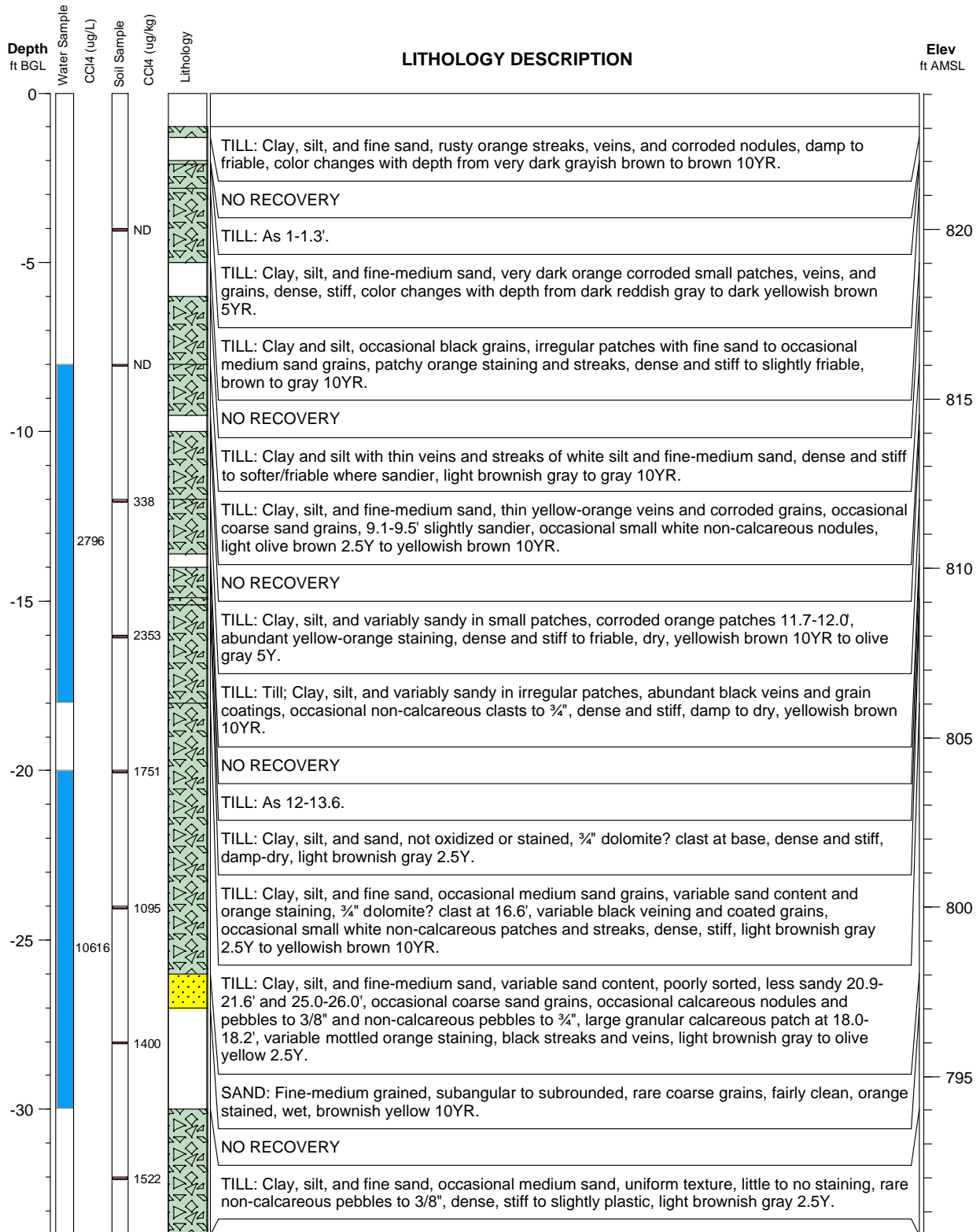
**Project: Montgomery City, MO**

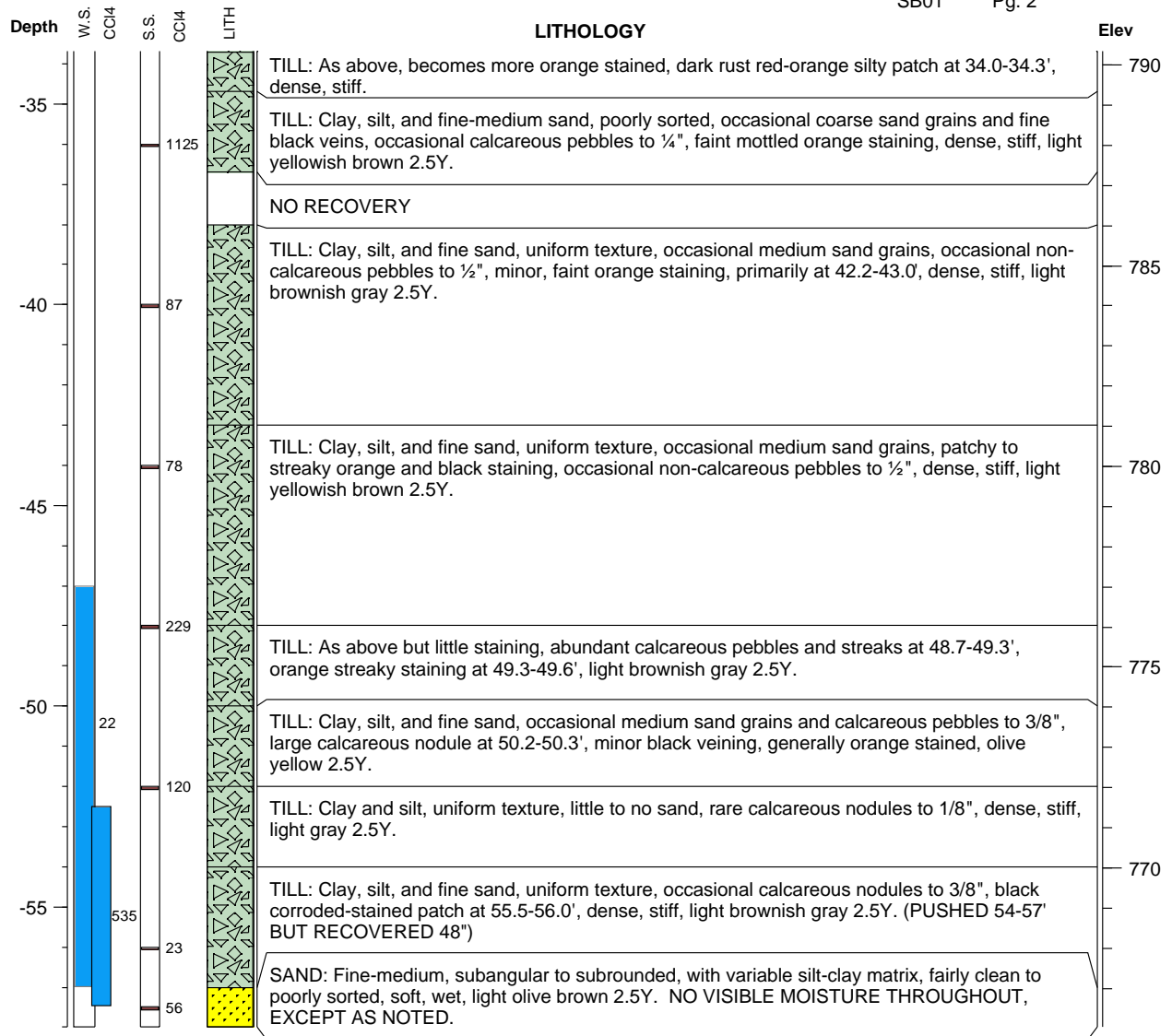
**Elevation: 824.03 ft**

**Log Date: 10/22/2010**

**Geologist: Bob Sedivy**

**Depth: 58 ft BGL**





**Argonne National Laboratory**

**Well ID: SB08**

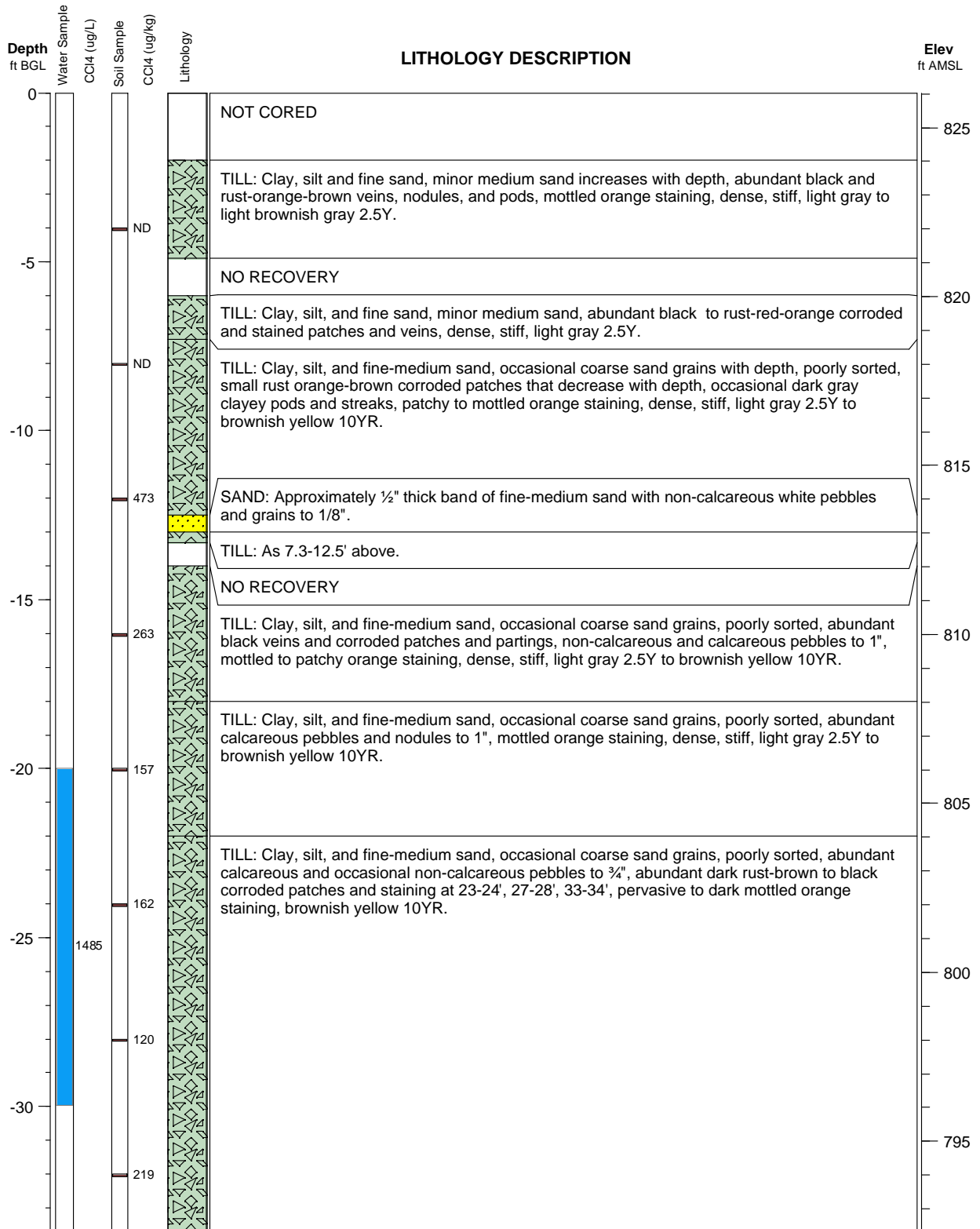
**Project: Montgomery City, MO**

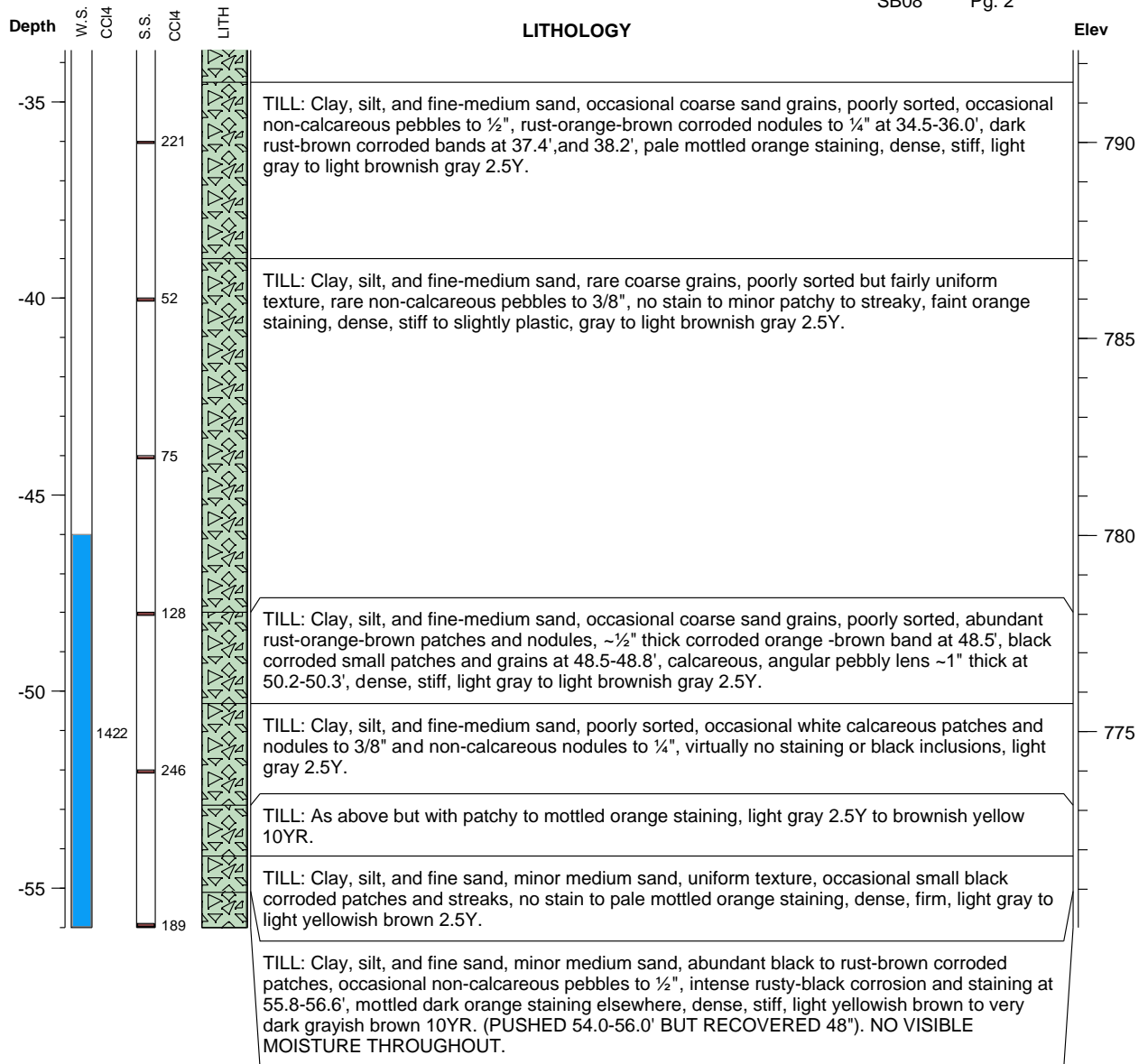
**Elevation: 826.03 ft**

**Log Date: 12/4/2010**

**Geologist: Bob Sedivy**

**Depth: 56 ft BGL**







**Argonne National Laboratory**

**Boring ID: SB09**

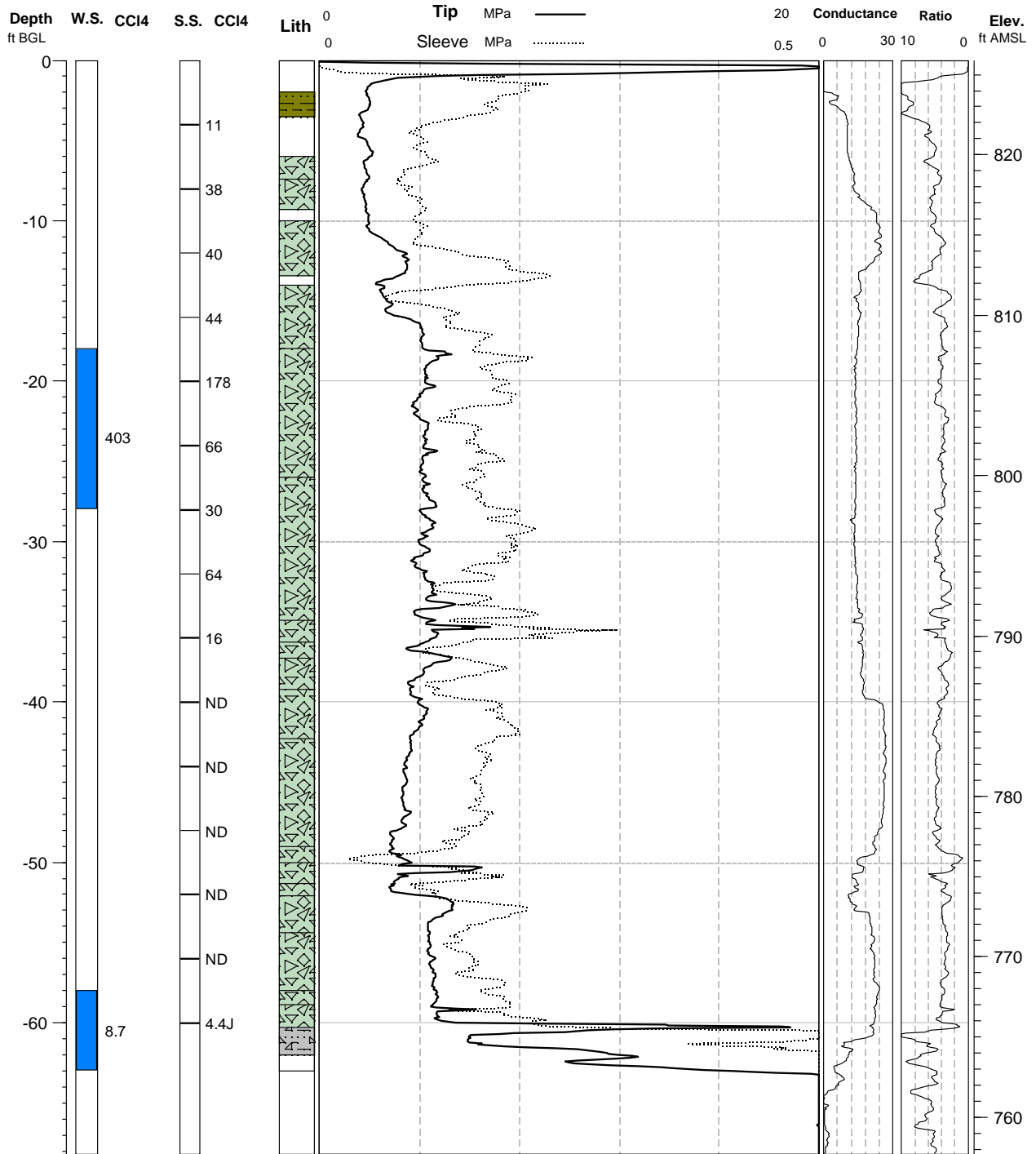
**Project: Montgomery City, MO**

**Elevation: 825.89 ft**

**Geologist: Bob Sedivy**

**Depth: 68.18 ft BGL**

**Log Date: 10/24/2010**



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

**Argonne National Laboratory**

**Well ID: SB09**

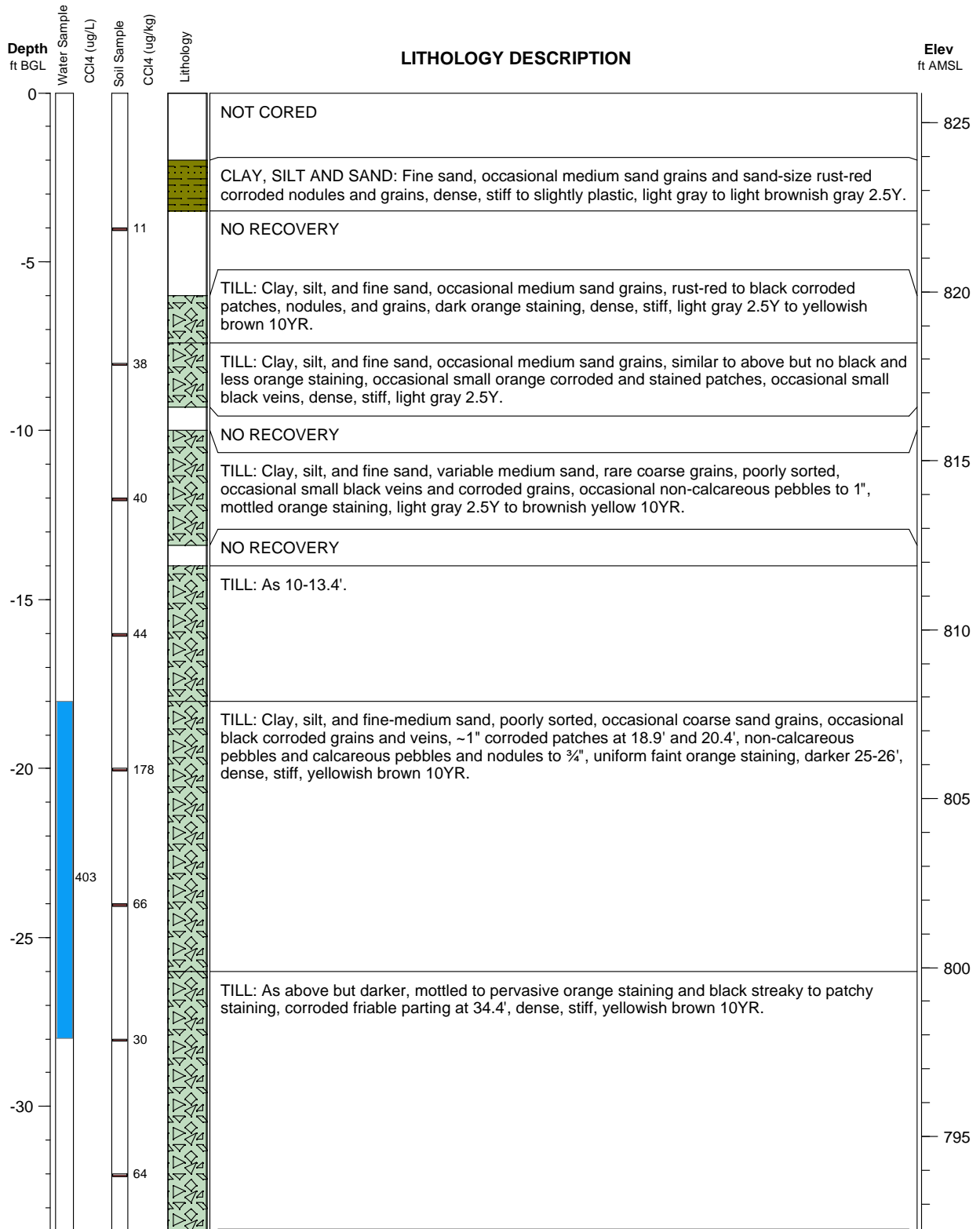
**Project: Montgomery City, MO**

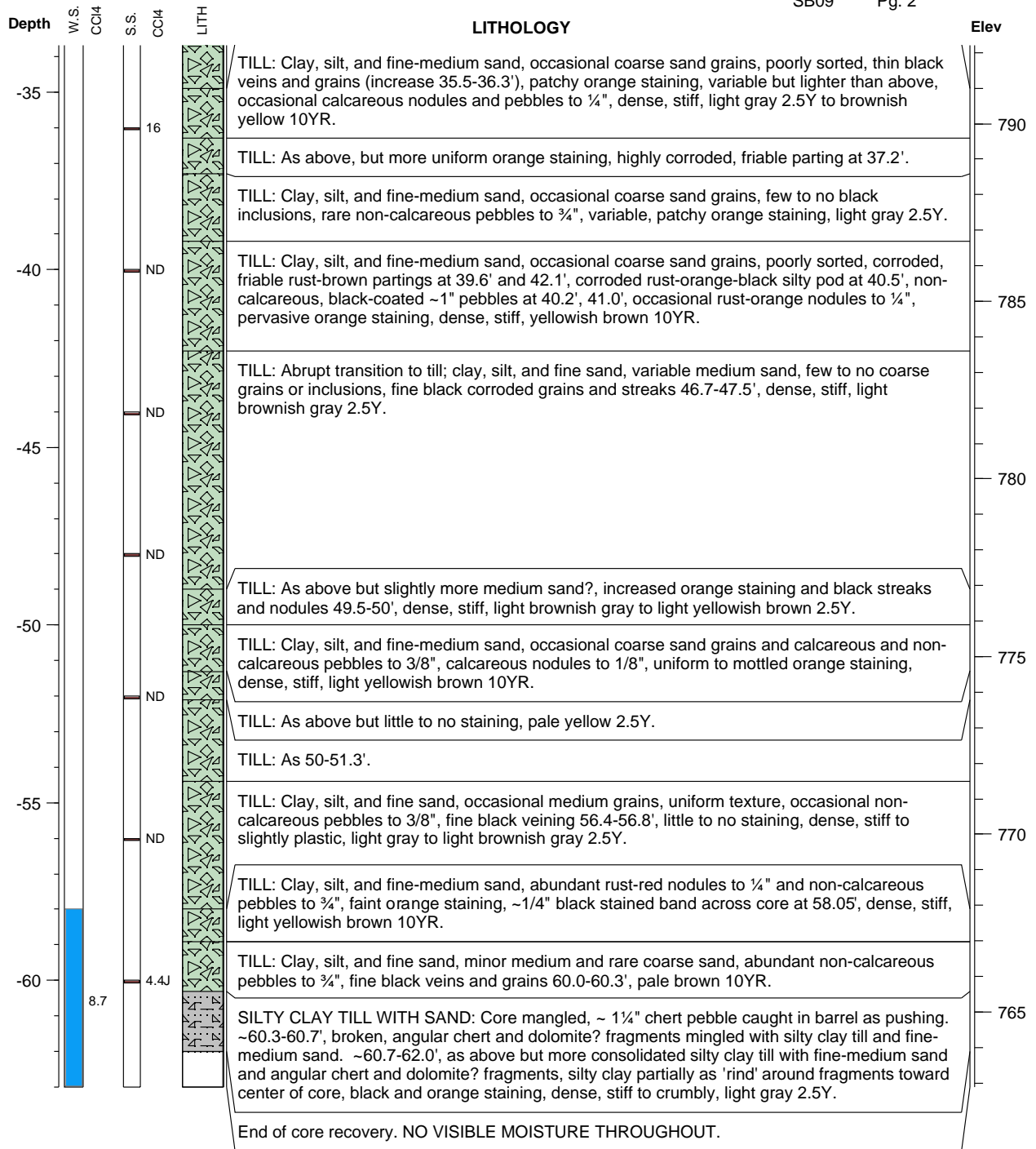
**Elevation: 825.89 ft**

**Log Date: 10/26/2010**

**Geologist: Bob Sedivy**

**Depth: 68.18 ft BGL**





**Argonne National Laboratory**

**Boring ID: SB11**

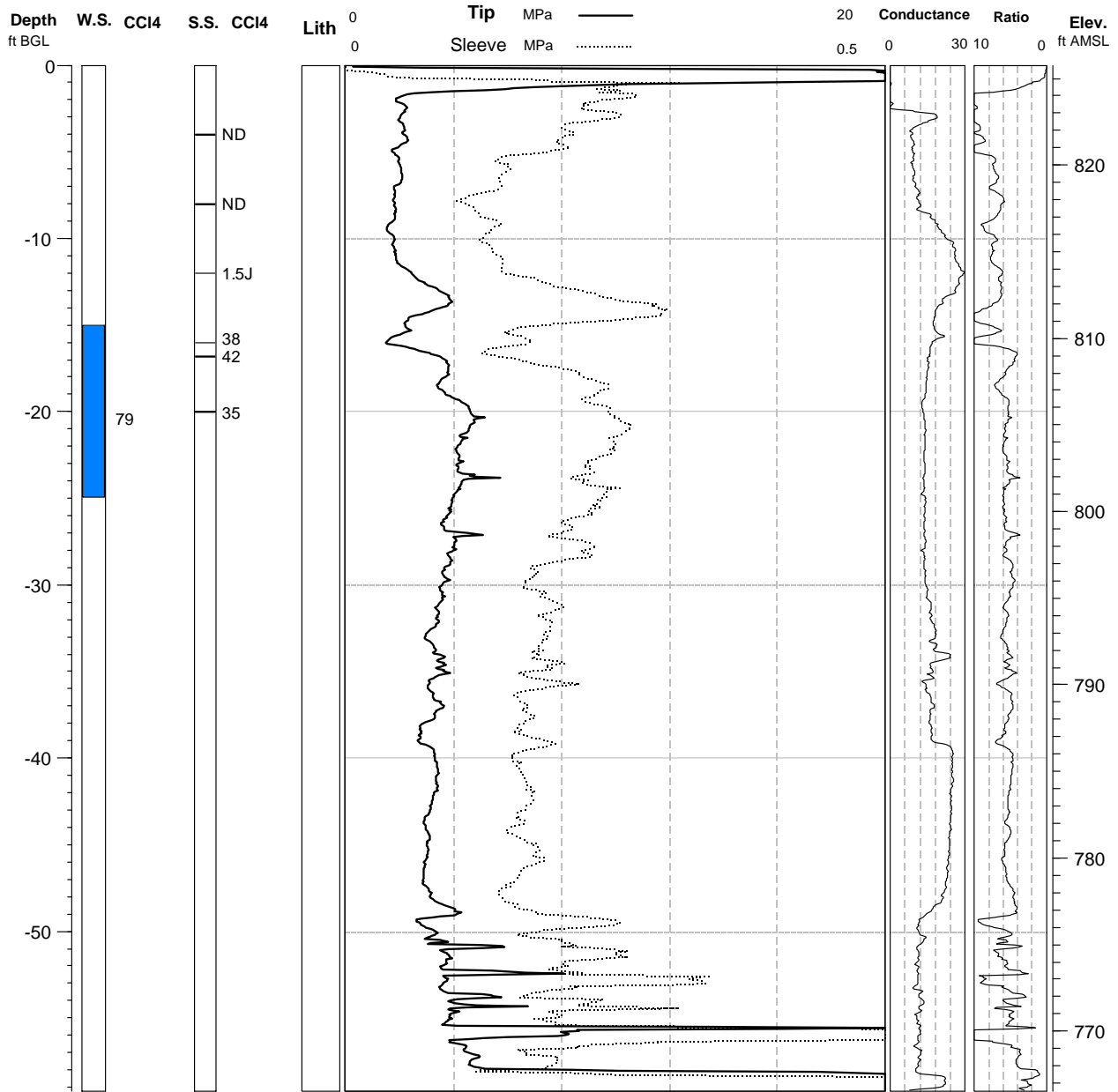
**Project: Montgomery City, MO**

**Elevation: 825.77 ft**

**Geologist: Bob Sedivy**

**Depth: 59.25 ft BGL**

**Log Date: 10/23/2010**



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



**Argonne National Laboratory**

**Well ID: SB16**

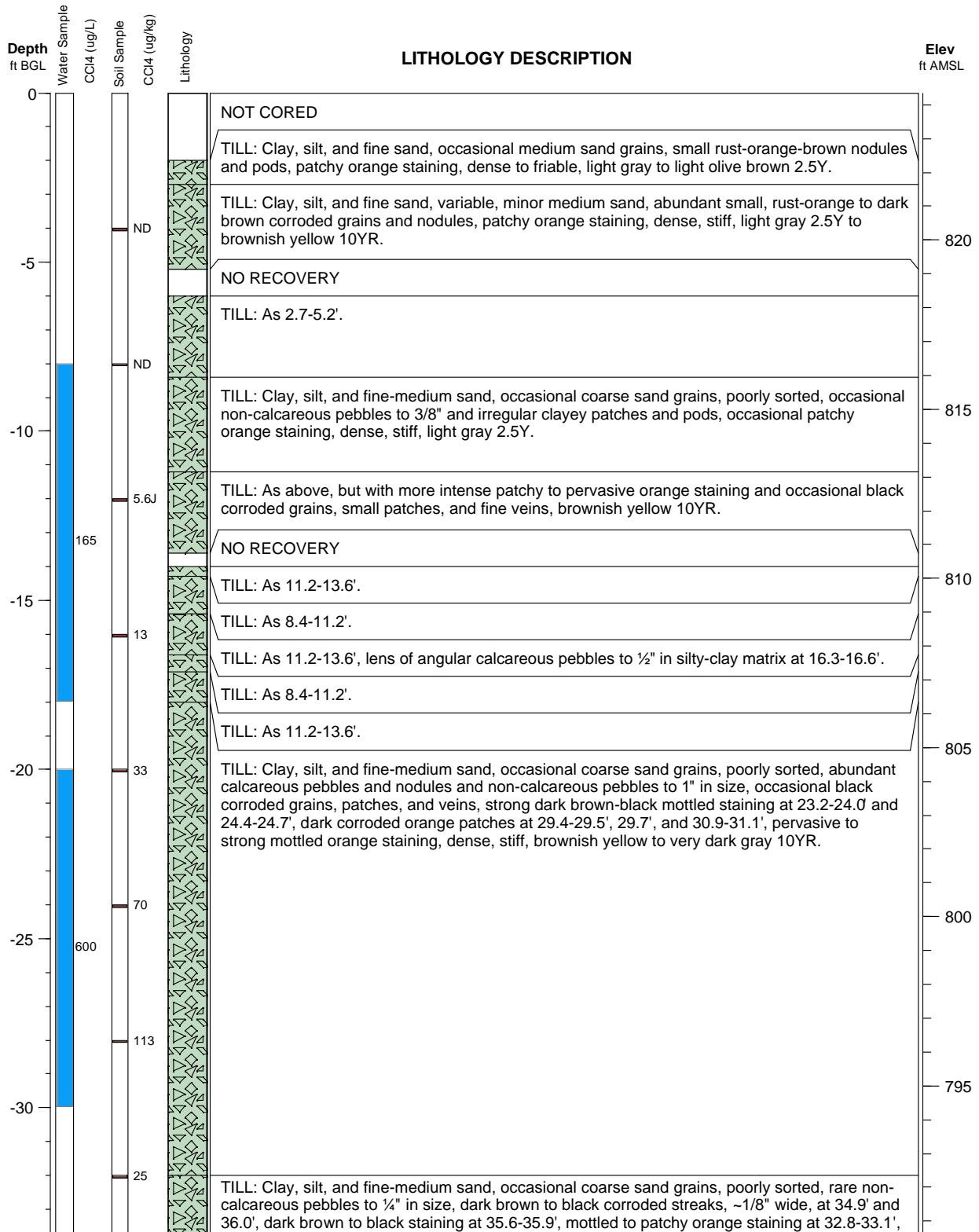
**Project: Montgomery City, MO**

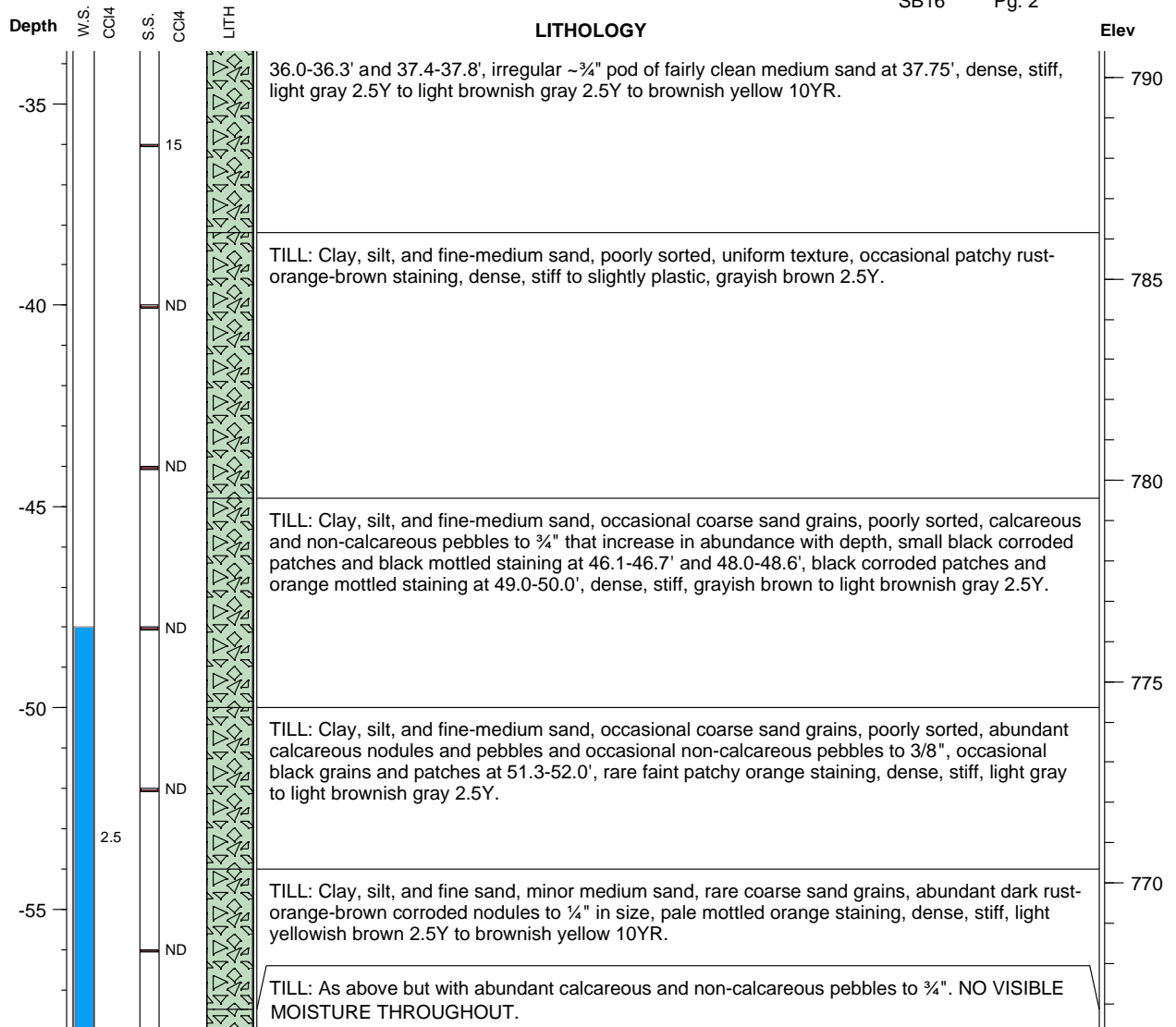
**Elevation: 824.35 ft**

**Log Date: 12/6/2010**

**Geologist: Bob Sedivy**

**Depth: 58 ft BGL**





**Argonne National Laboratory**

**Boring ID: SB17**

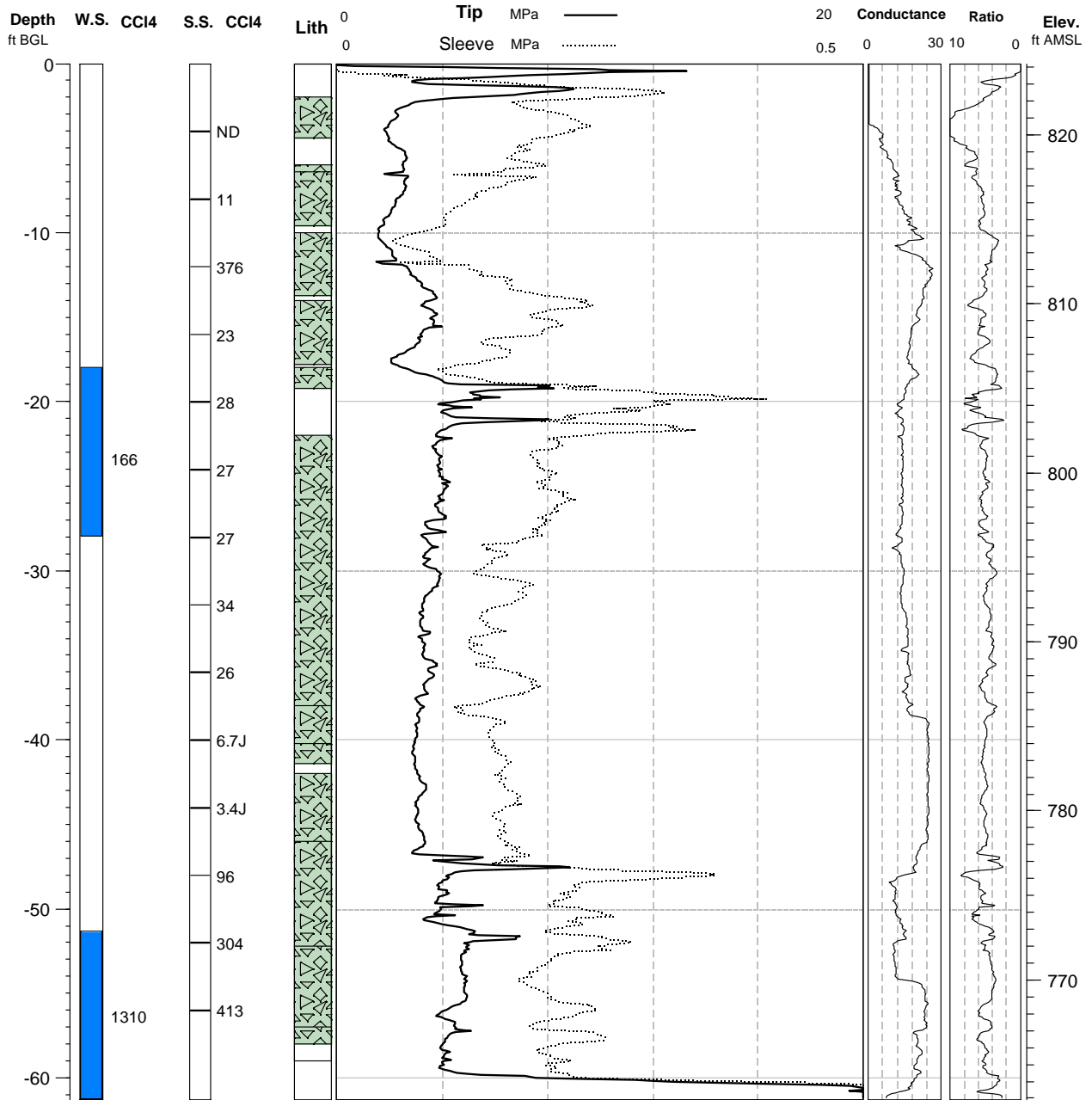
**Project: Montgomery City, MO**

**Elevation: 824.21 ft**

**Geologist: Bob Sedivy**

**Depth: 61.15 ft BGL**

**Log Date: 10/23/2010**



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

**Argonne National Laboratory**

**Well ID: SB17**

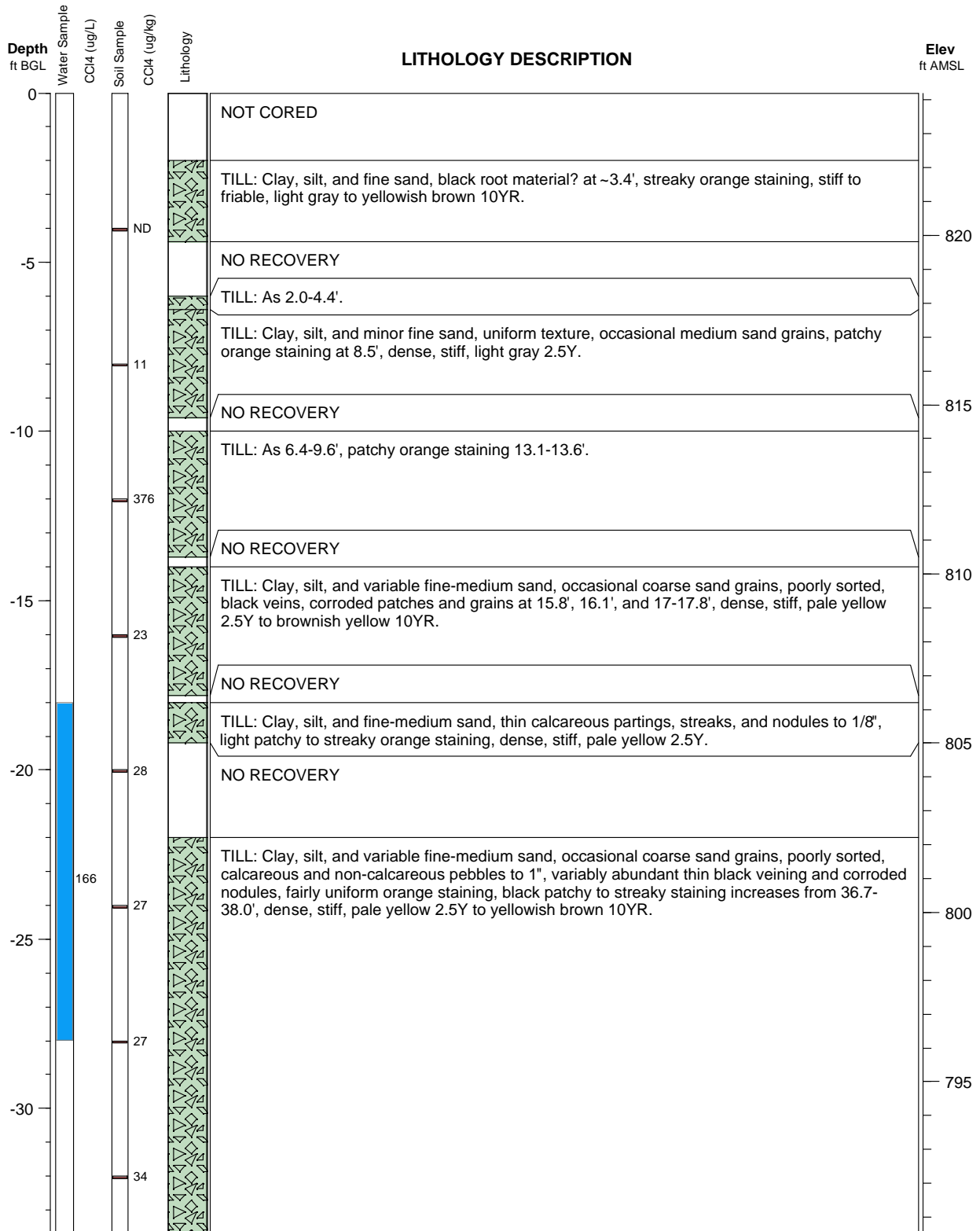
**Project: Montgomery City, MO**

**Elevation: 824.21 ft**

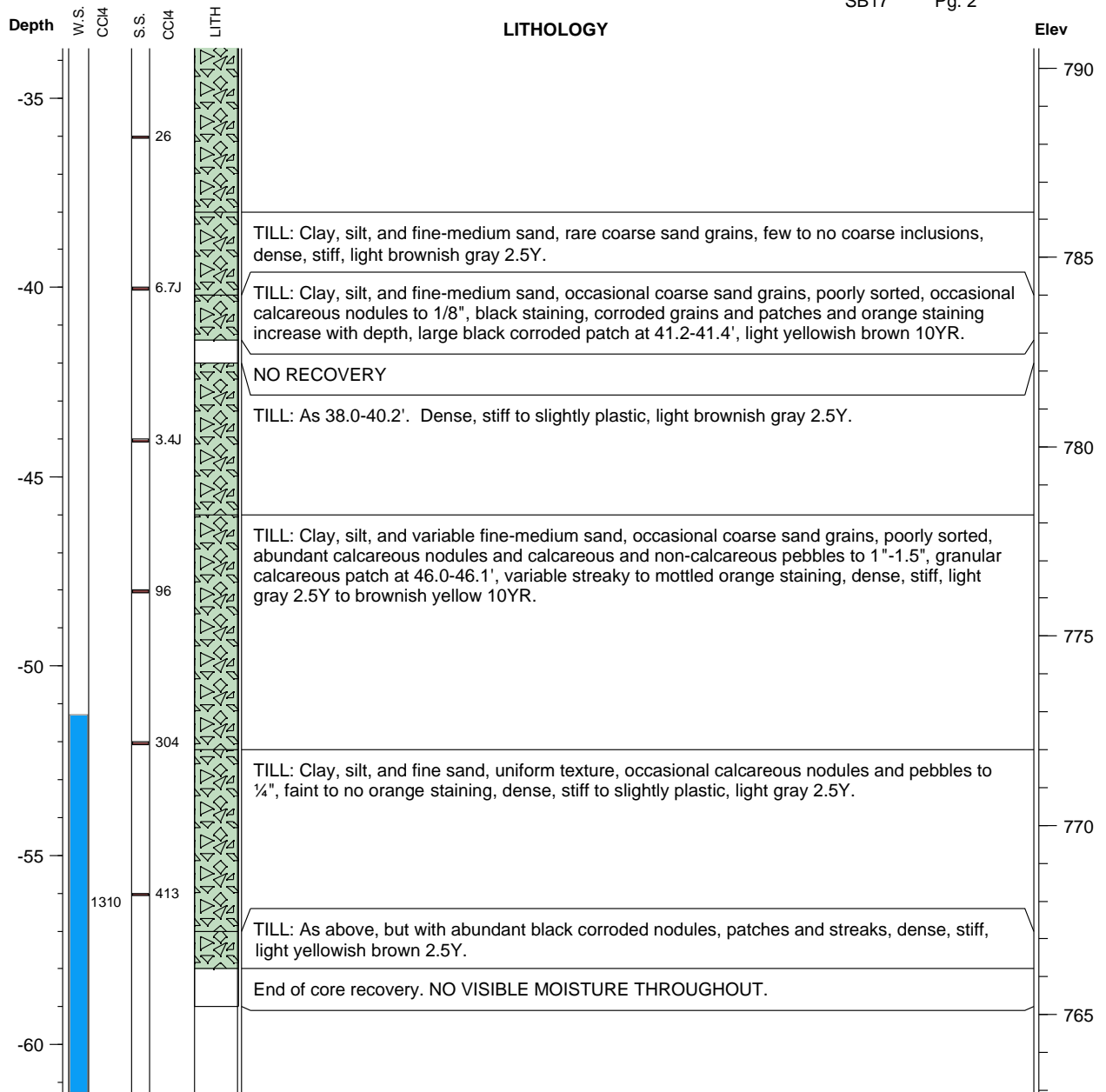
**Log Date: 10/25/2010**

**Geologist: Bob Sedivy**

**Depth: 61.15 ft BGL**







**Argonne National Laboratory**

**Boring ID: SB22**

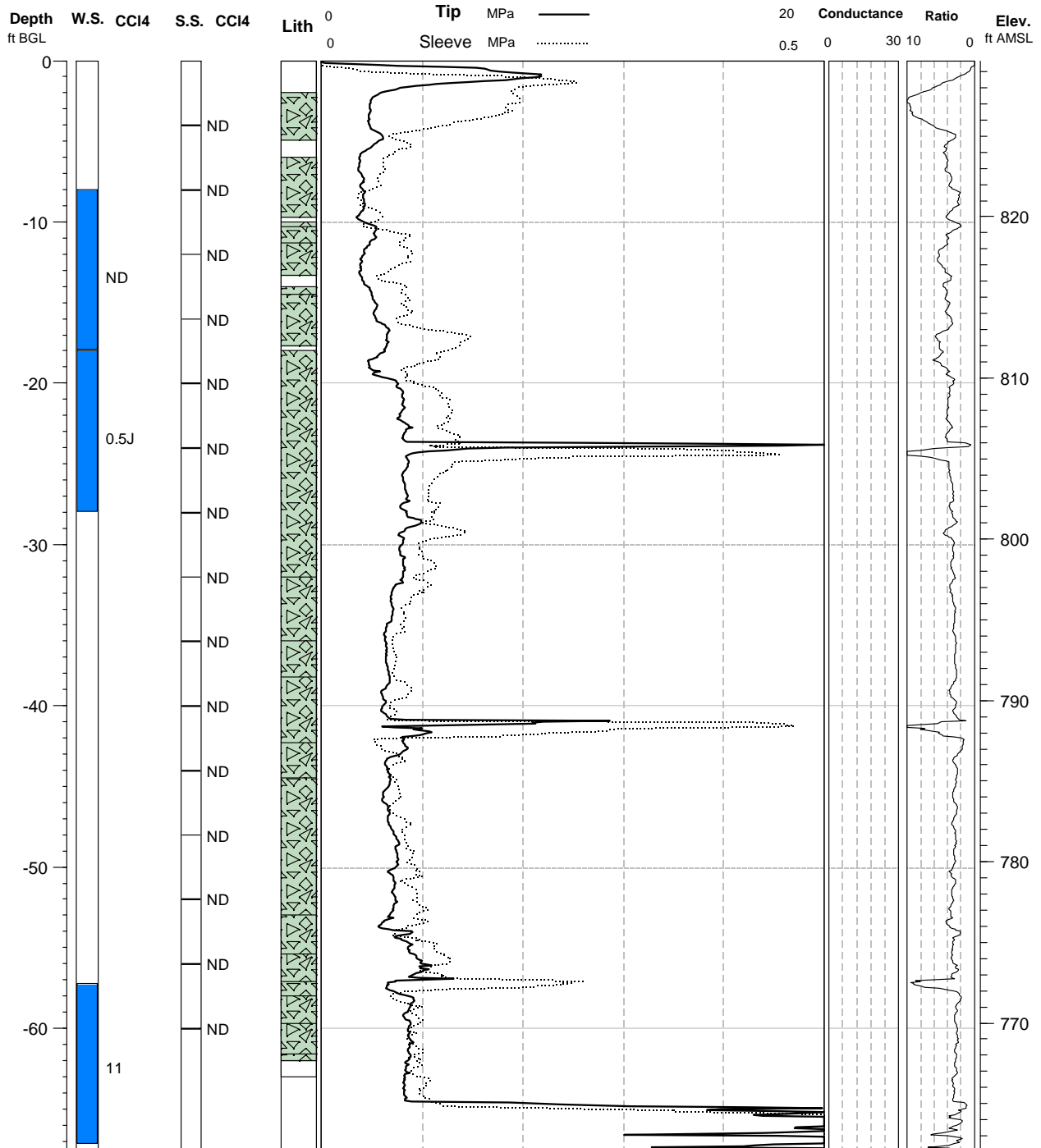
**Project: Montgomery City, MO**

**Elevation: 829.68 ft**

**Geologist: Bob Sedivy**

**Depth: 67.52 ft BGL**

**Log Date: 10/23/2010**



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

**Argonne National Laboratory**

**Well ID: SB22**

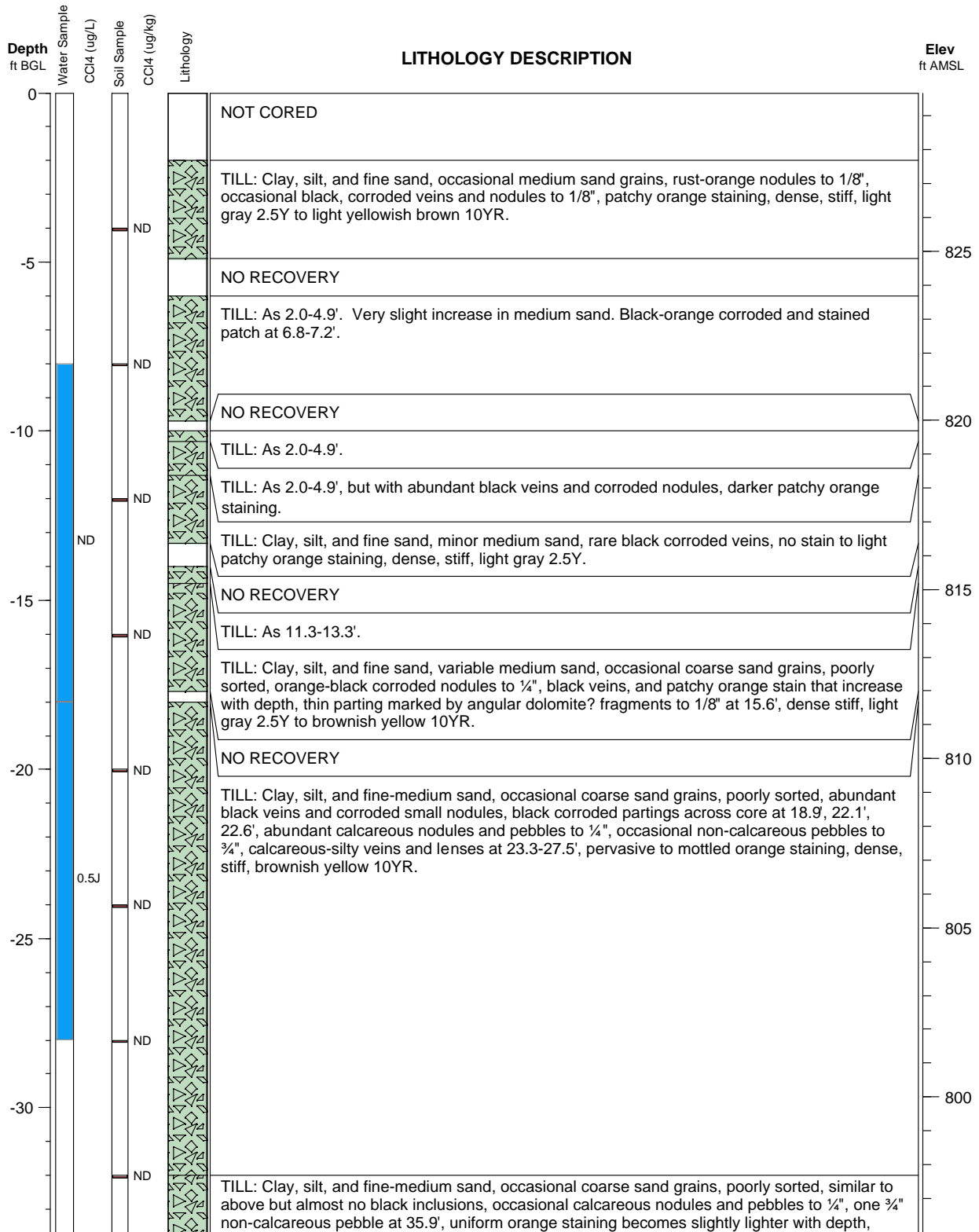
**Project: Montgomery City, MO**

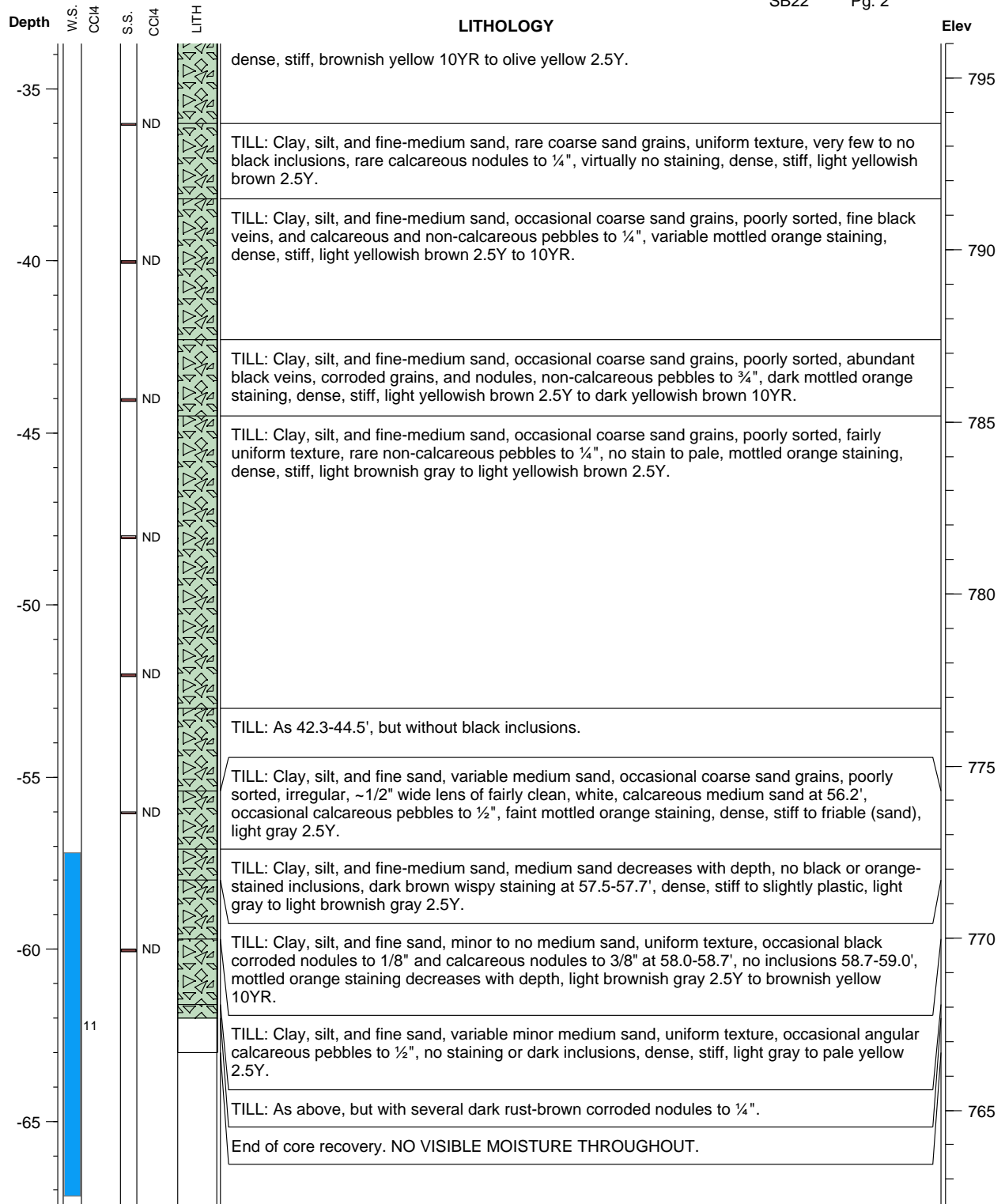
**Elevation: 829.68 ft**

**Log Date: 10/26/2010**

**Geologist: Bob Sedivy**

**Depth: 67.52 ft BGL**







**Argonne National Laboratory**

**Boring ID: SB25**

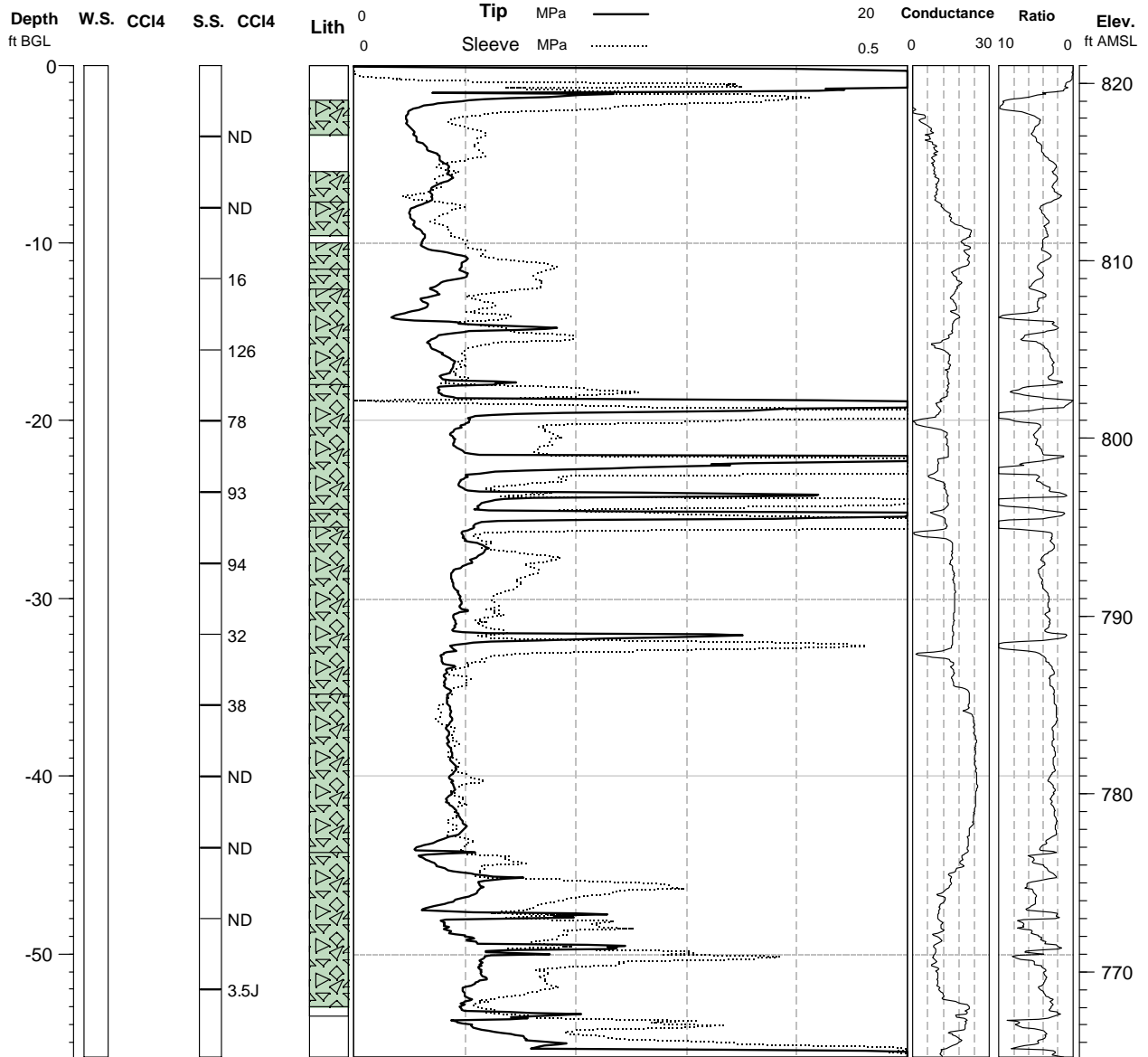
**Project: Montgomery City, MO**

**Elevation: 821.01 ft**

**Geologist: Bob Sedivy**

**Depth: 55.84 ft BGL**

**Log Date: 10/24/2010**



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

**Argonne National Laboratory**

**Well ID: SB25**

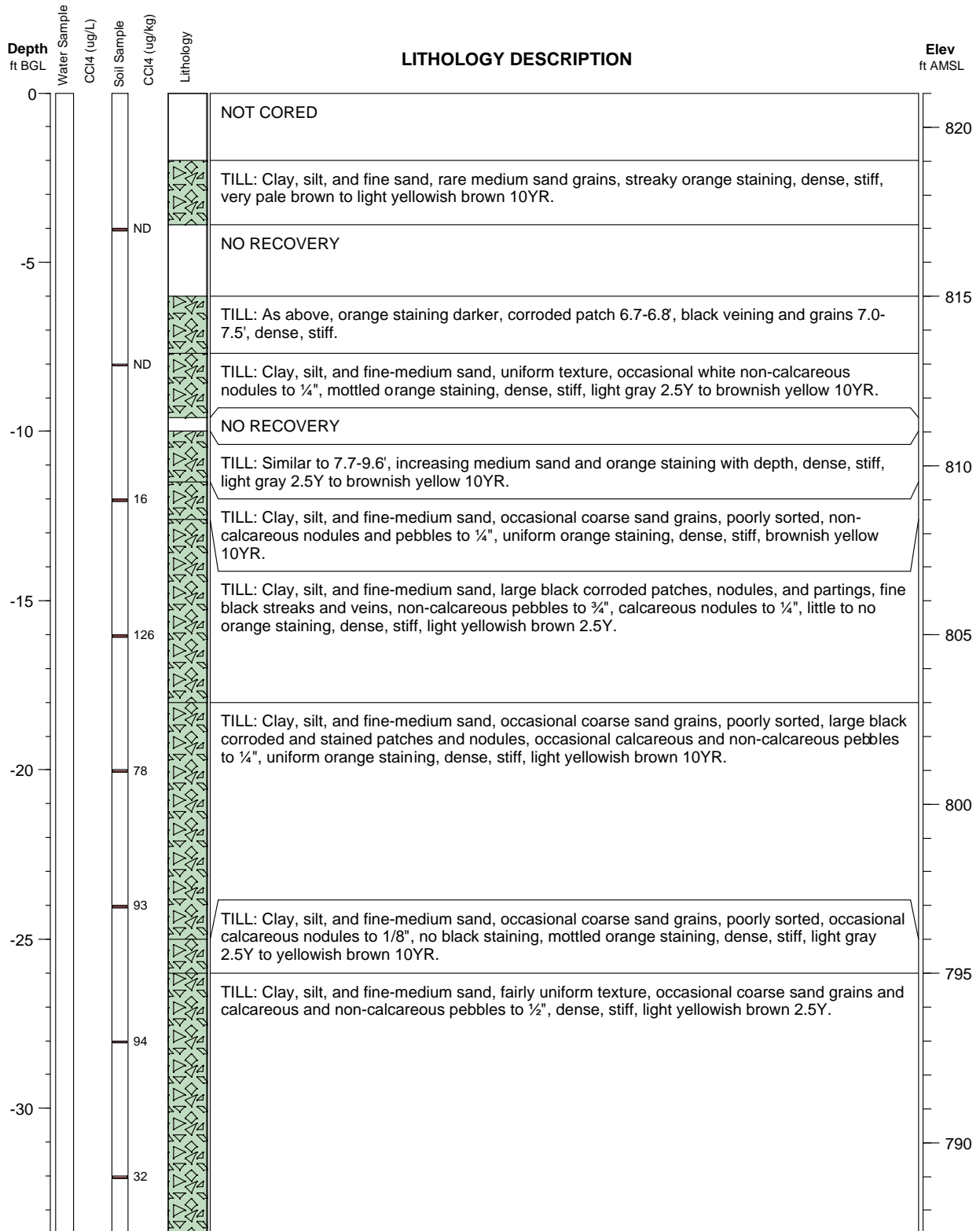
**Project: Montgomery City, MO**

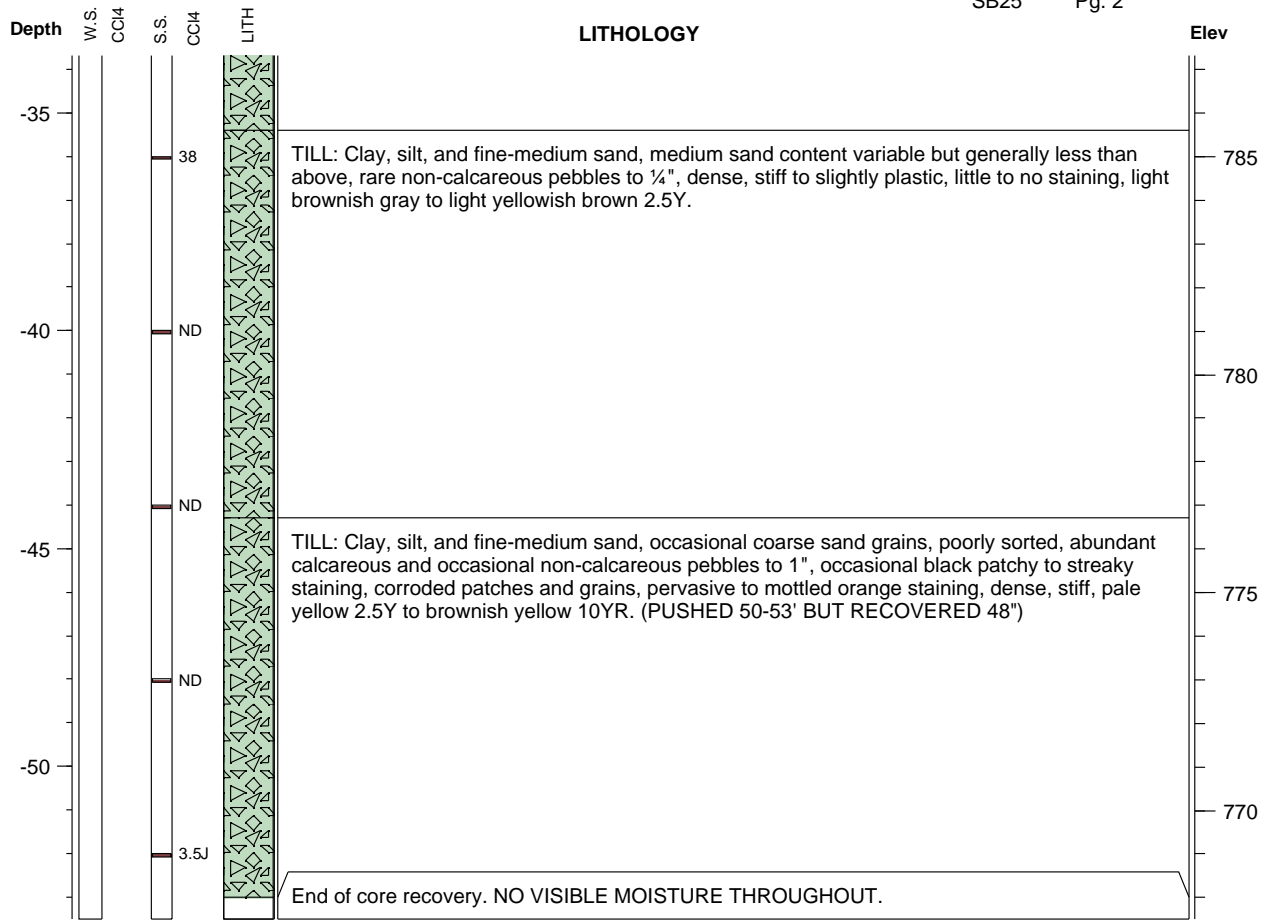
**Elevation: 821.01 ft**

**Log Date: 10/24/2010**

**Geologist: Bob Sedivy**

**Depth: 55.84 ft BGL**





**Argonne National Laboratory**

**Boring ID: SB27**

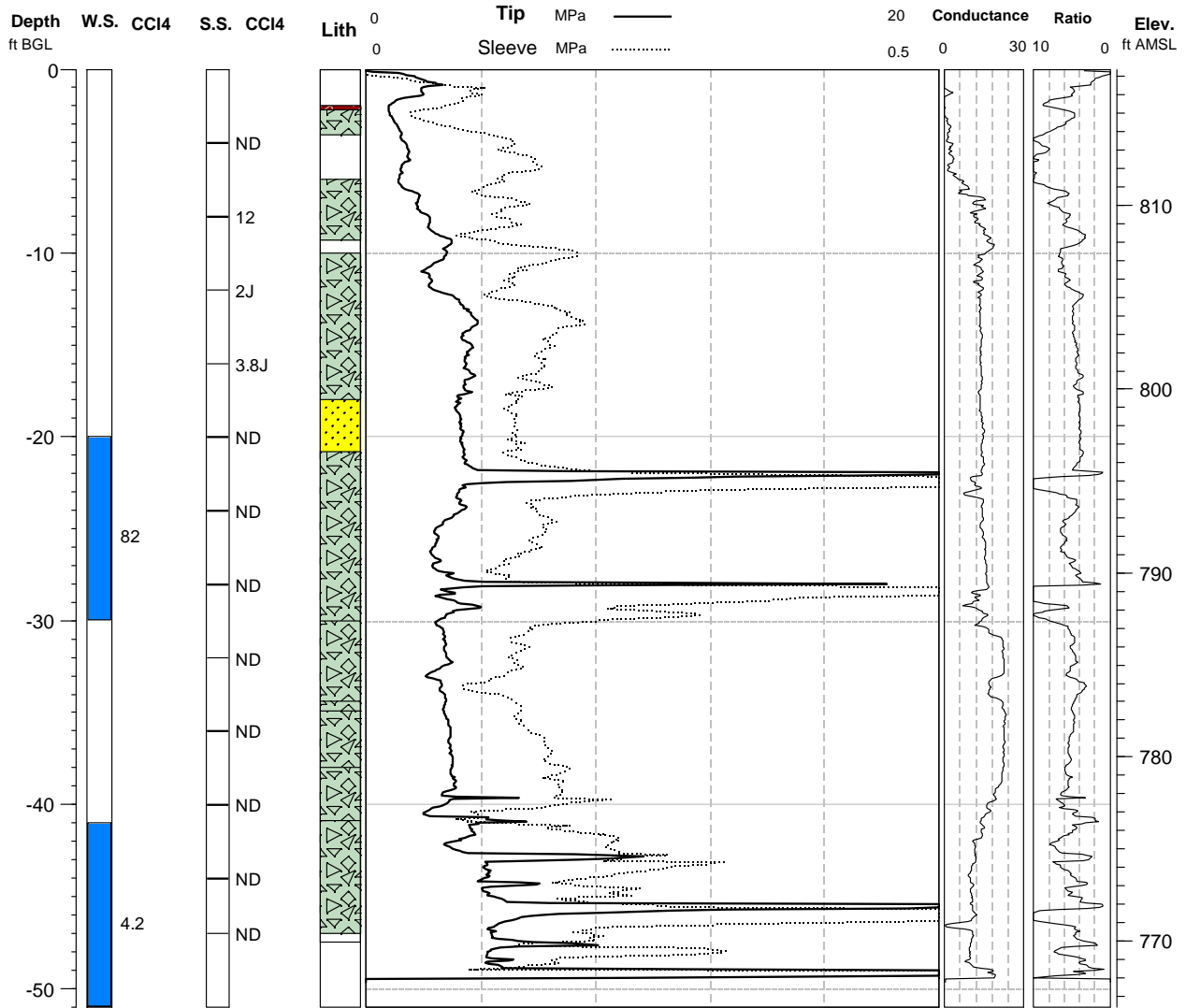
**Project: Montgomery City, MO**

**Elevation: 817.41 ft**

**Geologist: Bob Sedivy**

**Depth: 49.67 ft BGL**

**Log Date: 10/24/2010**



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



**Argonne National Laboratory**

**Well ID: SB27**

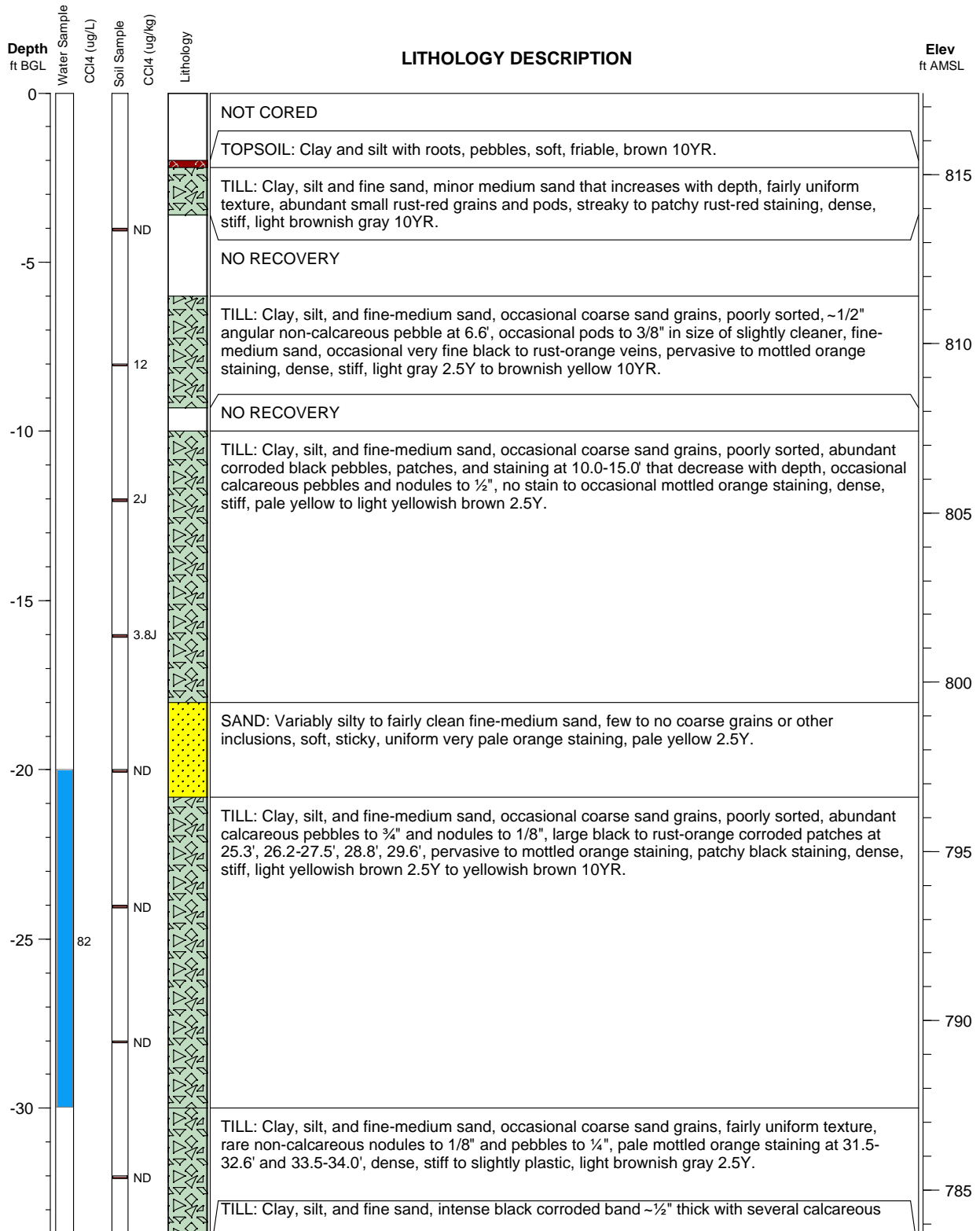
**Project: Montgomery City, MO**

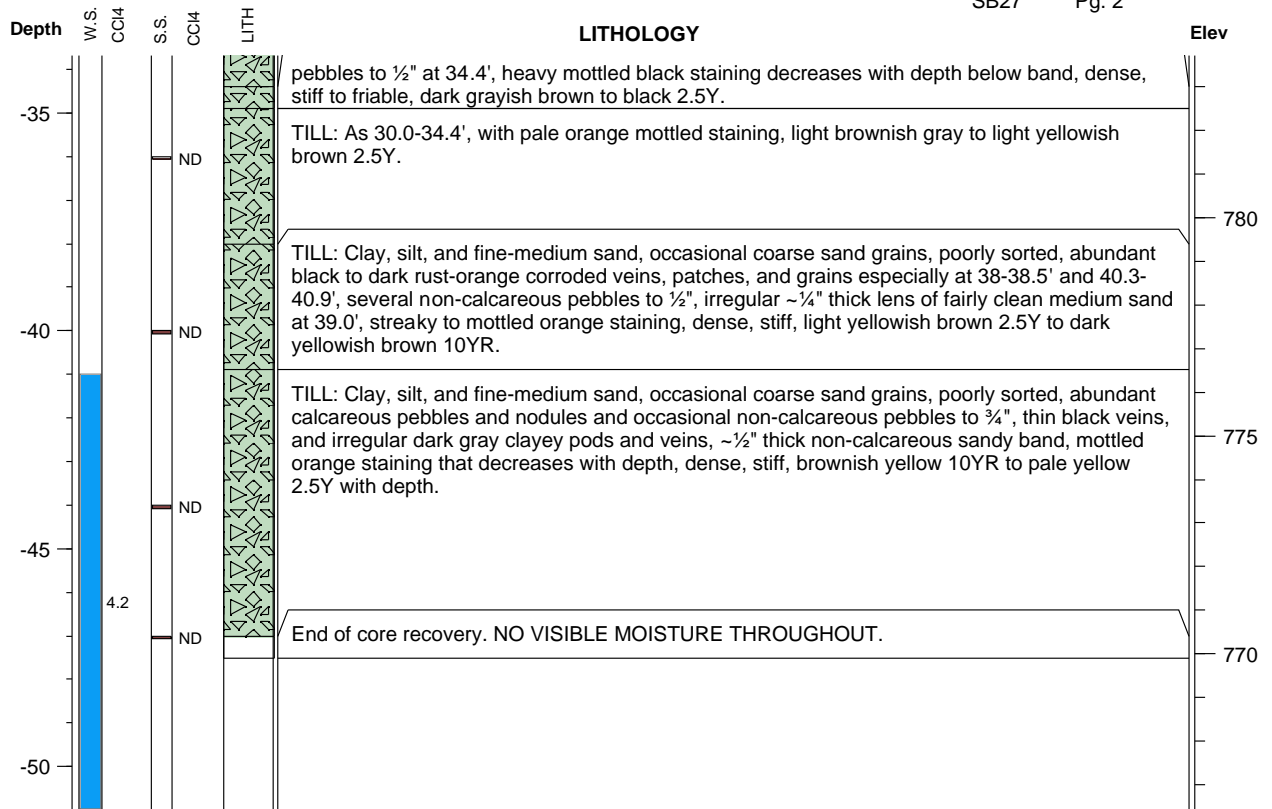
**Elevation: 817.41 ft**

**Log Date: 12/1/2010**

**Geologist: Bob Sedivy**

**Depth: 49.67 ft BGL**





**Argonne National Laboratory**

**Boring ID: SB36**

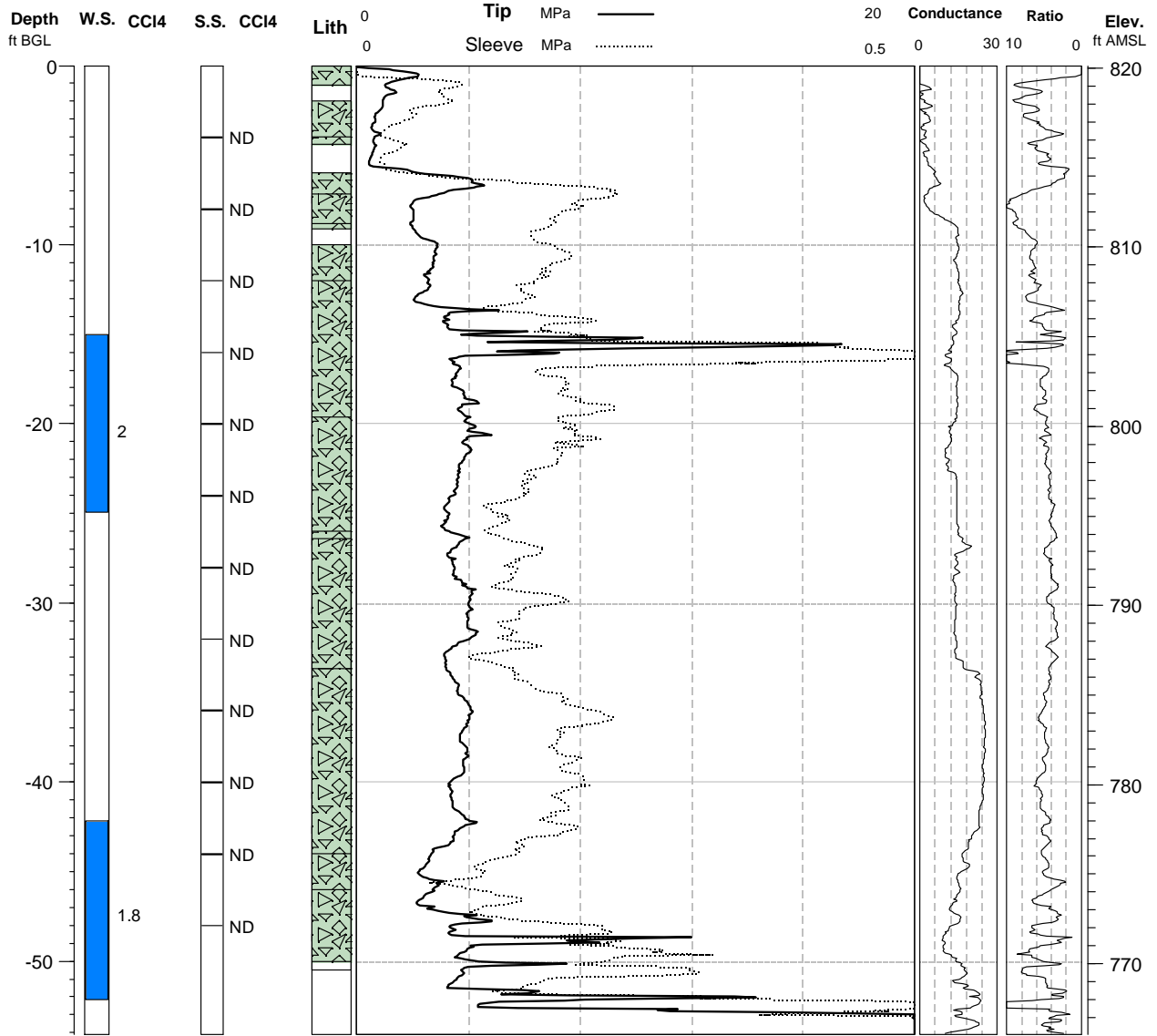
**Project: Montgomery City, MO**

**Elevation: 820.15 ft**

**Geologist: Bob Sedivy**

**Depth: 54.07 ft BGL**

**Log Date: 10/25/2010**



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

**Argonne National Laboratory**

**Well ID: SB36**

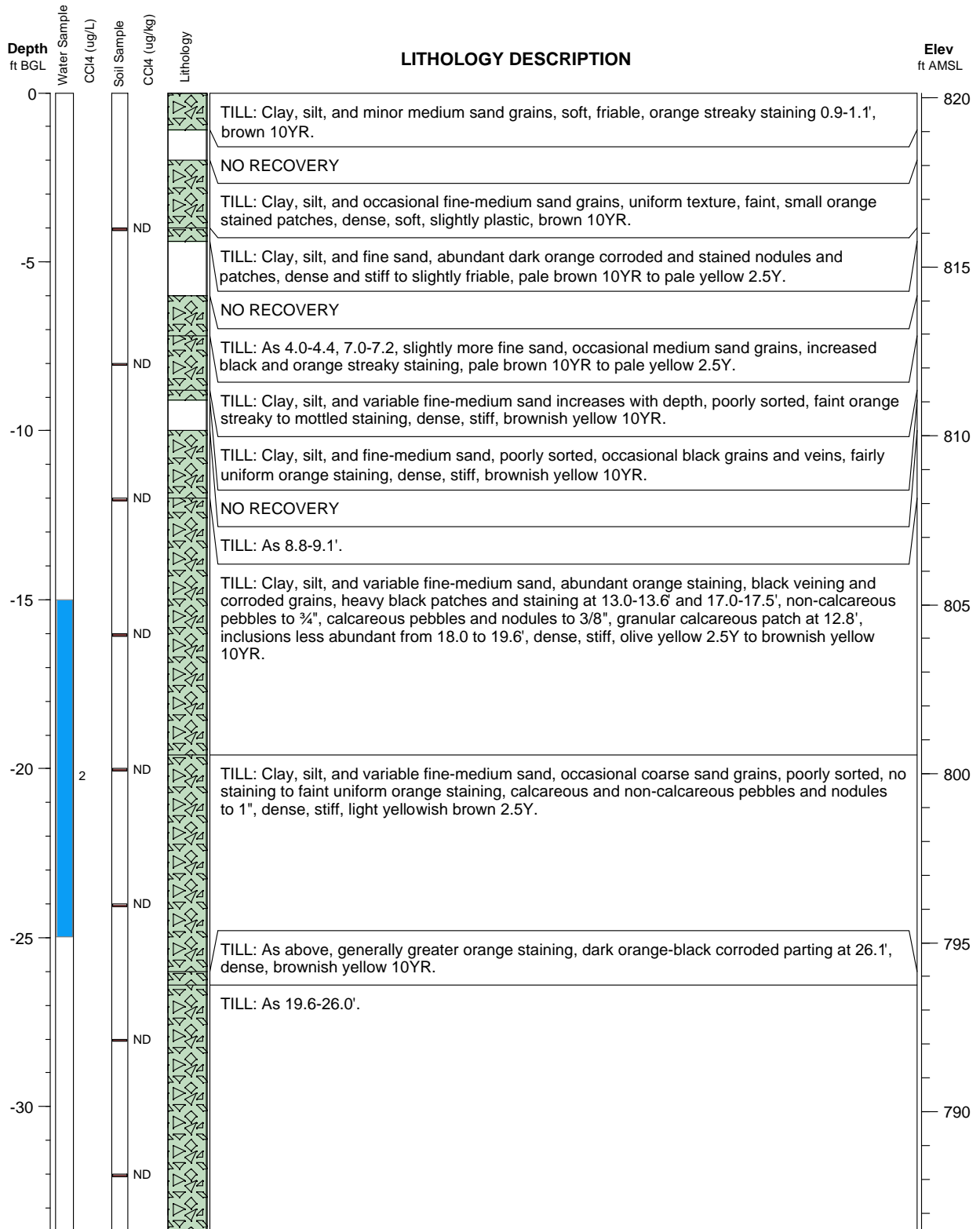
**Project: Montgomery City, MO**

**Elevation: 820.15 ft**

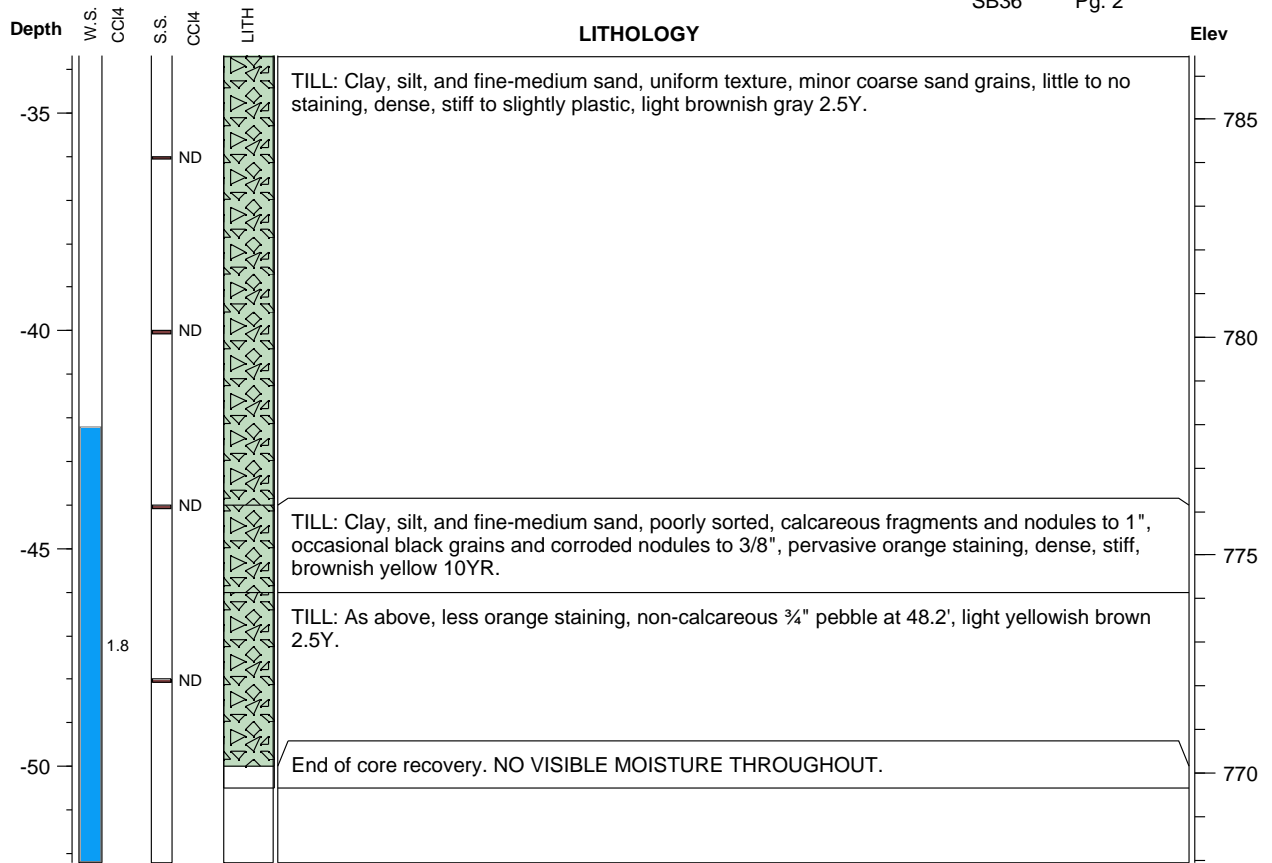
**Log Date: 10/25/2010**

**Geologist: Bob Sedivy**

**Depth: 54.07 ft BGL**







**Argonne National Laboratory**

**Boring ID: SB37**

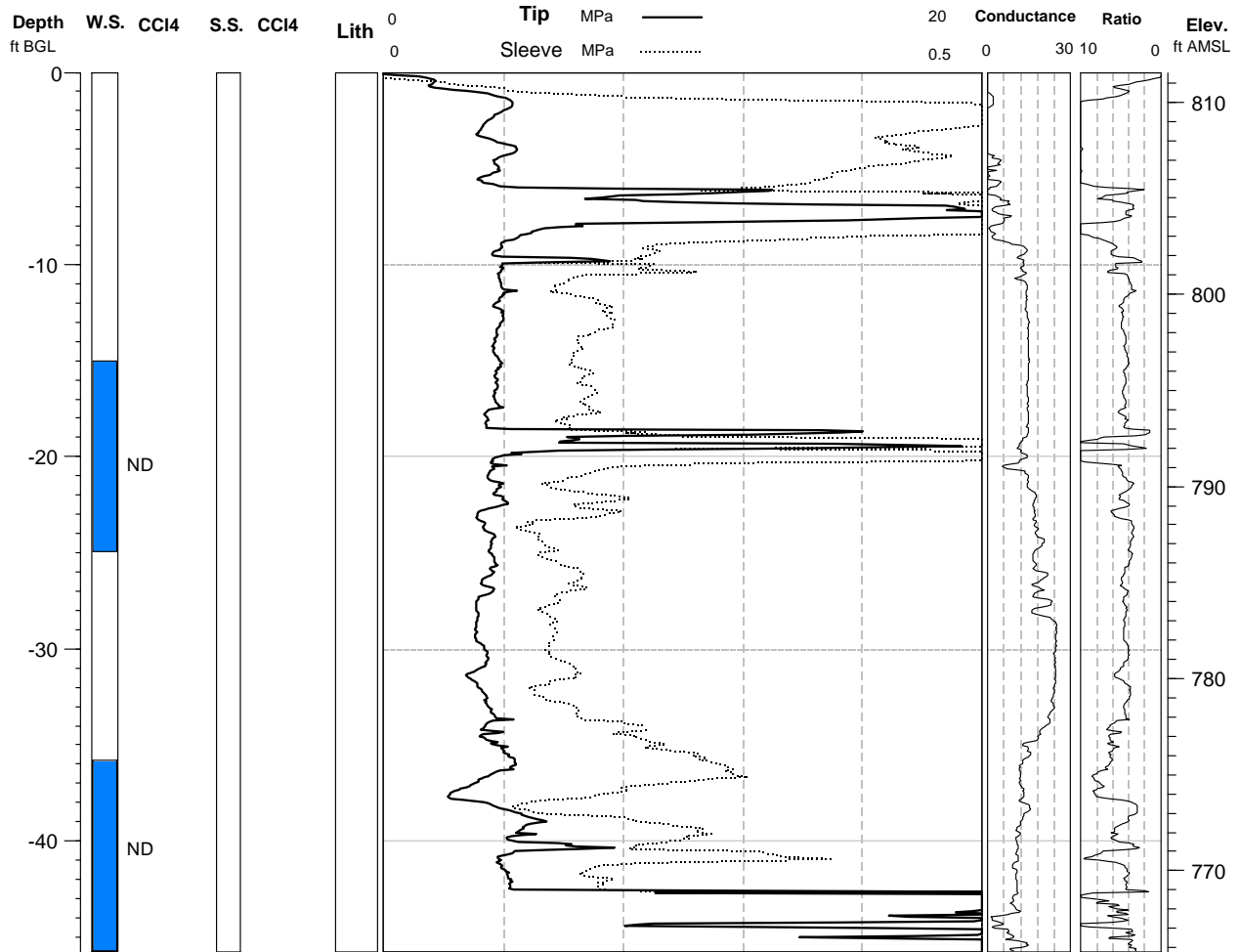
**Project: Montgomery City, MO**

**Elevation: 811.55 ft**

**Geologist: Bob Sedivy**

**Depth: 45.73 ft BGL**

**Log Date: 11/30/2010**



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

**Argonne National Laboratory**

**Boring ID: SB38**

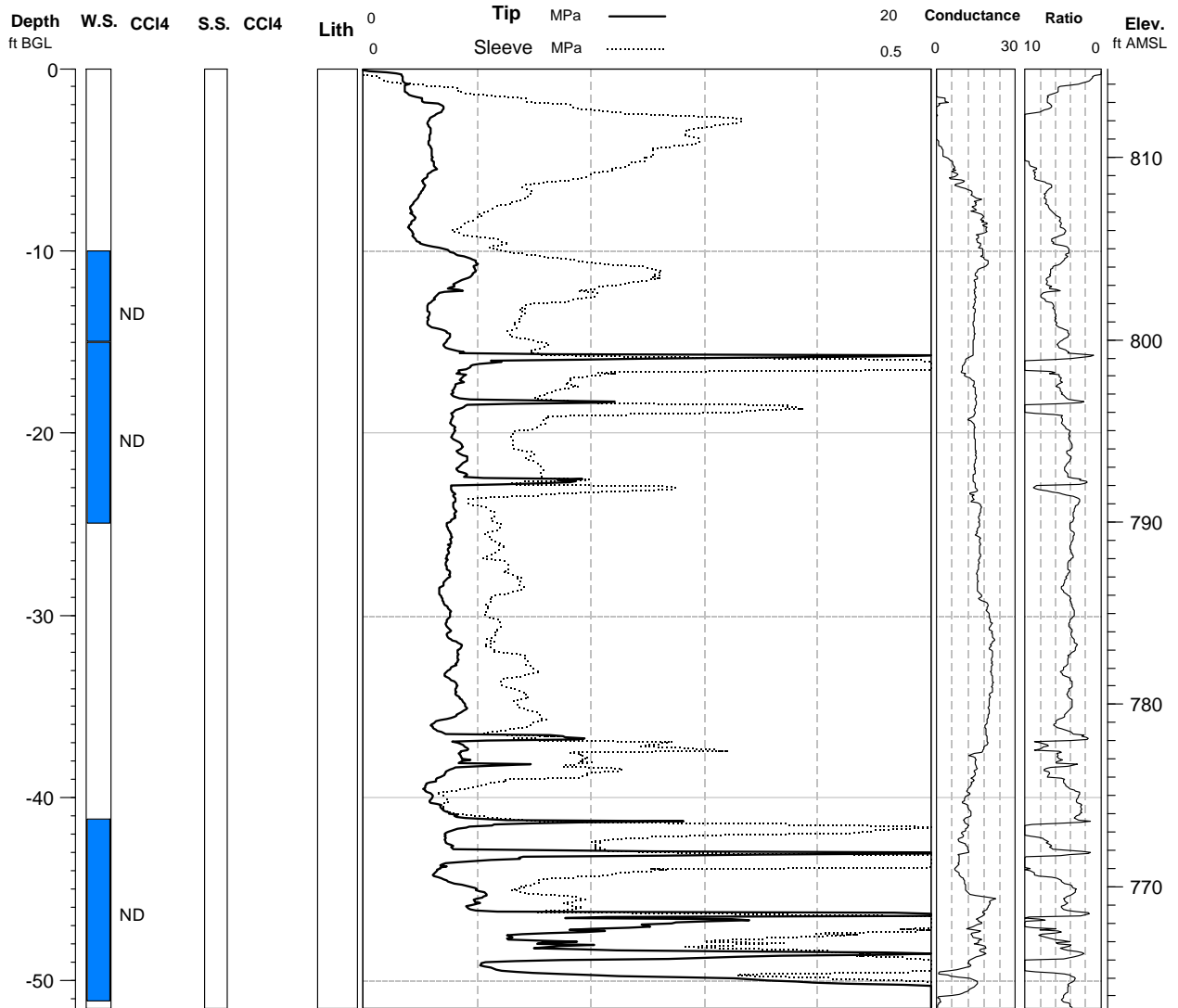
**Project: Montgomery City, MO**

**Elevation: 814.88 ft**

**Geologist: Bob Sedivy**

**Depth: 51.57 ft BGL**

**Log Date: 11/30/2010**



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

**Argonne National Laboratory**

**Boring ID: SB39**

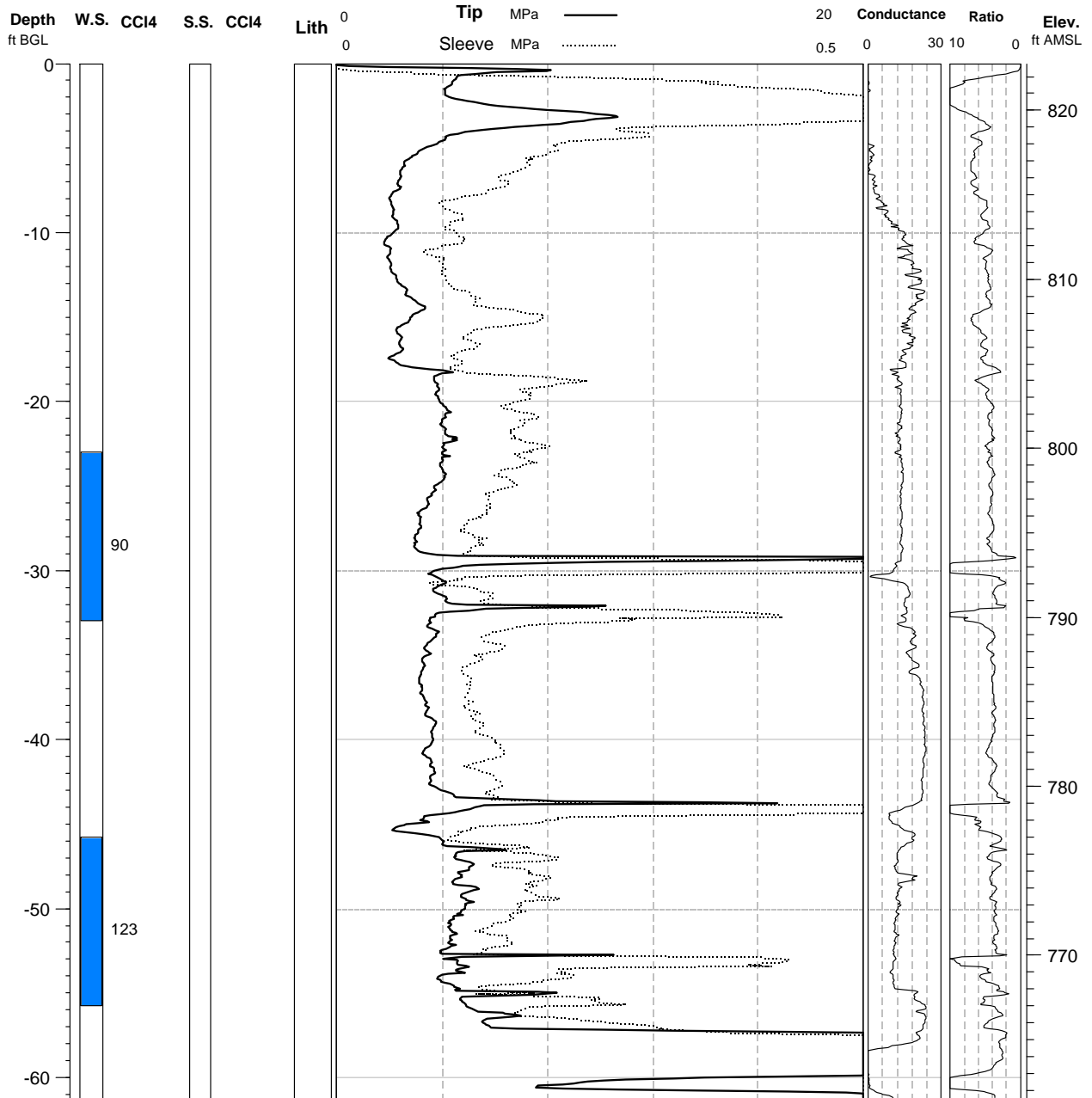
**Project: Montgomery City, MO**

**Elevation: 822.77 ft**

**Geologist: Bob Sedivy**

**Depth: 61.22 ft BGL**

**Log Date: 11/30/2010**



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



**Argonne National Laboratory**

**Boring ID: SB40**

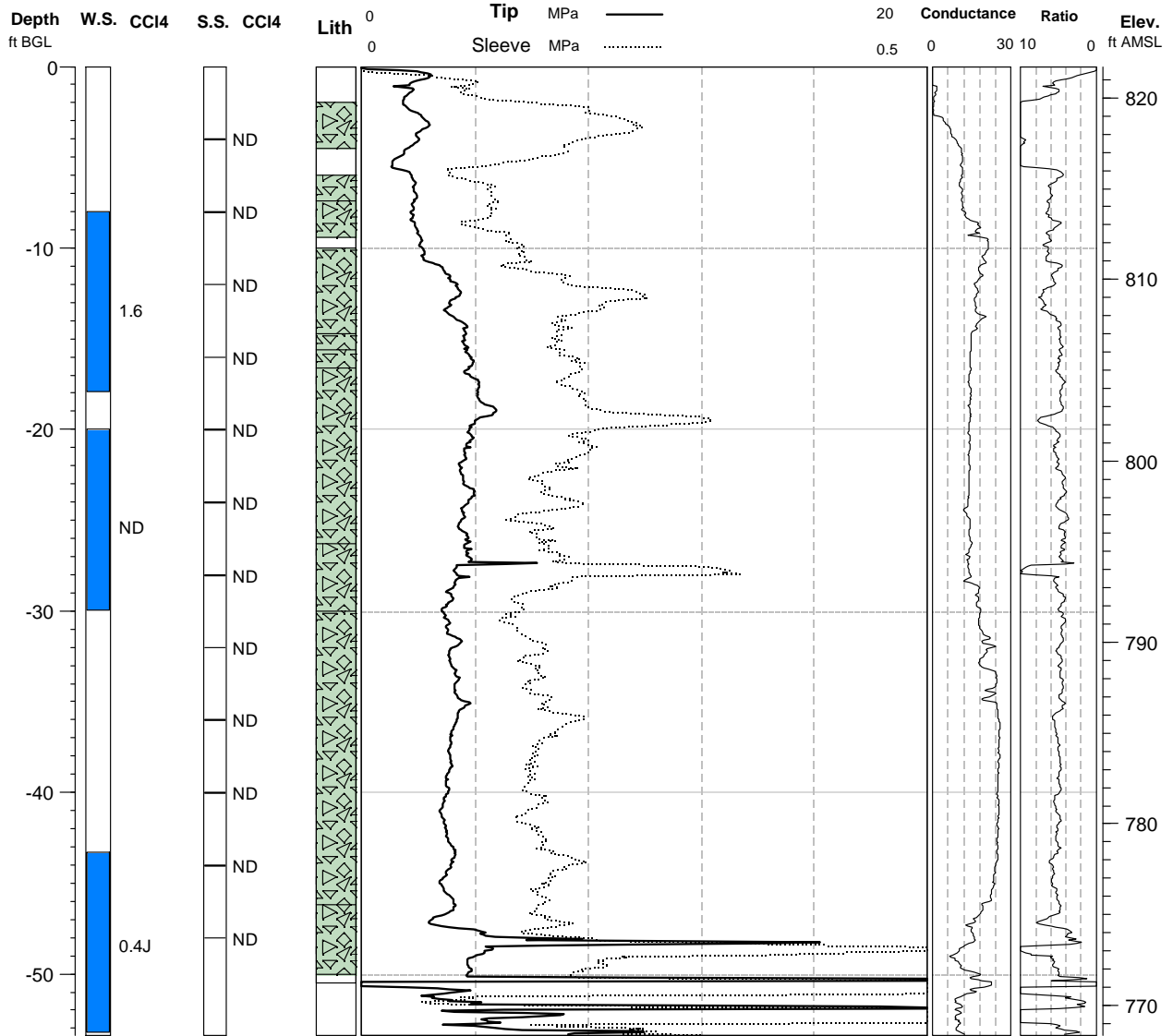
**Project: Montgomery City, MO**

**Elevation: 821.73 ft**

**Geologist: Bob Sedivy**

**Depth: 53.41 ft BGL**

**Log Date: 12/1/2010**



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

**Argonne National Laboratory**

**Well ID: SB40**

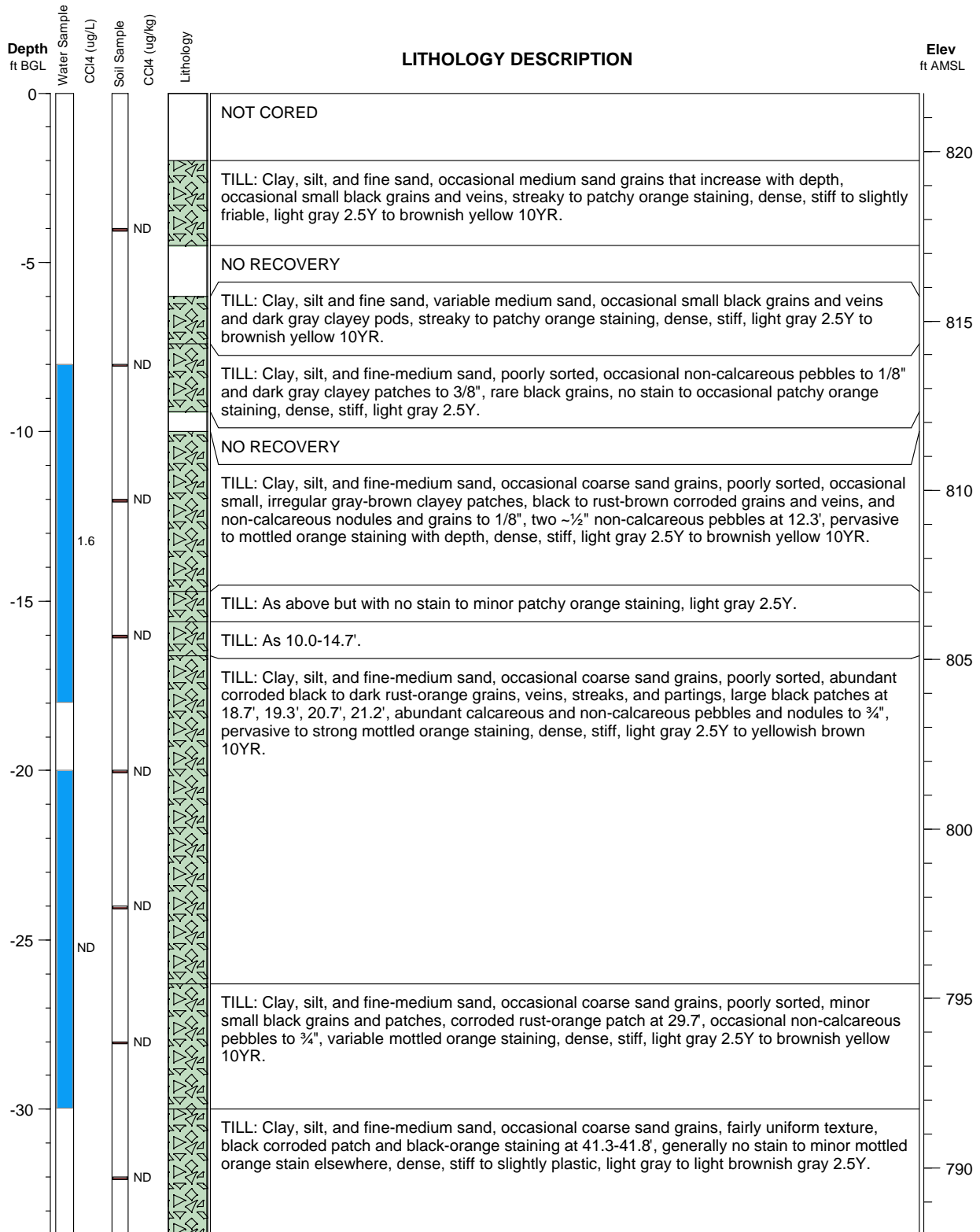
**Project: Montgomery City, MO**

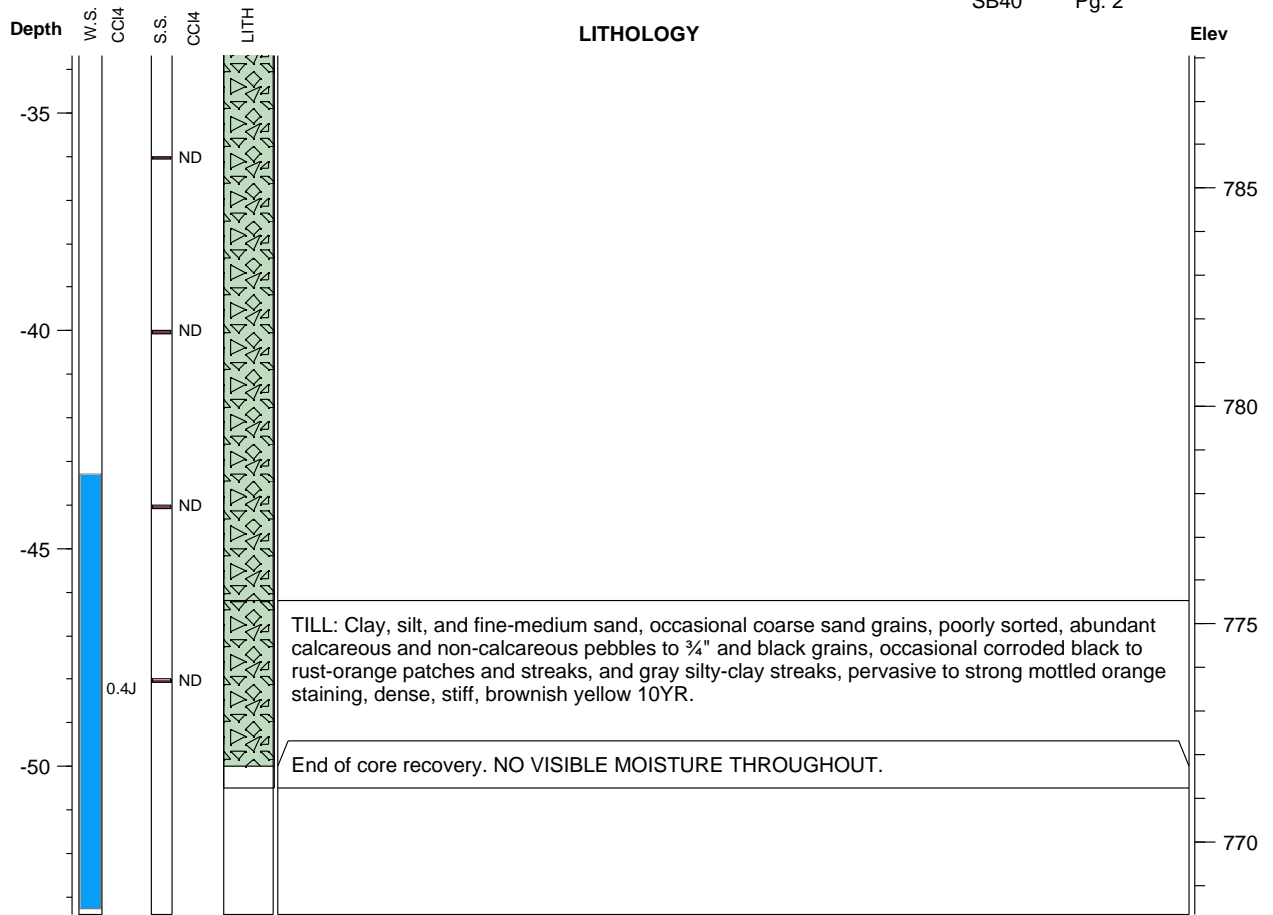
**Elevation: 821.73 ft**

**Log Date: 12/1/2010**

**Geologist: Bob Sedivy**

**Depth: 53.41 ft BGL**





**Argonne National Laboratory**

**Boring ID: SB41**

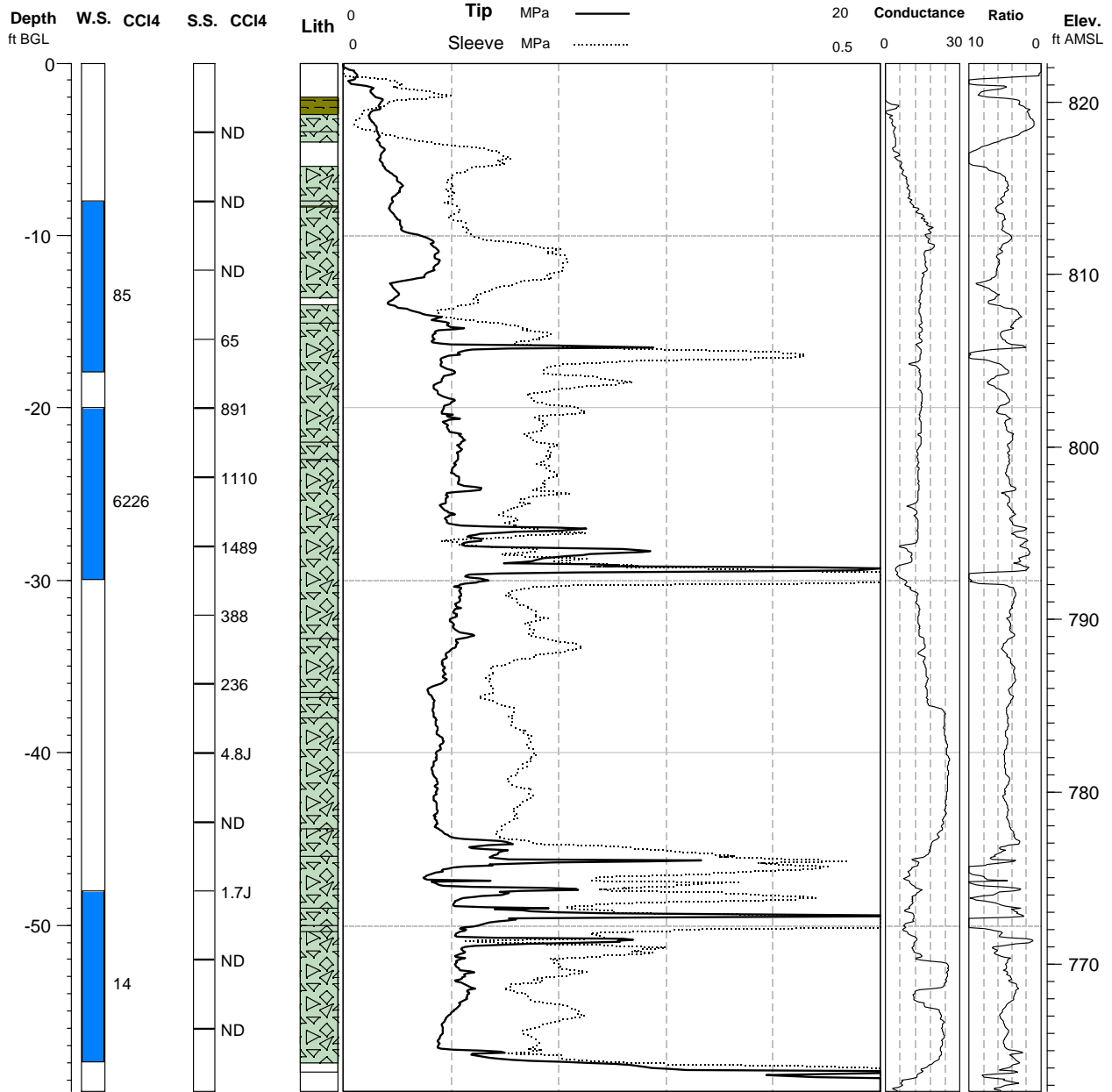
**Project: Montgomery City, MO**

**Elevation: 822.27 ft**

**Geologist: Bob Sedivy**

**Depth: 59.65 ft BGL**

**Log Date: 12/2/2010**



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



**Argonne National Laboratory**

**Well ID: SB41**

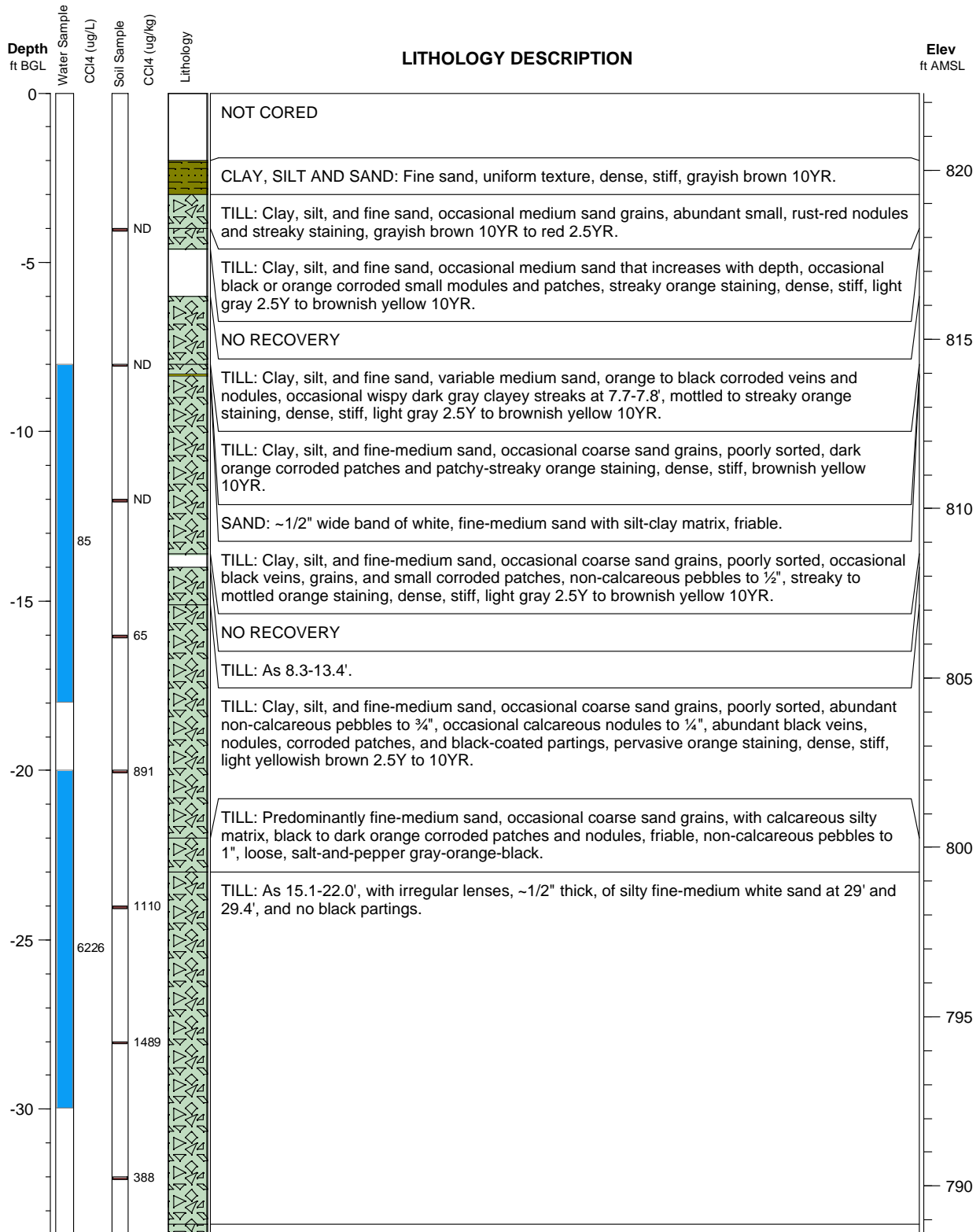
**Project: Montgomery City, MO**

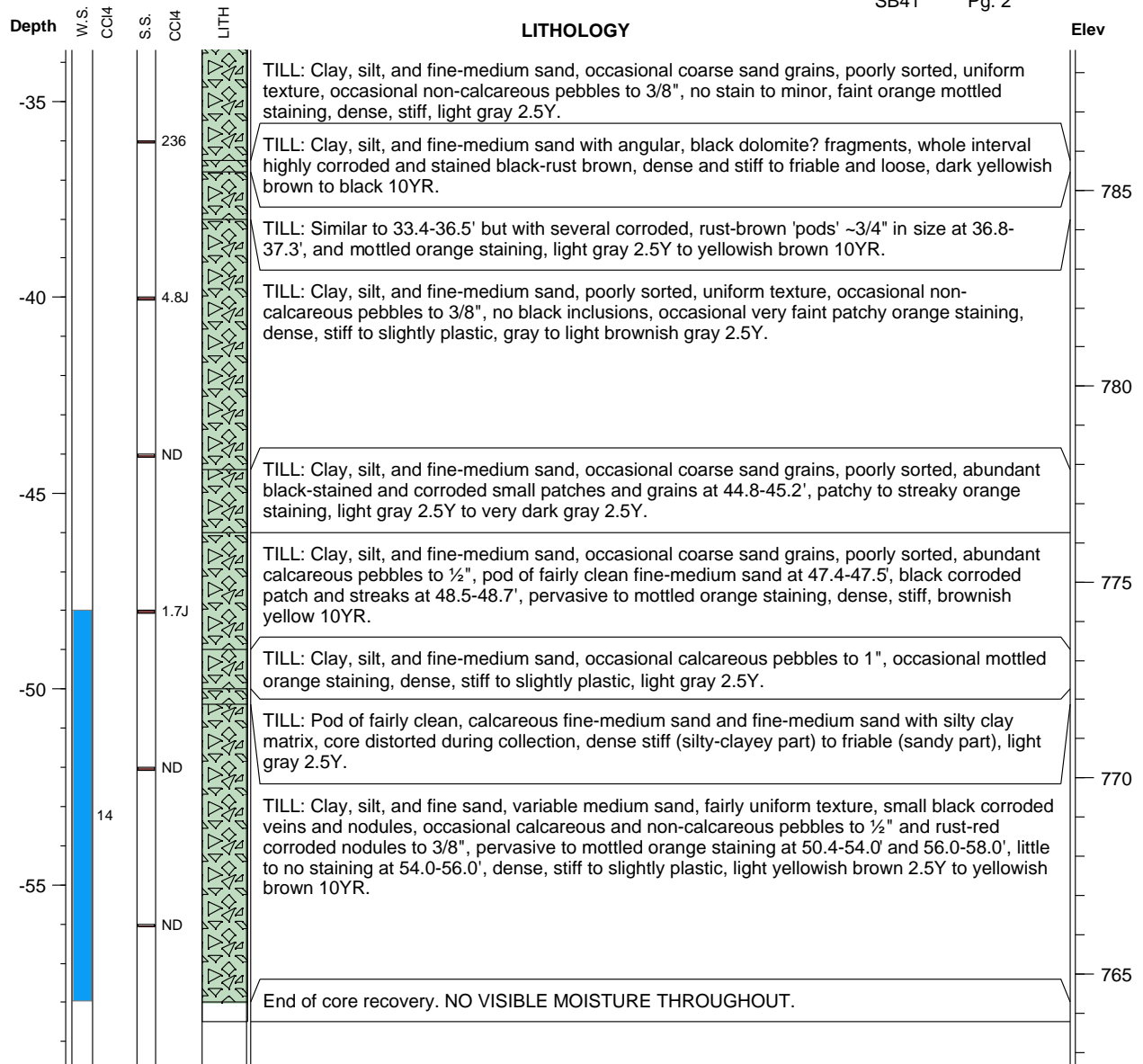
**Elevation: 822.27 ft**

**Log Date: 12/2/2010**

**Geologist: Bob Sedivy**

**Depth: 59.65 ft BGL**





**Argonne National Laboratory**

**Boring ID: SB42**

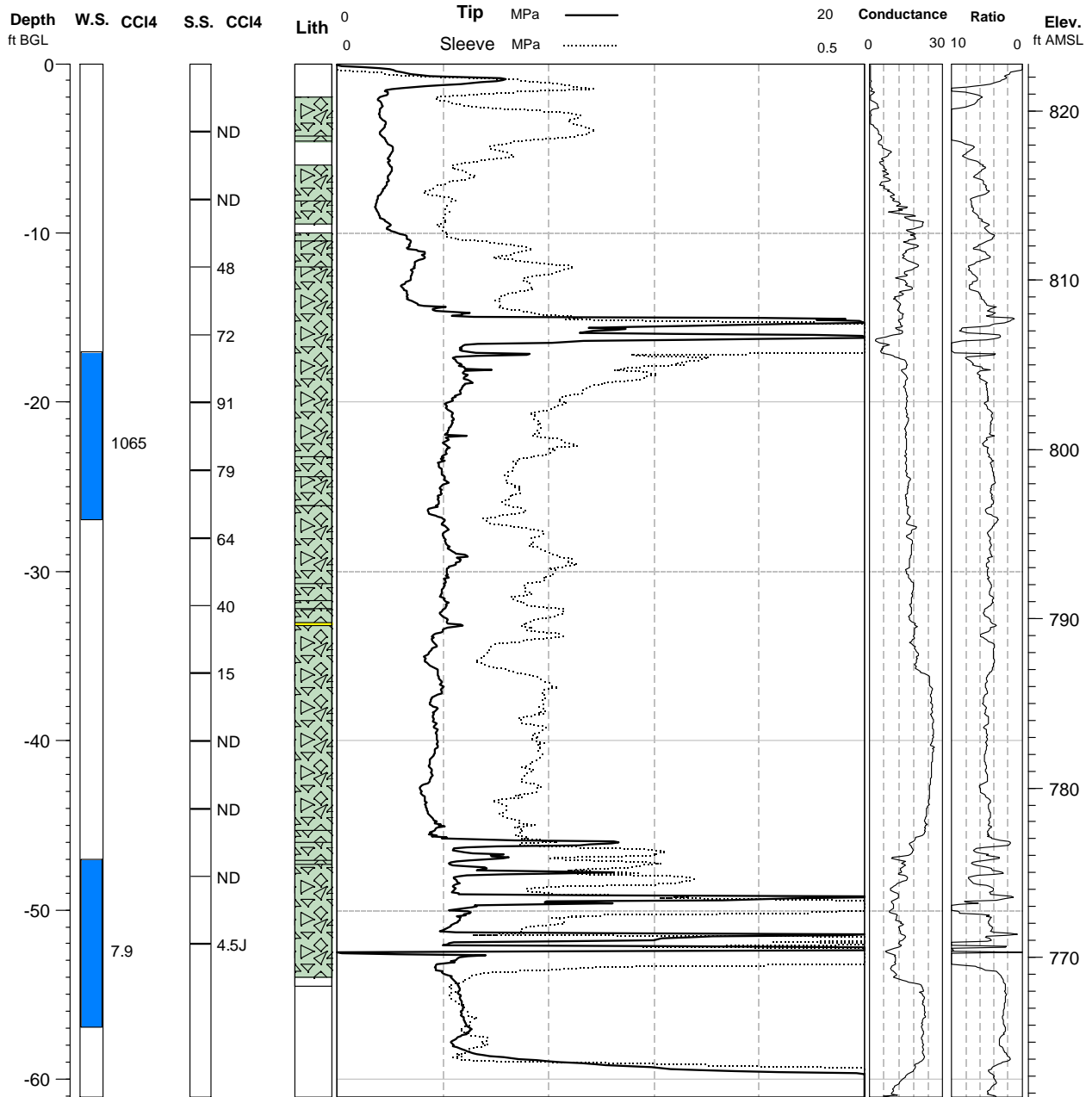
**Project: Montgomery City, MO**

**Elevation: 822.80 ft**

**Geologist: Bob Sedivy**

**Depth: 61.09 ft BGL**

**Log Date: 12/2/2010**



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

**Argonne National Laboratory**

**Well ID: SB42**

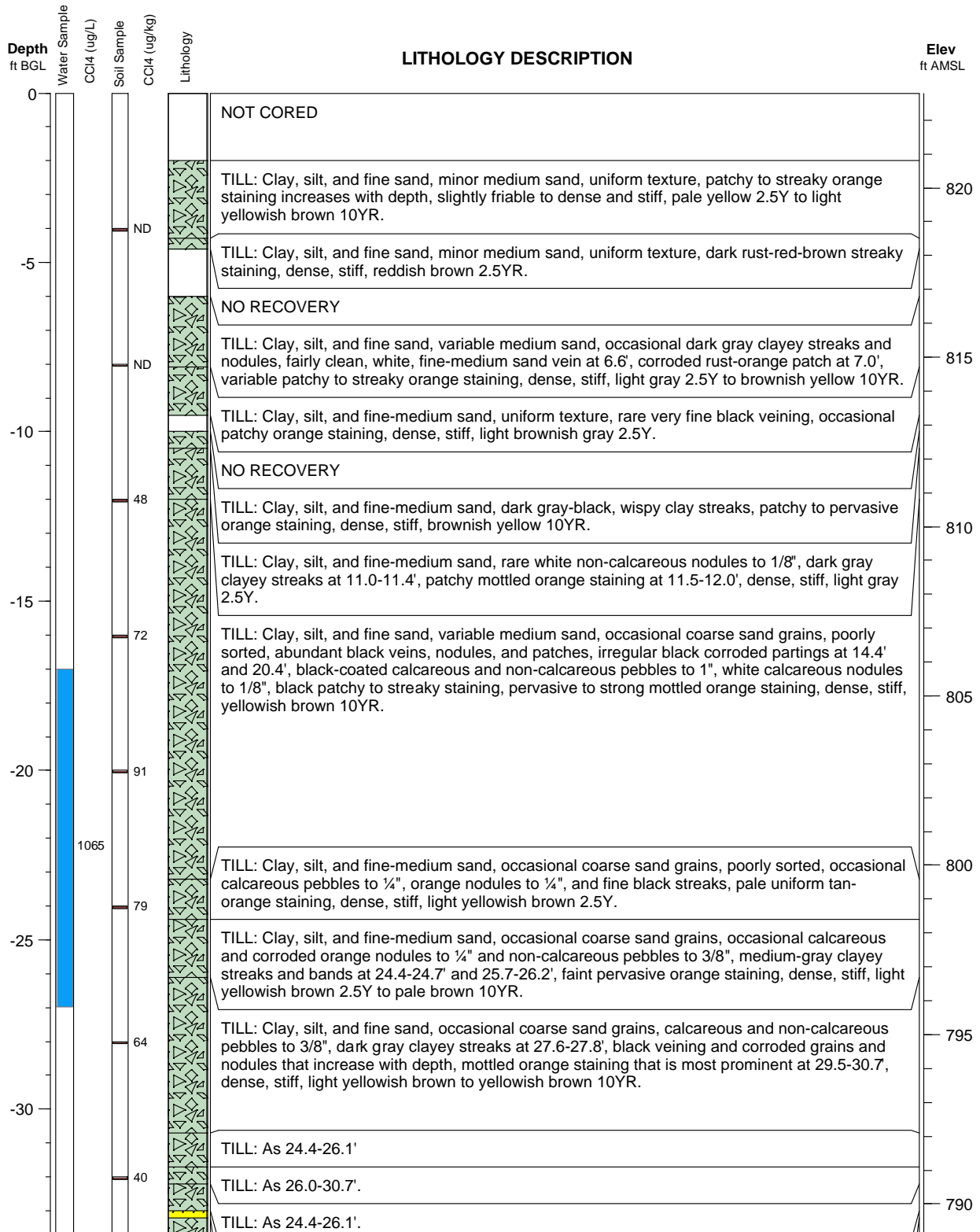
**Project: Montgomery City, MO**

**Elevation: 822.80 ft**

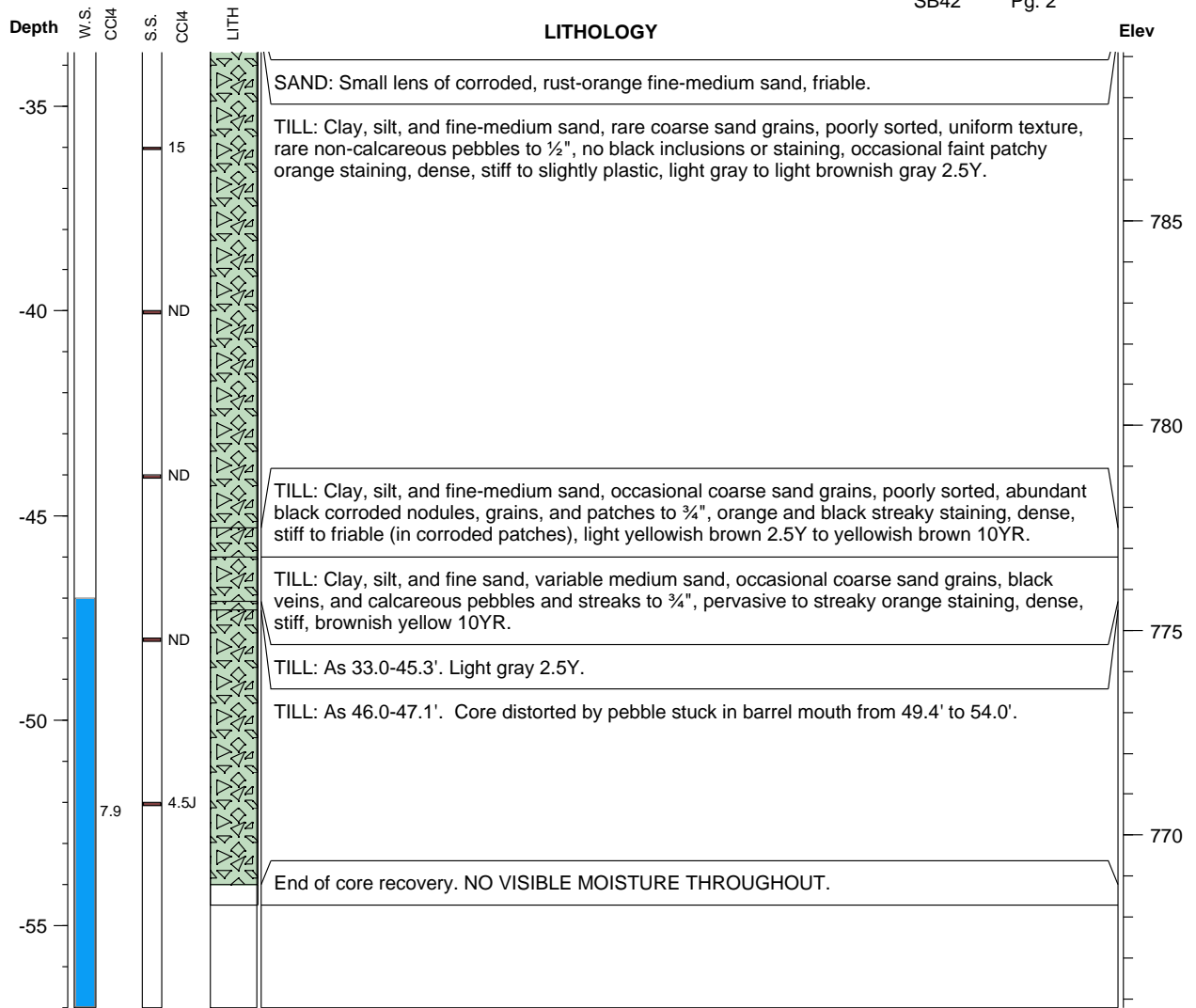
**Log Date: 12/2/2010**

**Geologist: Bob Sedivy**

**Depth: 61.09 ft BGL**







**Argonne National Laboratory**

**Boring ID: SB43**

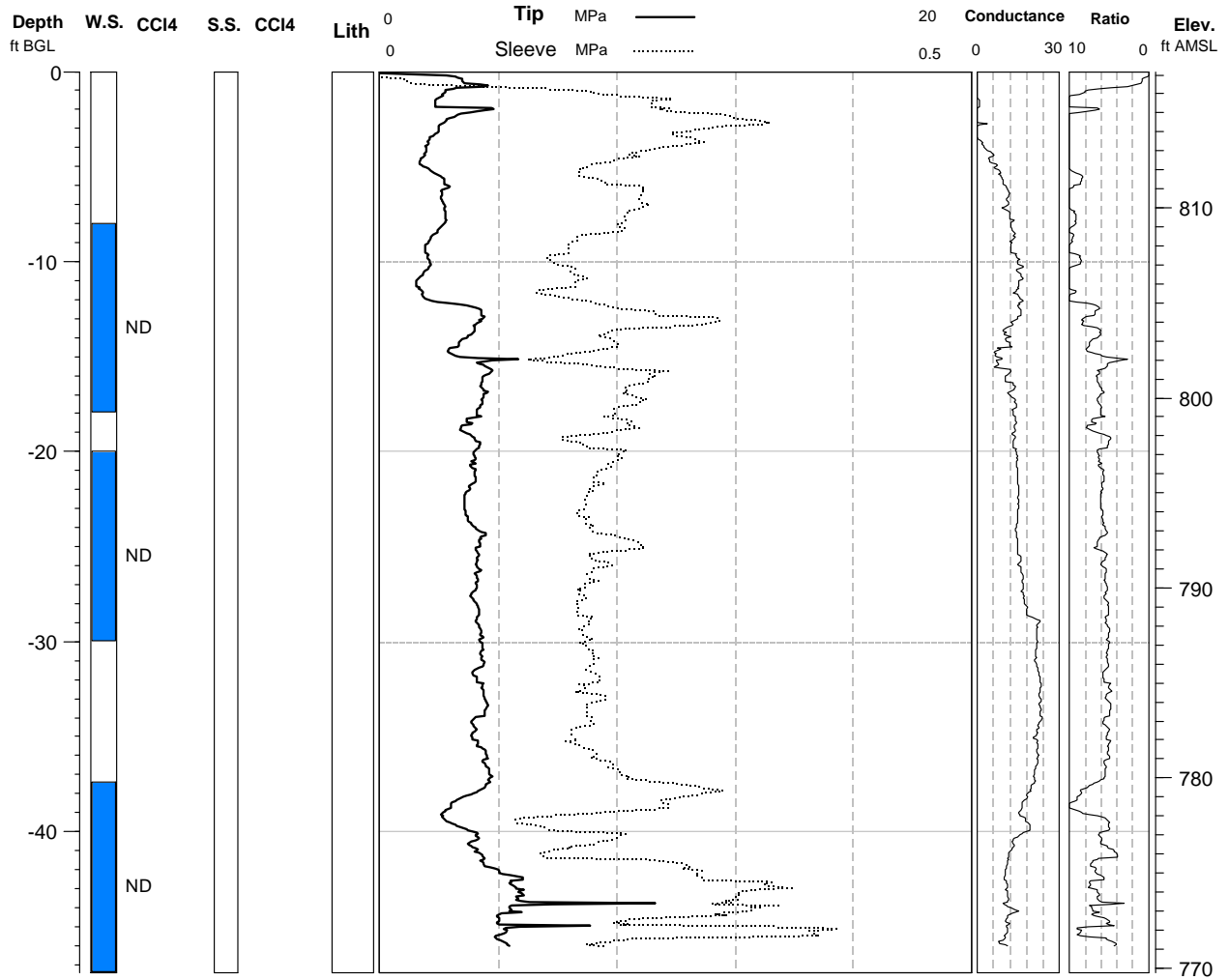
**Project: Montgomery City, MO**

**Elevation: 817.18 ft**

**Geologist: Bob Sedivy**

**Depth: 46.00 ft BGL**

**Log Date: 12/3/2010**



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

**Argonne National Laboratory**

**Well ID: SB44**

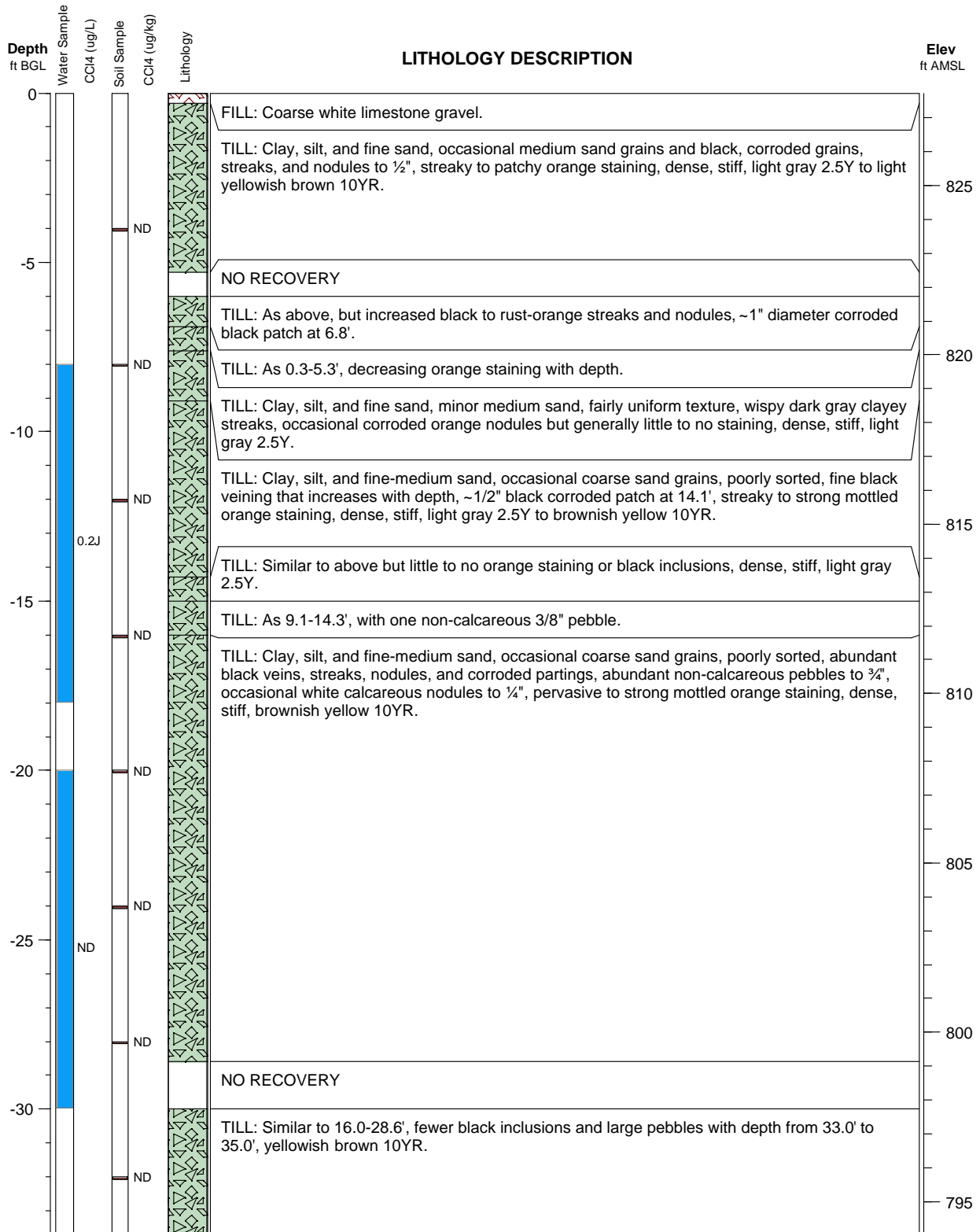
**Project: Montgomery City, MO**

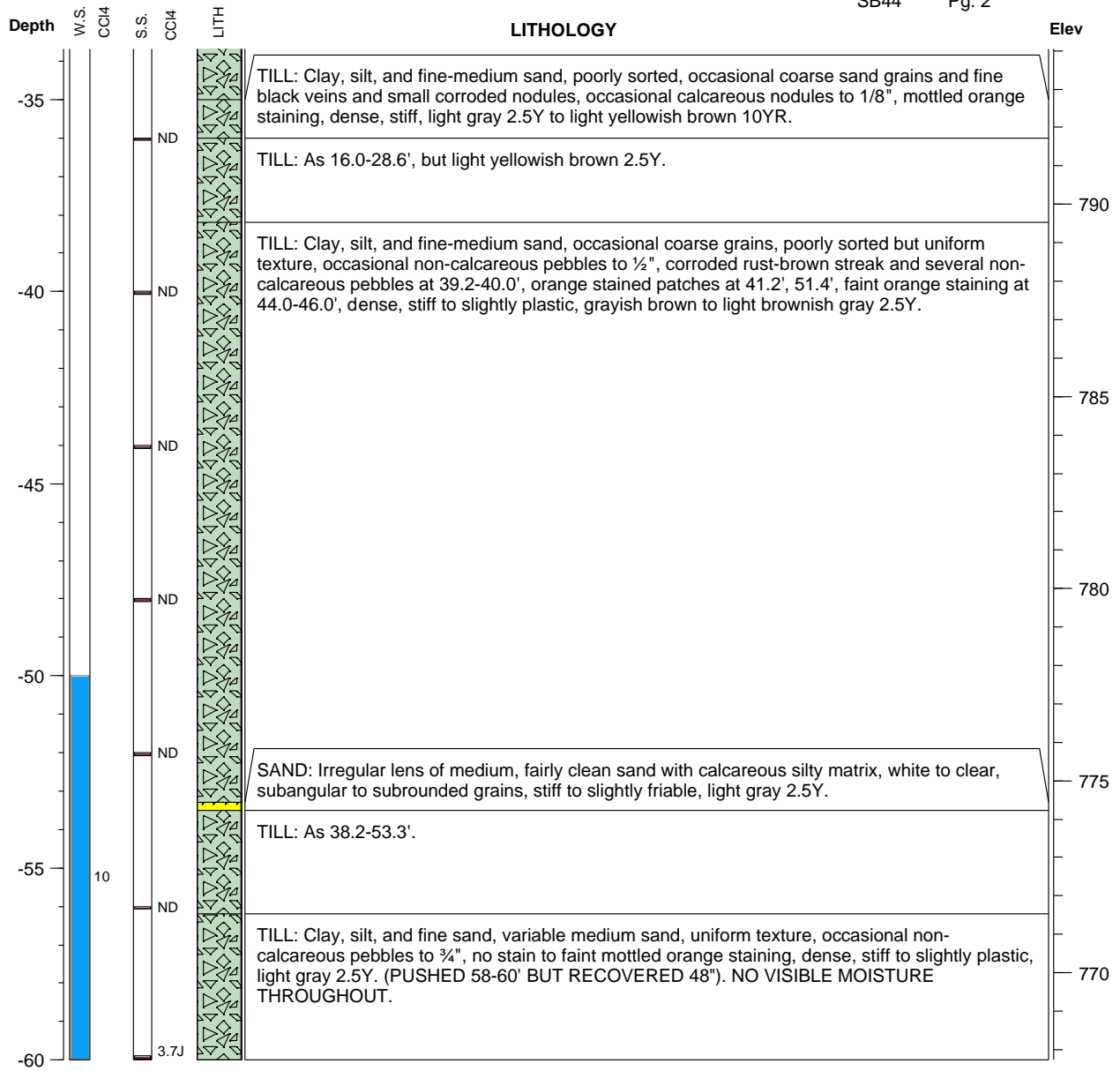
**Elevation: 827.73 ft**

**Log Date: 12/3/2010**

**Geologist: Bob Sedivy**

**Depth: 60 ft BGL**





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Boring ID: SB45

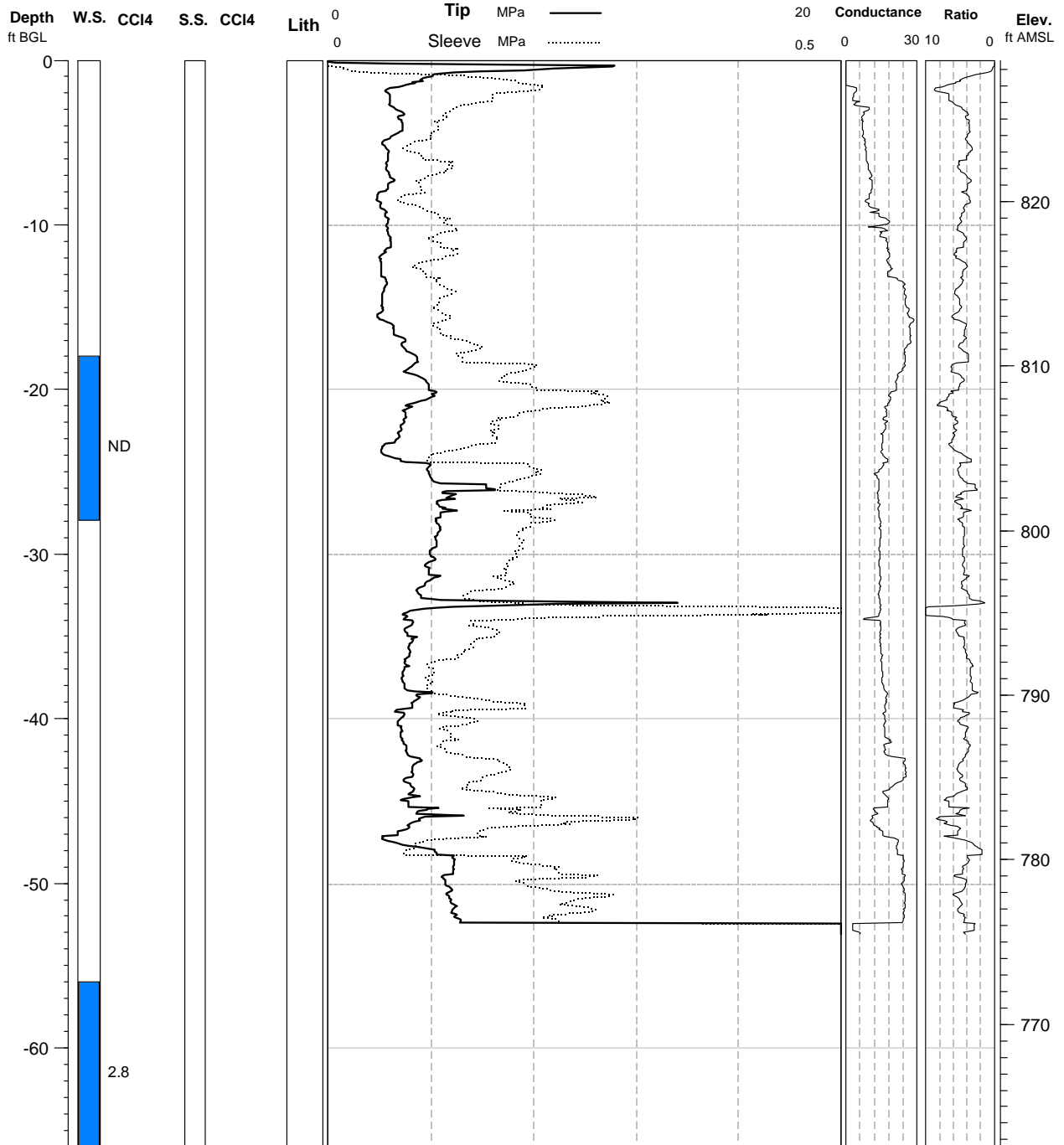
Project: Montgomery City, MO

Elevation: 828.57 ft

Geologist: Bob Sedivy

Depth: 53.08 ft BGL

Log Date: 12/3/2010



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



**Argonne National Laboratory**

**Well ID: SB46**

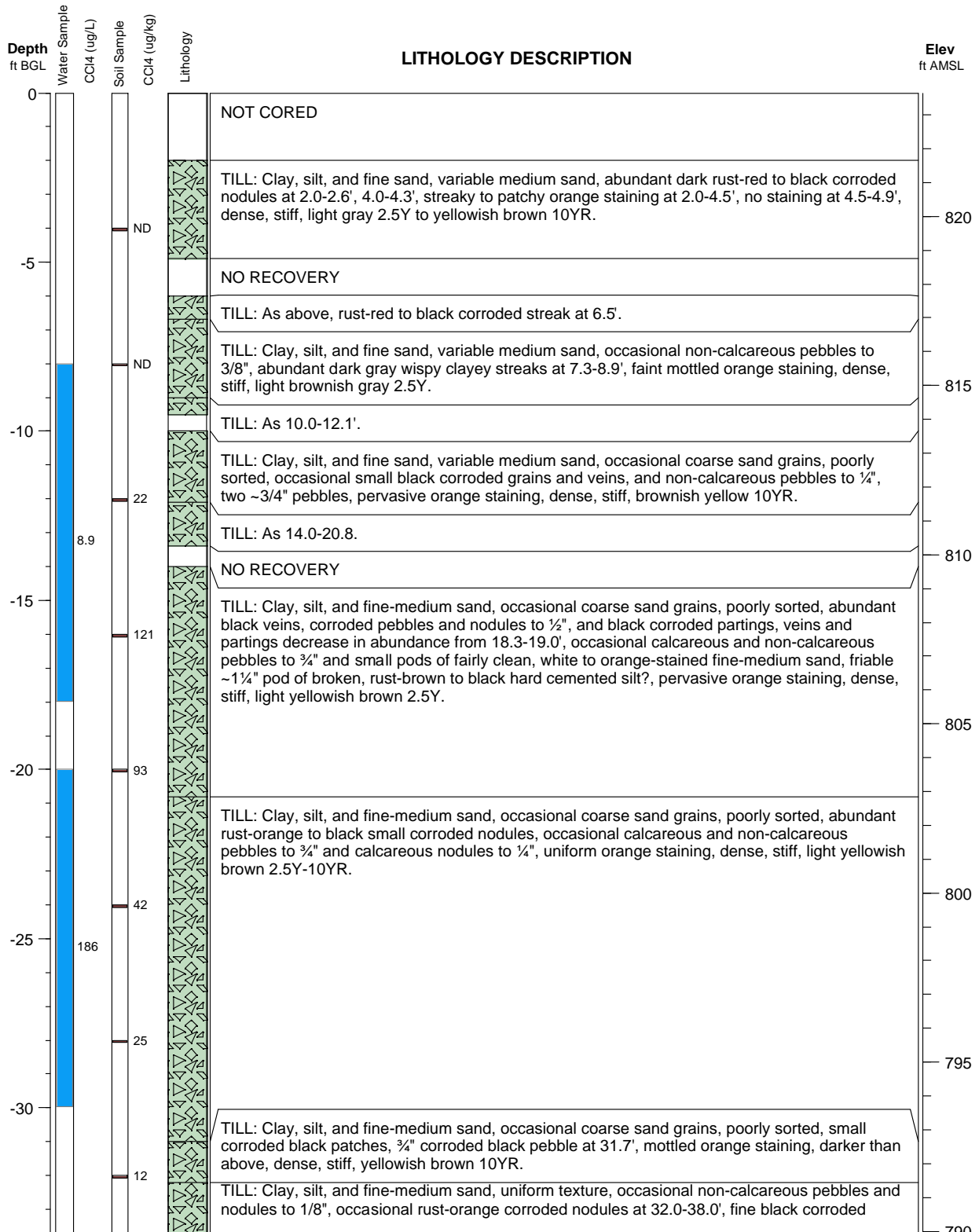
**Project: Montgomery City, MO**

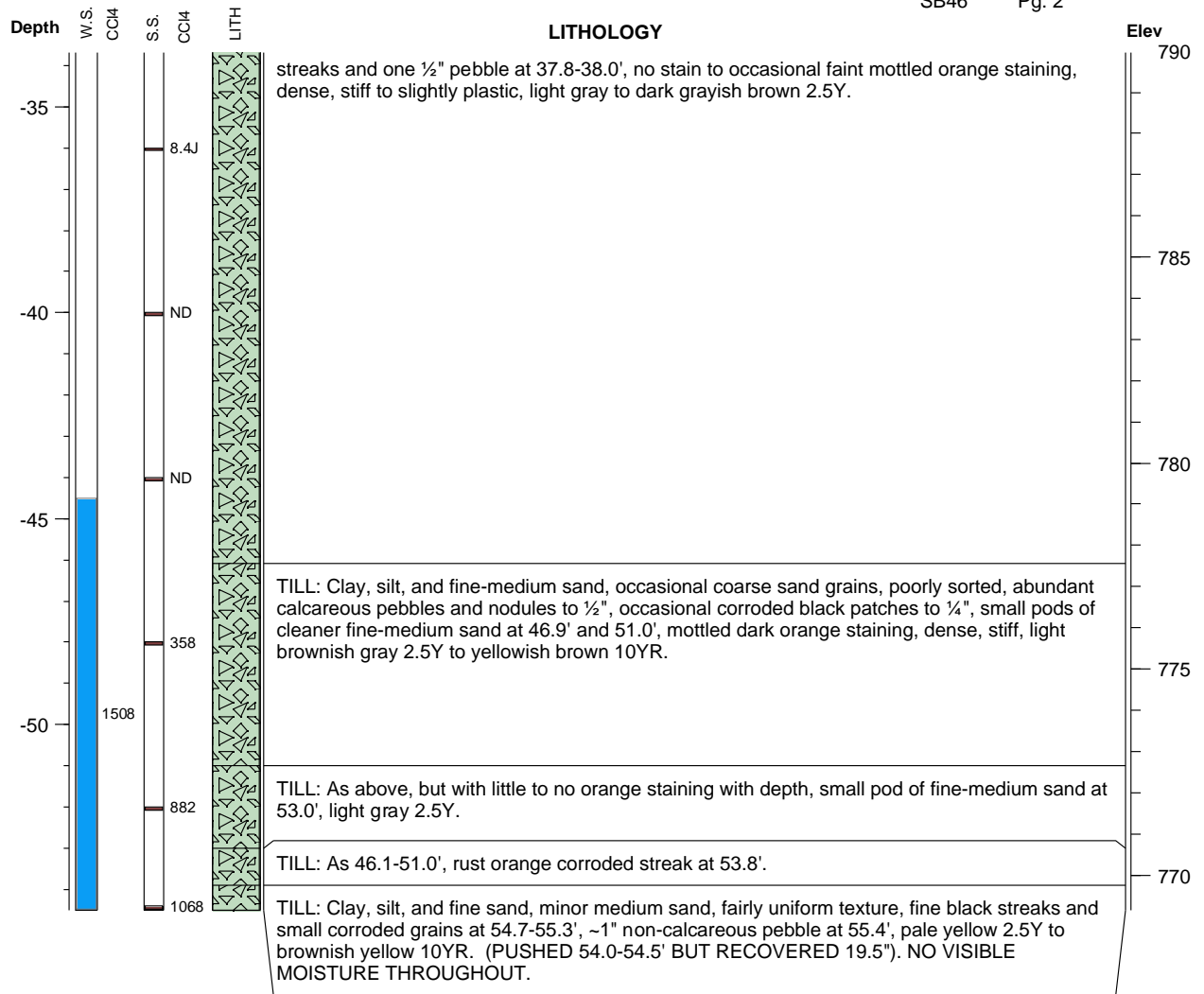
**Elevation: 823.65 ft**

**Log Date: 12/4/2010**

**Geologist: Bob Sedivy**

**Depth: 54.5 ft BGL**





**Argonne National Laboratory**

**Well ID: SB47**

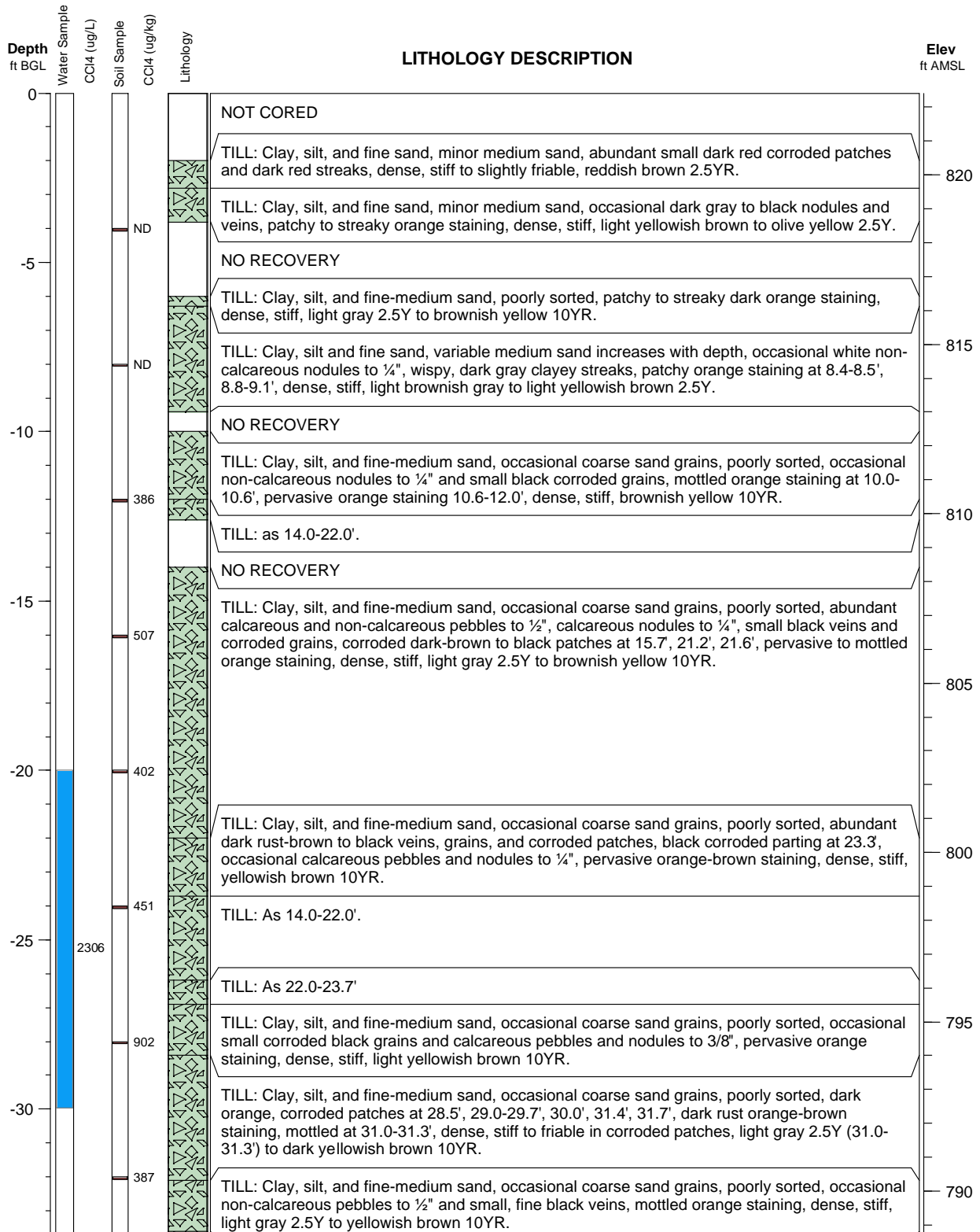
**Project: Montgomery City, MO**

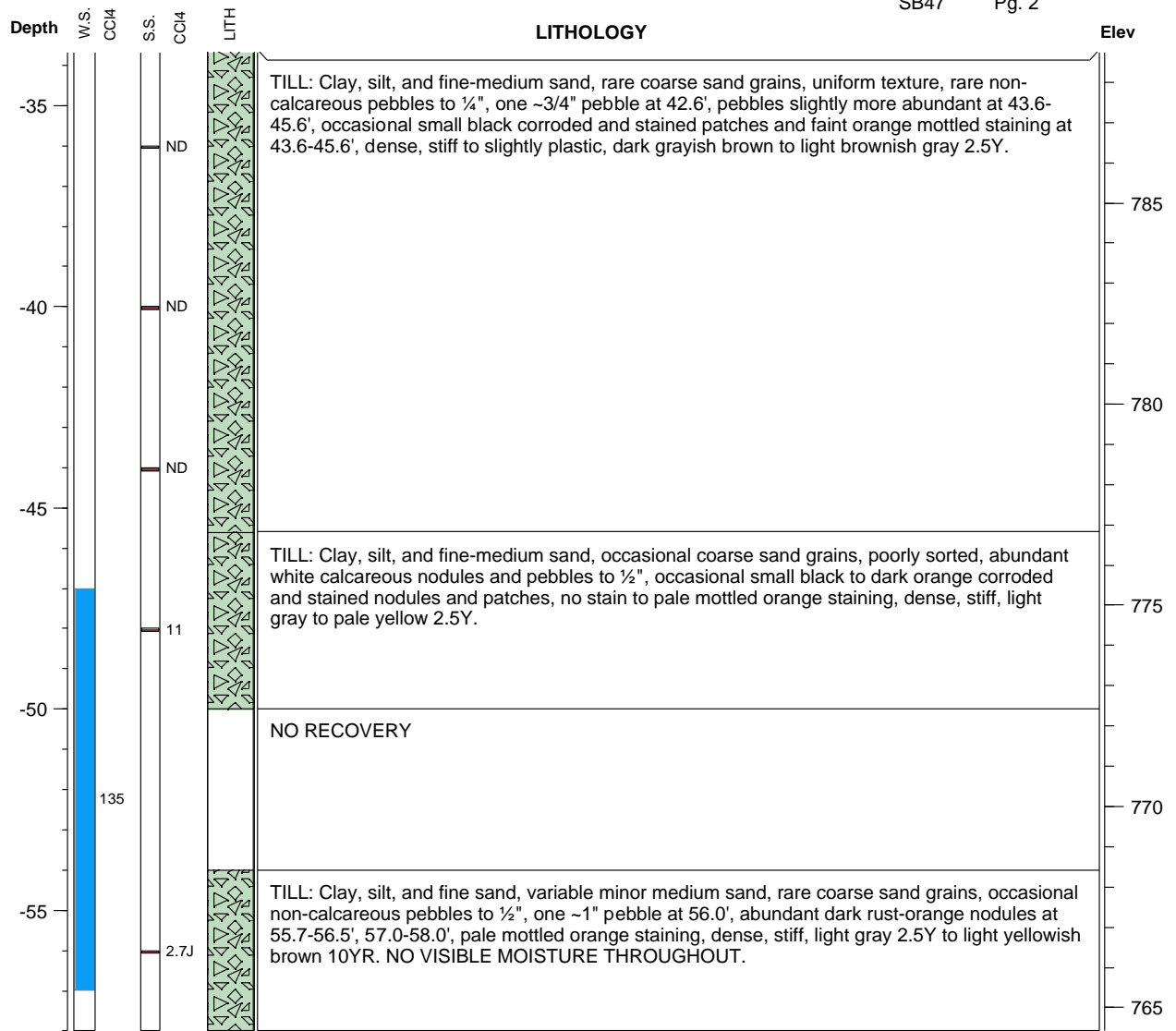
**Elevation: 822.42 ft**

**Log Date: 12/5/2010**

**Geologist: Bob Sedivy**

**Depth: 58 ft BGL**





**Argonne National Laboratory**

**Well ID: SB48**

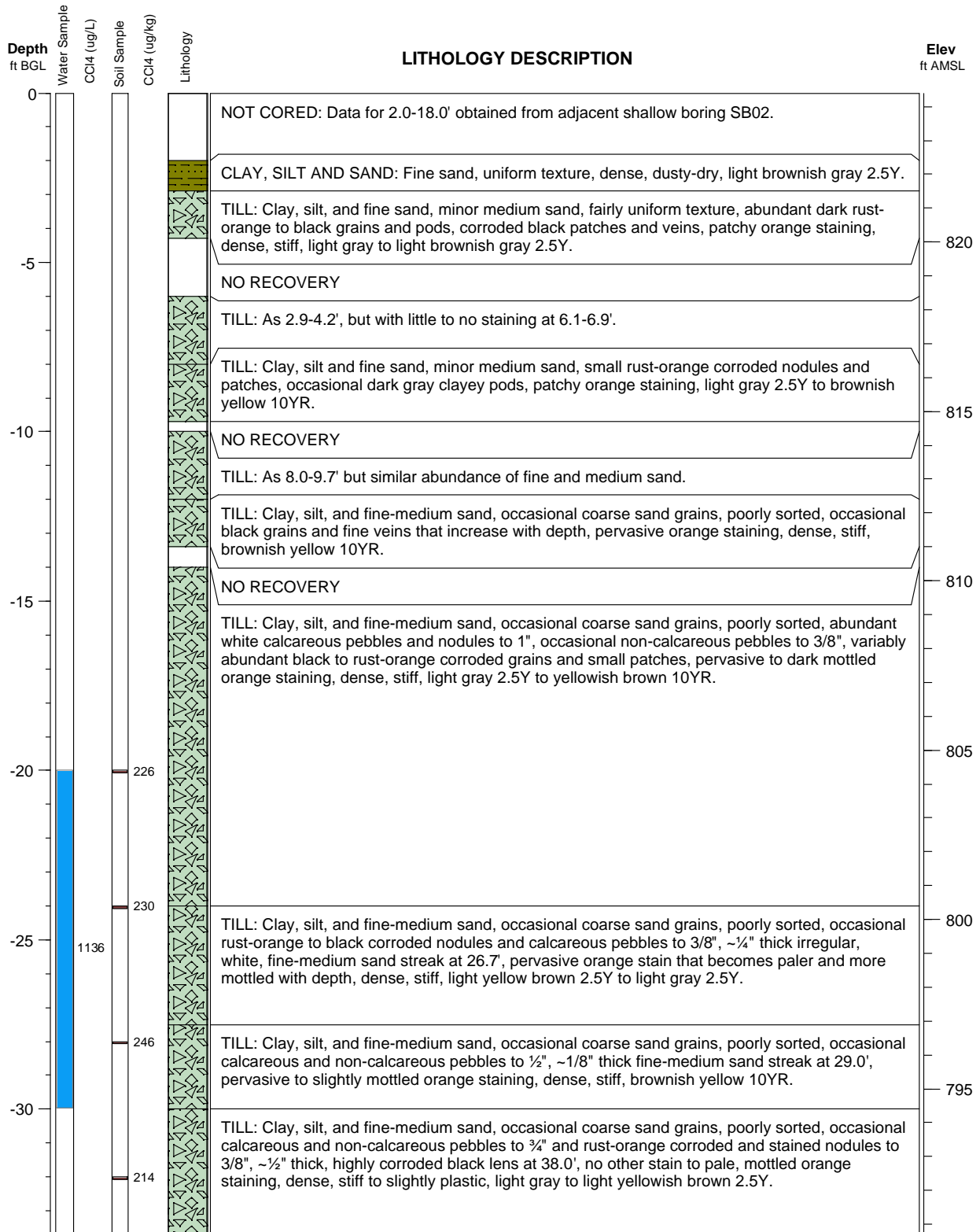
**Project: Montgomery City, MO**

**Elevation: 824.40 ft**

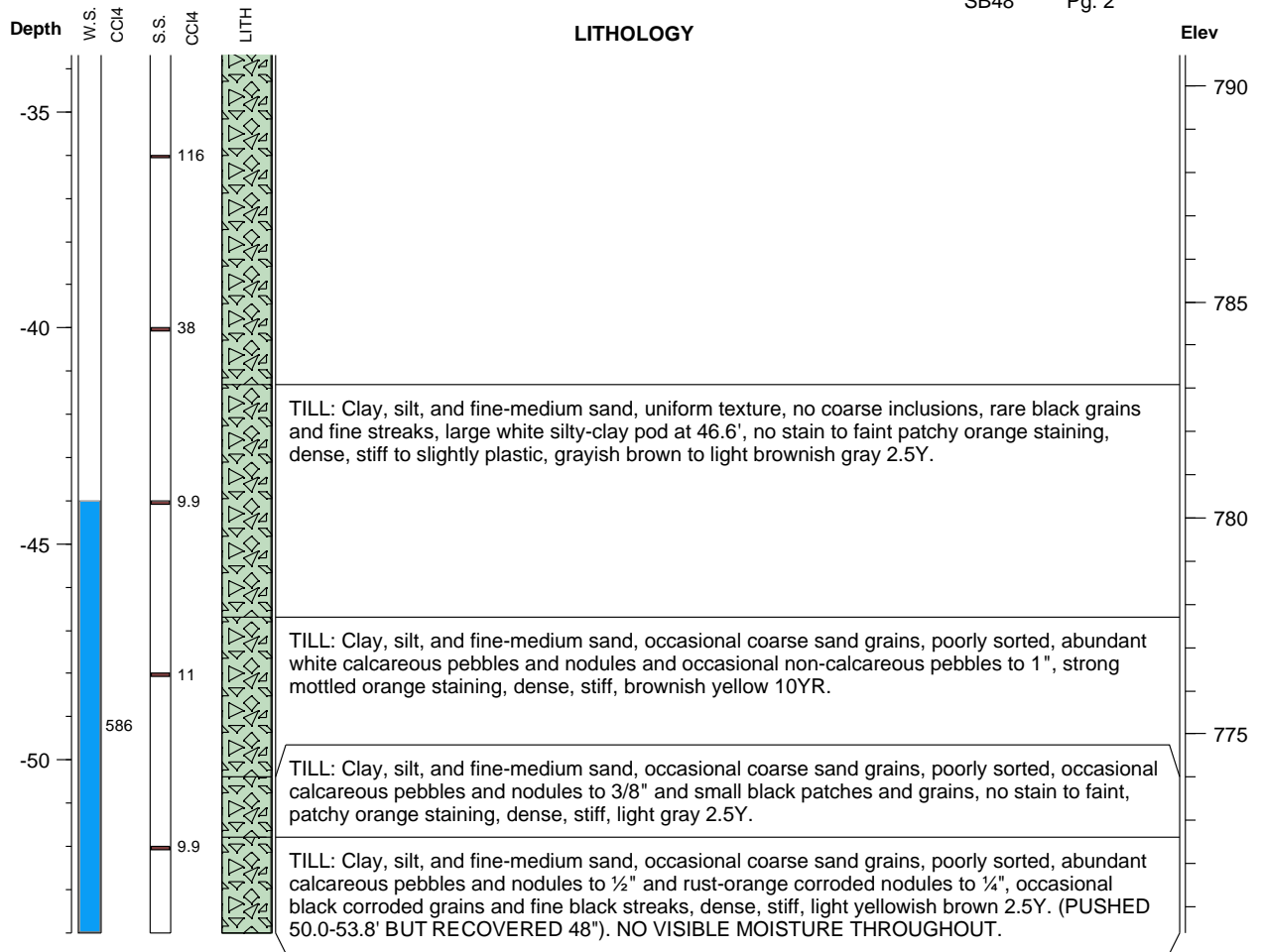
**Log Date: 12/5/2010**

**Geologist: Bob Sedivy**

**Depth: 53.8 ft BGL**







**Argonne National Laboratory**

**Well ID: SB49**

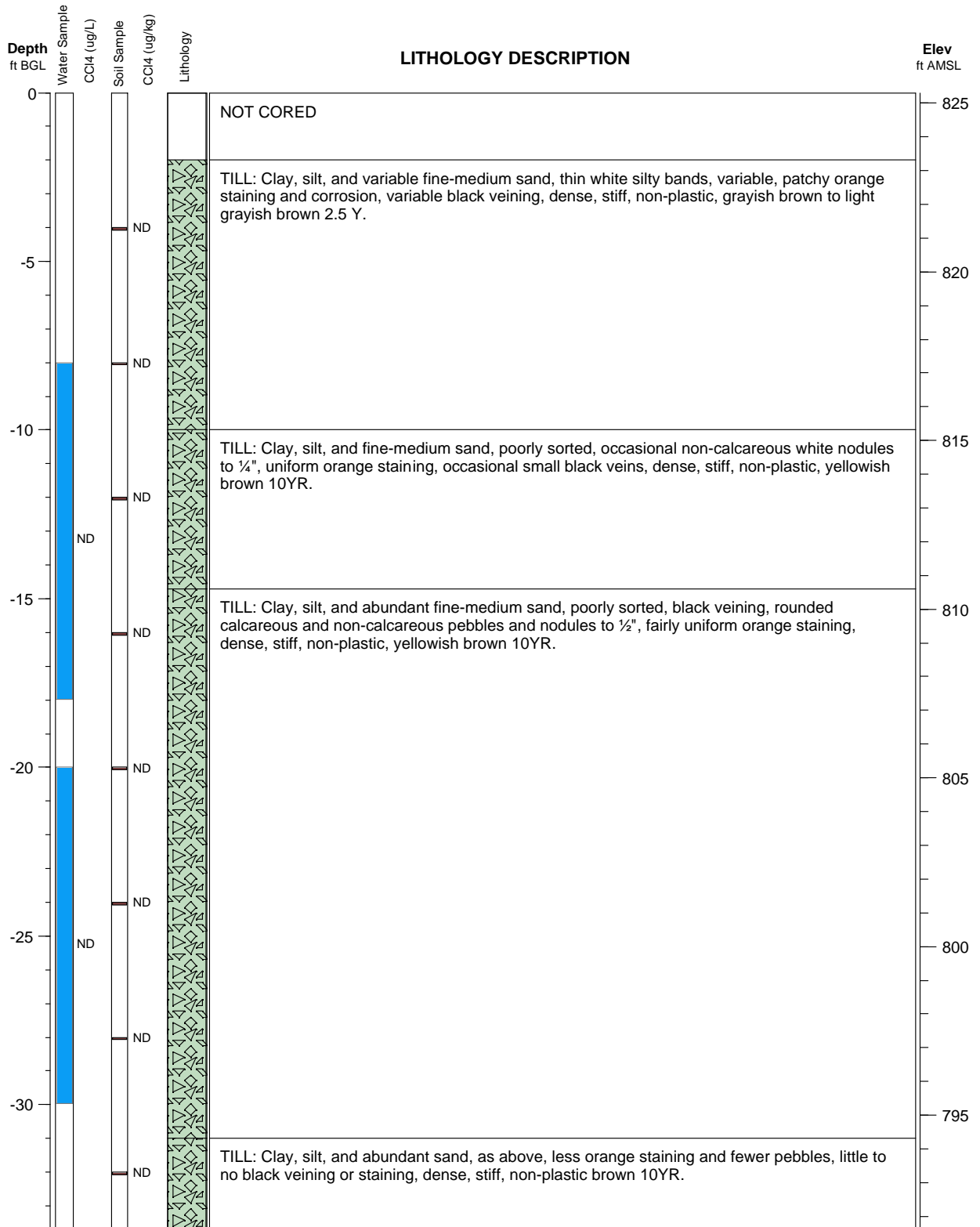
**Project: Montgomery City, MO**

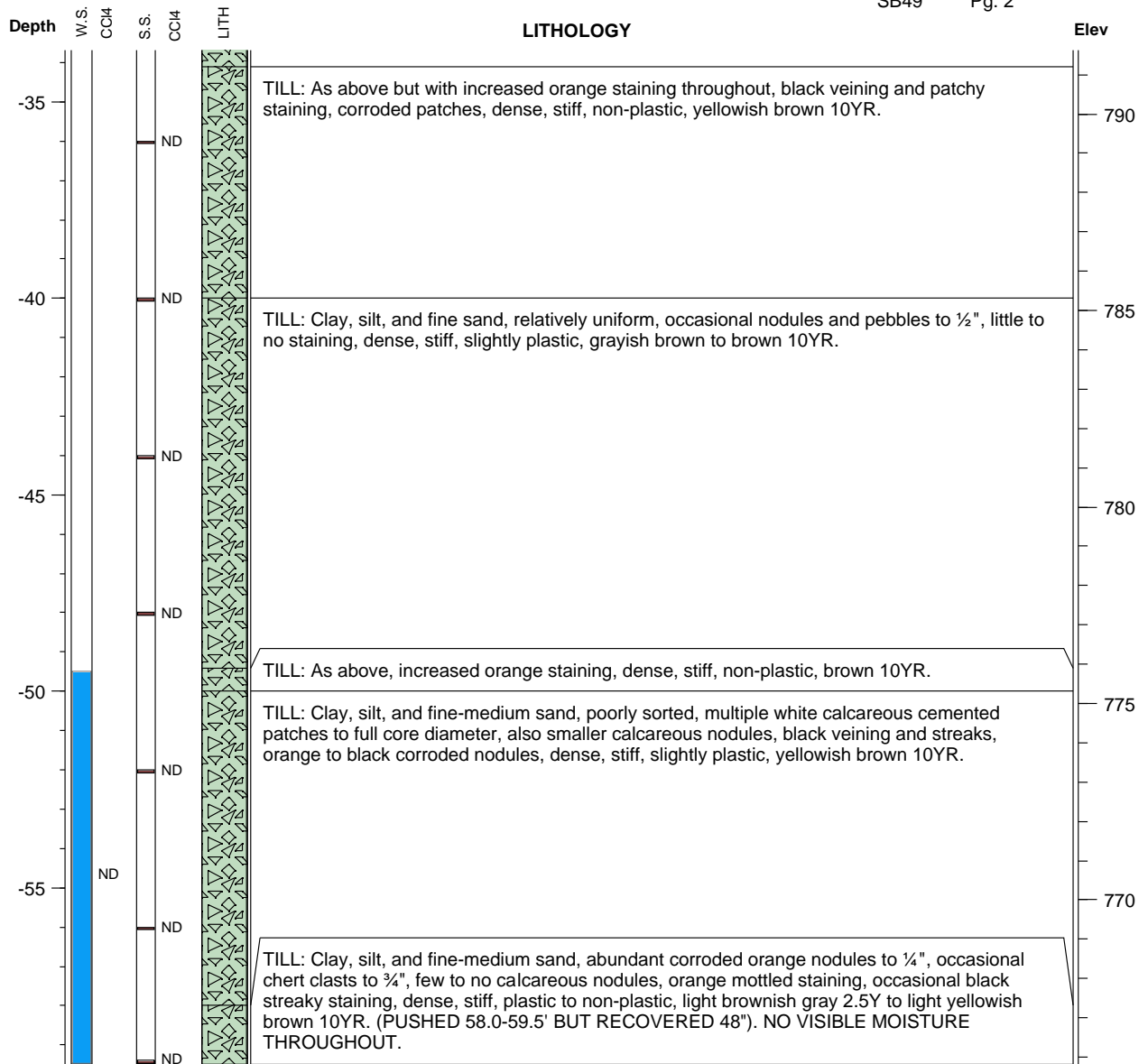
**Elevation: 825.31 ft**

**Log Date: 5/12/2011**

**Geologist: Bob Sedivy**

**Depth: 59.5 ft BGL**





**Argonne National Laboratory**

**Well ID: SB50**

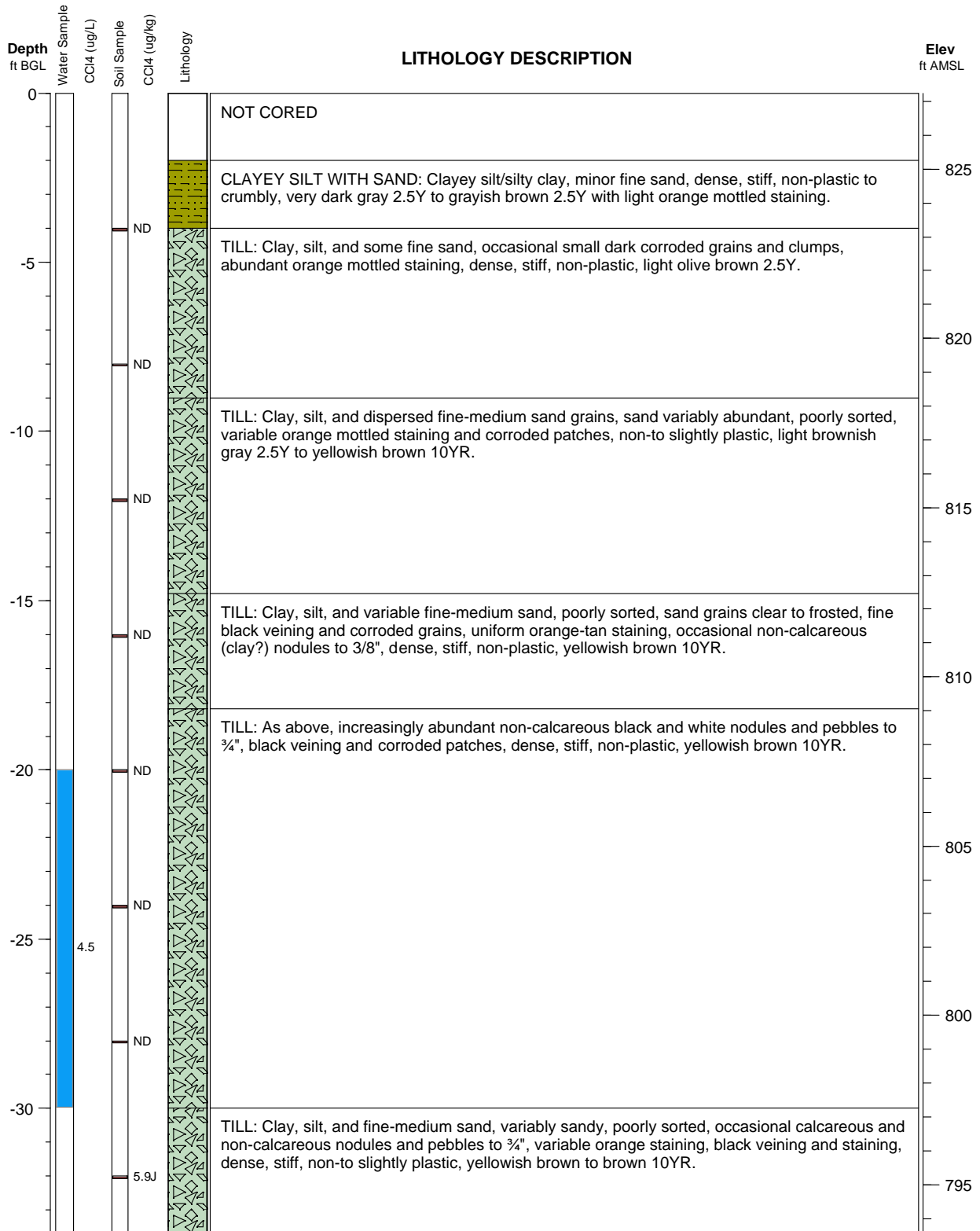
**Project: Montgomery City, MO**

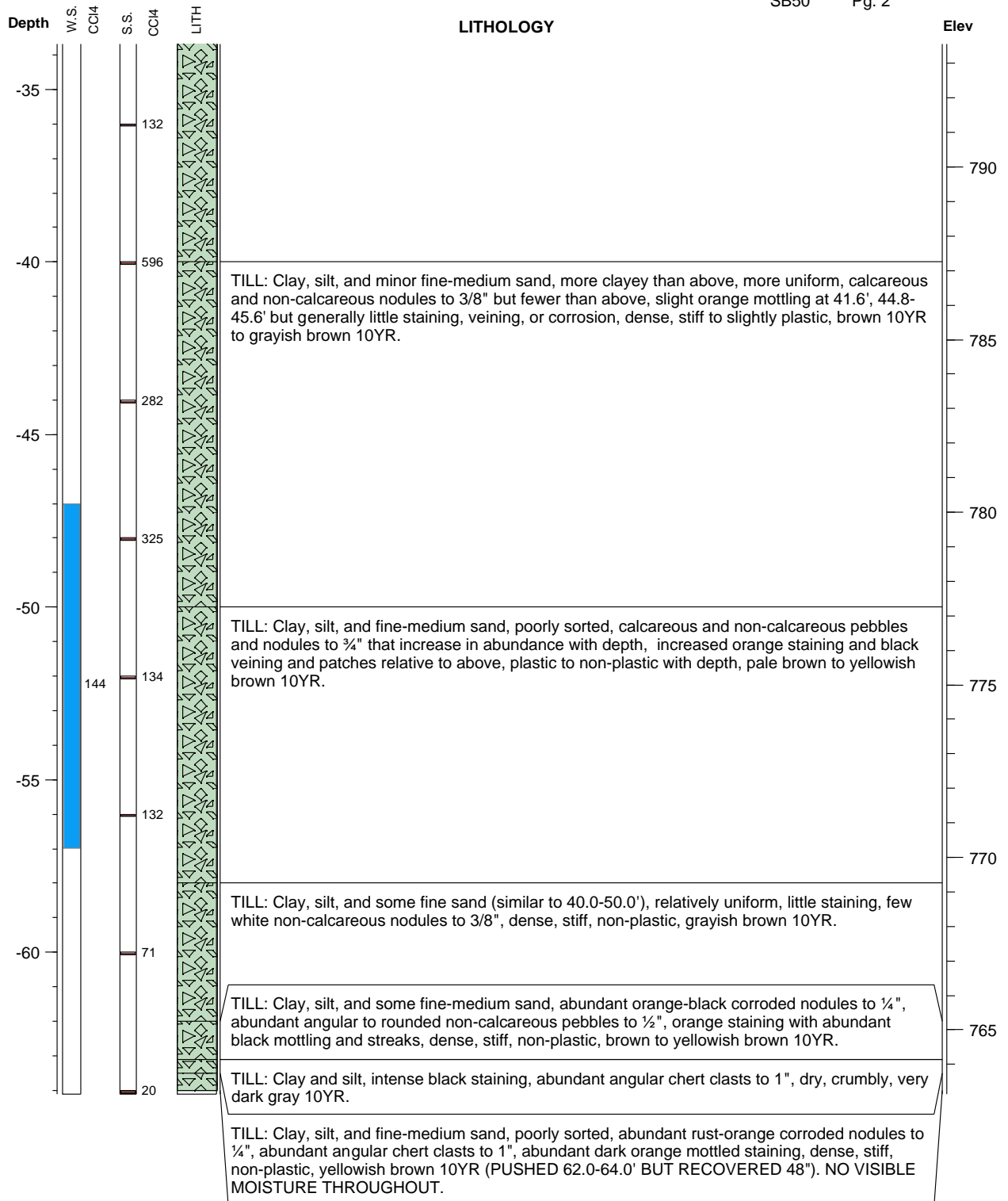
**Elevation: 827.25 ft**

**Log Date: 5/10/2011**

**Geologist: Bob Sedivy**

**Depth: 64 ft BGL**







**Argonne National Laboratory**

**Well ID: SB54**

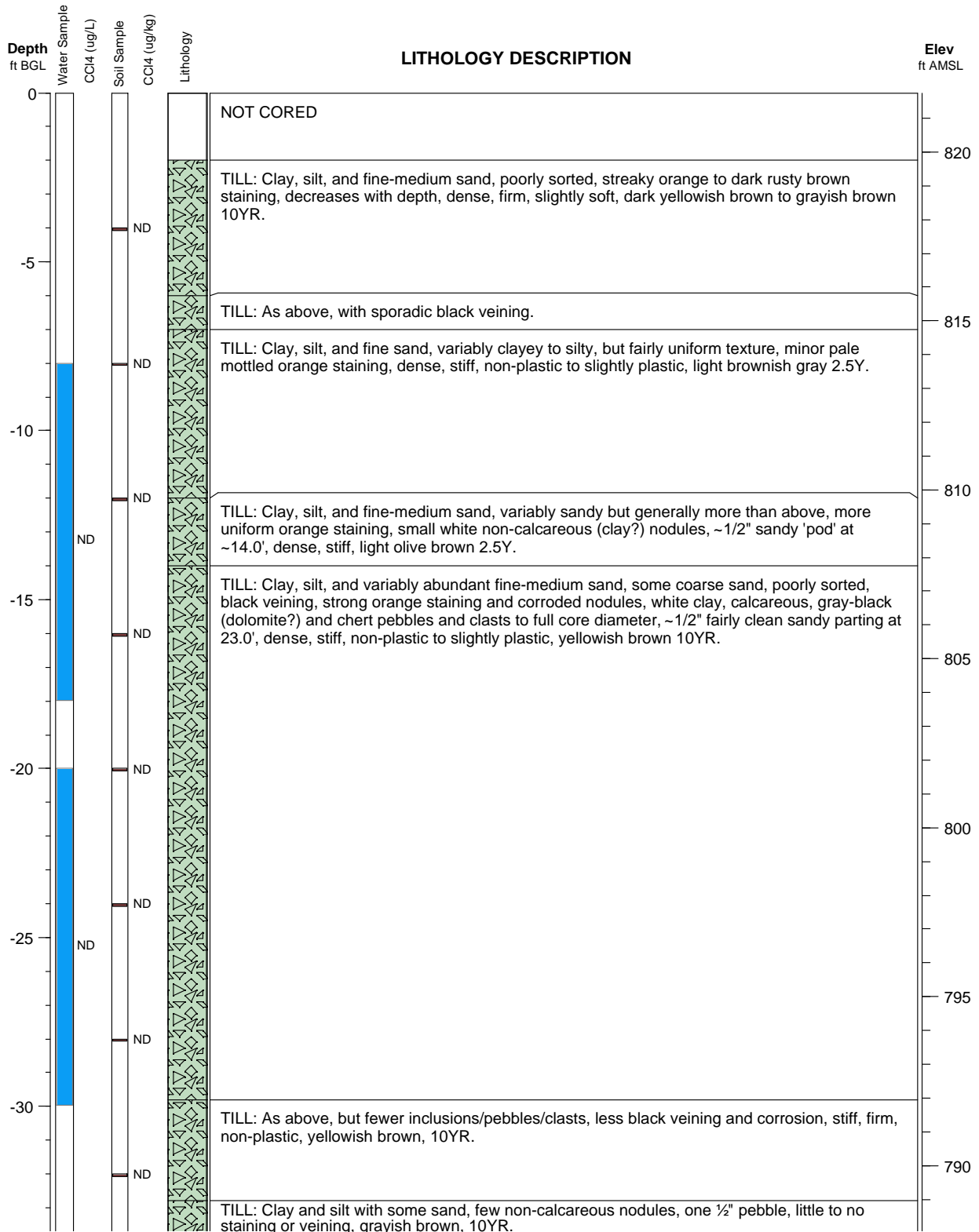
**Project: Montgomery City, MO**

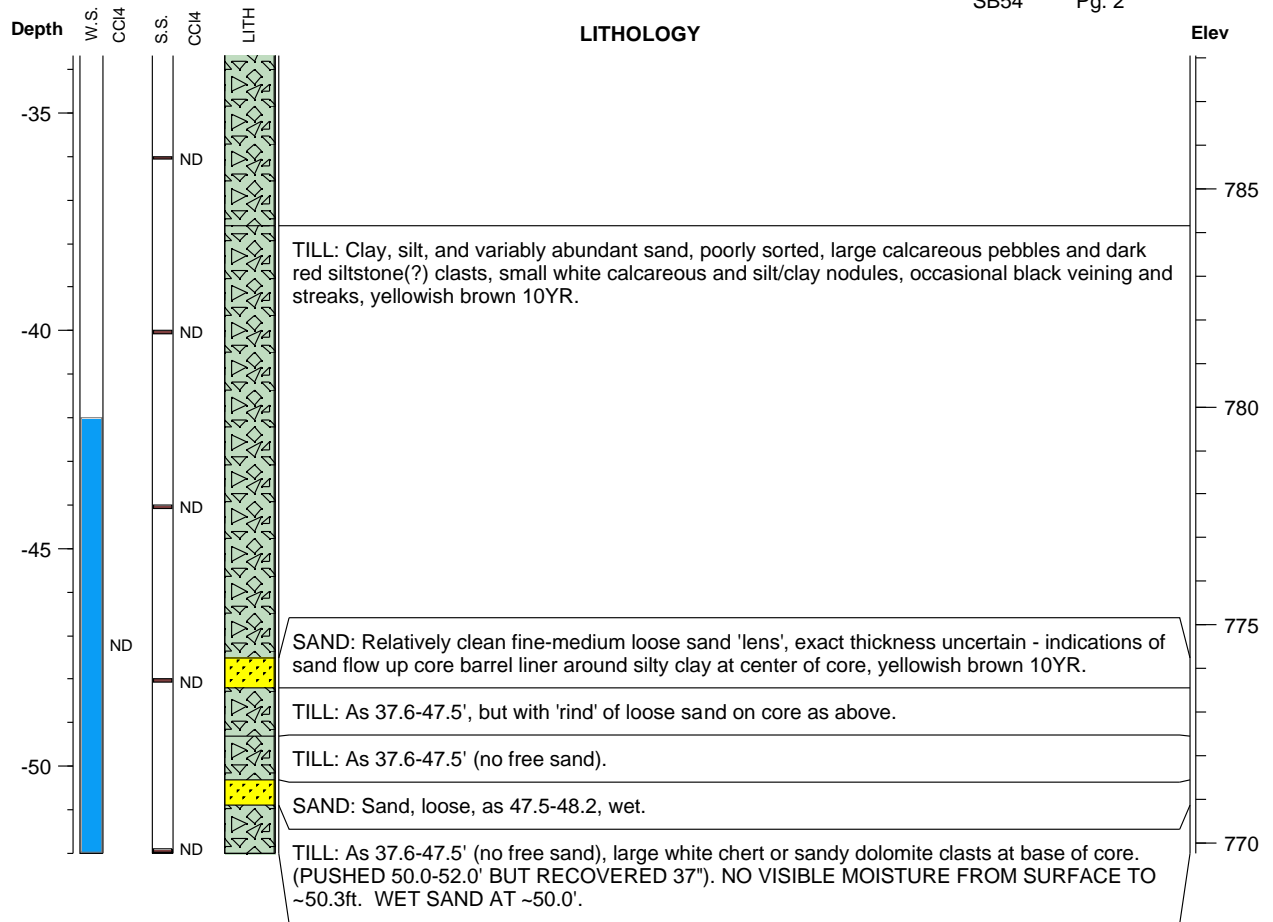
**Elevation: 821.75 ft**

**Log Date: 5/13/2011**

**Geologist: Bob Sedivy**

**Depth: 52 ft BGL**





**Appendix F:**  
**Groundwater Sampling Data**

TABLE F.1 Analytical results from the AGEM Laboratory for water samples collected in 2010-2011.<sup>a</sup>

Location	Sample	Sample Date and Time	Depth (ft BGL)	Analysis Date and Time	Concentration (µg/L)			Reportable Result	Comment		
					Carbon Tetrachloride	Chloroform	Methylene Chloride				
<i>Sampling in October 2010</i>											
SB01	MCSB01-W-32410	10/28/10	13:16	8-18	10/29/10	15:36	1,581	213	ND <sup>b</sup>	Yes	
SB01	MCSB01-W-32646	10/23/10	13:49	20-30	10/26/10	11:46	10,616	2,084	20	Yes	
SB01	MCSB01-W-32330	10/23/10	10:09	52.5-57.5	10/26/10	10:42	535	498	5.0	Yes	
SB01S	MCSB01S-W-32411	10/28/10	13:54	20-30	10/29/10	16:36	10,414	2,036	ND	Yes	
SB01D	MCSB0157-W-32415	10/29/10	9:55	52.5-57.5	11/1/10	14:13	448	240	5.9	Yes	
SB10	MCSB10-W-32405	10/27/10	10:58	8-18	10/28/10	13:19	ND	ND	ND	Yes	
SB11	MCSB11-W-32638	10/25/10	13:23	15-25	10/26/10	13:13	70	15	ND	Yes	
SB22D	MCSB22-W-32409	10/28/10	10:43	57.2-67.2	10/29/10	16:06	11	0.7 J <sup>c</sup>	ND	Yes	
SB24	MCSB24-W-32643	10/21/10	16:42	8.3-18.3	10/23/10	14:34	ND	ND	ND	Yes	
SB24	MCSB24-W-32651	10/20/10	10:04	20	10/23/10	17:34	ND	ND	ND	Yes	
SB24	MCSB24-W-32651DUP	10/20/10	10:04	20	10/23/10	18:04	ND	ND	ND	Yes	QC lab duplicate.
SB27	MCSB27-W-32406	10/27/10	12:28	41-51	10/28/10	14:19	4.2	1.0	ND	Yes	
SB29	MCSB29-W-32649	10/21/10	10:34	11.4-21.4	10/23/10	13:04	33	7.5	ND	Yes	
SB33	MCSB33-W-32636	10/25/10	12:48	12-22	10/26/10	13:43	233	24	ND	Yes	
SB34	MCSB34-W-32637	10/25/10	13:08	17-22	10/26/10	12:43	6.5	4.7	ND	Yes	
Creek	MCCREEK-W-32408	10/27/10	16:17	-	10/28/10	14:49	ND	ND	ND	Yes	
Hemeyer	MICHEMEYER-W-32633	10/22/10	12:18	-	10/23/10	13:34	ND	ND	ND	Yes	
Ken Cobb	MCKCOBB-W-32635	10/22/10	13:22	-	10/23/10	14:04	ND	ND	ND	Yes	
Subway	MCSUBWAY-W-32413	10/28/10	15:30	-	10/29/10	17:07	ND	ND	ND	Yes	
PWS1	MCPWS1-W-32630	10/22/10	8:27	-	10/23/10	15:34	ND	ND	ND	Yes	
PWS2	MCPWS2-W-32631	10/22/10	8:54	-	10/23/10	15:04	ND	ND	ND	Yes	
PWS3	MCPWS3-W-32632	10/22/10	9:16	-	10/23/10	17:04	ND	ND	ND	Yes	
City Water	MCTREAT-W-32634	10/22/10	9:48	-	10/23/10	16:04	ND	ND	ND	Yes	
QC	MCQCTB-W-32645	10/21/10	17:22	-	10/23/10	18:34	ND	ND	ND	Yes	QC trip blank.
QC	MCQCTB-W-32331	10/23/10	10:37	-	10/26/10	14:43	ND	ND	ND	Yes	QC trip blank.
QC	MCQCBR-W-32333	10/25/10	14:06	-	10/26/10	14:13	ND	ND	ND	Yes	QC rinsate.
QC	MCQCTB-W-32407	10/27/10	15:45	-	10/28/10	15:19	ND	ND	ND	Yes	QC trip blank.
QC	MCQCBR-W-32412	10/28/10	13:26	-	10/29/10	18:09	ND	ND	ND	Yes	QC rinsate.
QC	MCQCTB-W-32414	10/28/10	16:36	-	11/1/10	17:14	ND	ND	ND	Yes	QC trip blank.
QC	MCDECON-W-32417	10/29/10	9:25	-	11/1/10	16:14	ND	ND	ND	Yes	QC rinsate.
QC	MCHYD-W-32416	10/29/10	9:30	-	11/1/10	15:43	ND	1.8	ND	Yes	QC field blank.
QC	MCQCTB-W-32418	10/29/10	10:00	-	11/1/10	16:44	ND	1.1	ND	Yes	QC trip blank.
<i>Sampling on November 15, 2010</i>											
SB09D	MCSB09D-W-32424	11/15/10	13:04	58-63	11/16/10	17:30	8.7	0.9 J	ND	Yes	
SB09D	MCSB09D-W-32425	11/15/10	13:05	58-63	11/16/10	18:00	7.1	0.8 J	ND	Yes	QC replicate.
SB17D	MCSB17D-W-32422	11/15/10	12:06	51.3-61.3	11/17/10	22:52	1,310	35	ND	Yes	
SB22M	MCSB22S-W-32426	11/15/10	13:27	18-28	11/16/10	20:00	0.5 J	ND	ND	Yes	
SB22M	MCSB22S-W-32426DUP	11/15/10	13:27	18-28	11/16/10	20:31	0.4 J	ND	ND	Yes	QC lab duplicate.
SB22D	MCSB22D-W-32427	11/15/10	13:46	57.2-67.2	11/16/10	18:30	11	0.4 J	ND	Yes	
SB27S	MCSB27S-W-32428	11/15/10	14:38	20-30	11/16/10	19:00	82	10	ND	Yes	

TABLE F.1 (Cont.)

Location	Sample	Sample Date and Time	Depth (ft BGL)	Analysis Date and Time	Concentration (µg/L)			Reportable Result	Comment		
					Carbon Tetrachloride	Chloroform	Methylene Chloride				
SB27S	MCSB27S-W-32428DUP	11/15/10	14:38	20-30	11/16/10	19:30	89	11	ND	Yes	QC lab duplicate.
SB36S	MCSB36S-W-32421	11/15/10	11:29	15-25	11/16/10	16:29	2.0	1.3	ND	Yes	
SB36D	MCSB36D-W-32420	11/15/10	10:40	42.2-52.2	11/16/10	15:59	1.8	0.3 J	ND	Yes	
<i>Sampling on November 29-December 10, 2010</i>											
SB08D	MCSB08D-W-32508	12/6/10	10:48	47-57	12/7/10	10:13	1,422	42	ND	Yes	QC lab duplicate.
SB08D	MCSB08D-W-32508DUP	12/6/10	10:48	47-57	12/7/10	10:43	1,340	40	ND	Yes	
SB09S	MCSB09S-W-32430	11/30/10	10:17	18-28	12/2/10	4:14	105	5.2	ND	Yes	
SB17S	MCSB17S-W-32431	11/30/10	11:04	18-28	12/2/10	4:44	152	19	ND	Yes	
SB37S	MCSB37S-W-32433	11/30/10	14:52	15-25	12/2/10	0:43	ND	ND	ND	Yes	
SB37D	MCSB37D-W-32434	12/1/10	9:42	35.8-45.8	12/2/10	11:50	ND	ND	ND	Yes	
SB37D	MCSB37D-W-32434DUP	12/1/10	9:42	35.8-45.8	12/2/10	12:20	ND	ND	ND	Yes	QC lab duplicate. Sample frozen in shipment. Re-collected as 32599.
SB38D	MCSB38D-W-32506	12/6/10	9:45	41.2-51.2	12/7/10	3:10	1.4	0.7 J	ND	No	
SB38D	MCSB38D-W-32599	12/7/10	10:35	41.2-51.2	12/8/10	23:47	ND	ND	ND	Yes	
SB39D	MCSB39D-W-32435	12/1/10	10:15	45.8-55.8	12/2/10	13:21	123	32	ND	Yes	
SB40D	MCSB40D-W-32601	12/7/10	12:52	43.3-53.3	12/9/10	2:19	0.4 J	ND	ND	Yes	
SB41M	MCSB41M-W-32500	12/2/10	14:15	20-30	12/3/10	11:11	6,226	957	4.38	Yes	
SB41D	MCSB41D-W-32439	12/5/10	10:49	48-58	12/7/10	12:39	13	76	0.6 J	No	Sample frozen in shipment. Re-collected as 32595.
SB41D	MCSB41D-W-32595	12/7/10	11:50	48-58	12/8/10	22:47	14	78	ND	Yes	
SB42D	MCSB42D-W-32502	12/5/10	11:10	47-57	12/7/10	12:08	7.9	6.2	ND	No	Sample frozen in shipment. Re-collected as 32596.
SB42D	MCSB42D-W-32596	12/7/10	12:06	47-57	12/9/10	12:18	7.4	1.4	ND	Yes	
SB43D	MCSB43D-W-32503	12/5/10	11:45	37.4-47.4	12/7/10	11:38	ND	ND	ND	Yes	
SB44D	MCSB44D-W-32504	12/5/10	12:15	50-60	12/7/10	11:08	10	ND	ND	Yes	
SB45D	MCSB45D-W-32507	12/6/10	10:30	56-66	12/7/10	1:09	ND	ND	ND	No	Sample frozen in shipment. Re-collected as 32598.
SB45D	MCSB45D-W-32598	12/7/10	11:30	56-66	12/9/10	1:49	2.8	1.1	ND	Yes	
SB46M	MCSB46M-W-32505	12/5/10	12:45	20-30	12/7/10	1:39	75	33	ND	No	Sample frozen in shipment. Re-collected as 32597.
SB46M	MCSB46M-W-32597	12/7/10	11:11	20-30	12/9/10	12:48	76	33	ND	Yes	
SB46D	MCSB46D-W-32600	12/7/10	12:40	44.5-54.5	12/10/10	3:57	1,341	240	1.8	Yes	
SB48D	MCSB48D-W-32509	12/6/10	11:20	44-54	12/7/10	9:43	586	252	0.9 J	Yes	
QC	MCQCTB-W-32432	11/30/10	13:25	-	12/2/10	1:13	ND	ND	ND	Yes	QC trip blank.
QC	MCQCTB-W-32437	12/1/10	17:00	-	12/2/10	12:50	ND	ND	ND	Yes	QC trip blank.
QC	MCQCTB-W-32501	12/2/10	15:00	-	12/3/10	12:38	ND	ND	ND	Yes	QC trip blank.
QC	MCQCTB-W-32594	12/6/10	12:30	-	12/7/10	4:40	1.5	0.5 J	ND	Yes	QC trip blank.
QC	MCQCTB-W-32602	12/7/10	14:05	-	12/9/10	2:49	ND	ND	ND	Yes	QC trip blank.
<i>Sampling on January 13-15, 2011</i>											
SB16D	MCSB16D-W-32606	1/14/11	9:53	48-58	1/17/11	12:46	2.5	0.5 J	ND	Yes	QC replicate.
SB16D	MCSB16D-W-32607	1/14/11	9:57	48-58	1/17/11	13:16	2.8	0.5 J	ND	Yes	
SB22S	MCSB22S-W-32603	1/13/11	16:02	8-18	1/17/11	11:17	ND	ND	ND	Yes	
SB22M	MCSB22M-W-32604	1/13/11	16:33	18-28	1/17/11	11:46	ND	ND	ND	Yes	



TABLE F.1 (Cont.)

Location	Sample	Sample Date and Time	Depth (ft BGL)	Analysis Date and Time	Concentration (µg/L)			Reportable Result	Comment		
					Carbon Tetrachloride	Chloroform	Methylene Chloride				
SB38M	MCSB38M-W-32615	1/14/11	13:45	15-25	1/17/11	18:14	ND	ND	ND	Yes	
SB39S	MCSB39S-W-32617	1/14/11	14:56	23-33	1/17/11	19:13	85	35	0.9 J	Yes	
SB40S	MCSB40S-W-32613	1/14/11	12:59	8-18	1/17/11	16:44	1.6	ND	ND	Yes	
SB40M	MCSB40M-W-32612	1/14/11	12:37	20-30	1/17/11	15:45	ND	ND	ND	Yes	
SB41S	MCSB41S-W-32620	1/15/11	9:17	8-18	1/18/11	11:34	85	36	2.3	Yes	
SB42S	MCSB42S-W-32611	1/14/11	12:00	17-27	1/18/11	18:33	1,065	141	1.5	Yes	
SB43M	MCSB43M-W-32616	1/14/11	14:14	20-30	1/17/11	18:44	ND	ND	ND	Yes	
SB44S	MCSB44S-W-32619	1/15/11	8:51	8-18	1/18/11	12:04	ND	ND	ND	Yes	
SB44M	MCSB44M-W-32605	1/14/11	9:22	20-30	1/17/11	12:16	ND	ND	ND	Yes	
SB47S	MCSB47S-W-32610	1/14/11	11:17	20-30	1/18/11	17:03	2,306	103	ND	Yes	
SB47S	MCSB47S-W-32610DUP	1/14/11	11:17	20-30	1/18/11	17:33	2,253	101	ND	Yes	QC lab duplicate.
SB47D	MCSB47D-W-32609	1/14/11	10:58	47-57	1/18/11	13:34	135	6.1	ND	Yes	
SB47D	MCSB47D-W-32609DUP	1/14/11	10:58	47-57	1/18/11	14:04	134	6.1	ND	Yes	QC lab duplicate.
SB48S	MCSB48S-W-32621	1/15/11	9:54	20-30	1/18/11	16:33	658	137	1.4	Yes	
SB48D	MCSB48D-W-32608	1/14/11	10:19	44-54	1/17/11	13:46	449	318	ND	Yes	
QC	MCQCBR-W-32614	1/14/11	13:15	-	1/17/11	17:44	ND	ND	ND	Yes	QC rinsate.
QC	MCQCTB-W-32618	1/14/11	16:54	-	1/18/11	16:03	ND	ND	ND	Yes	QC trip blank.
QC	MCQCTB-W-32622	1/17/11	13:31	-	1/18/11	13:04	ND	ND	ND	Yes	QC trip blank.
<i>Sampling on February 26, 2011</i>											
SB08S	MCSB08S-W-32566	2/26/11	15:09	20-30	3/2/11	10:57	1,485	154	ND	Yes	
SB16M	MCSB16M-W-32568	2/26/11	15:54	20-30	3/2/11	11:57	491	44	ND	Yes	
SB45S	MCSB45S-W-32567	2/26/11	15:24	18-28	3/1/11	11:34	ND	ND	ND	Yes	
SB45S	MCSB45S-W-32567DUP	2/26/11	15:24	18-28	3/1/11	12:04	ND	ND	ND	Yes	QC lab duplicate.
QC	MCQCTB-W-32569	2/28/11	13:46	-	3/1/11	13:04	ND	ND	ND	Yes	QC trip blank.
<i>Sampling on March 23, 2011</i>											
SB16S	MCSB16S-W-32623	3/23/11	16:04	8-18	3/29/11	11:41	165	21	ND	Yes	
SB38S	MCSB38S-W-32624	3/23/11	16:44	10-15	3/24/11	12:12	ND	ND	ND	Yes	
SB43S	MCSB43S-W-32625	3/23/11	16:59	8-18	3/24/11	12:43	ND	ND	ND	Yes	
SB46S	MCSB46S-W-32626	3/23/11	16:21	8-18	3/24/11	13:14	8.9	6.0	ND	Yes	
SB46S	MCSB46S-W-32626DUP	3/23/11	16:21	8-18	3/24/11	13:44	8.9	5.9	ND	Yes	QC lab duplicate.
QC	MCQCTB-W-32627	3/23/11	15:38	-	3/24/11	14:15	ND	ND	ND	Yes	QC trip blank.
<i>Sampling on April 4-13, 2011</i>											
SB01M	MCSB1S-W-32879	4/5/11	16:29	20-30	4/7/11	18:10	8,001	1,397	ND	Yes	
SB08S	MCSB8S-W-32871	4/5/11	12:51	20-30	4/7/11	13:08	66	5.4	ND	Yes	
SB08D	MCSB8D-W-32872	4/5/11	13:13	47-57	4/7/11	13:46	1,209	61	ND	Yes	
SB08D	MCSB8D-W-32873	4/5/11	13:15	47-57	4/7/11	14:16	1,196	61	ND	Yes	QC replicate.
SB09S	MCSB9S-W-32875	4/5/11	14:11	18-28	4/7/11	15:41	403	31	ND	Yes	
SB09D	MCSB9D-W-32876	4/5/11	14:39	58-63	4/7/11	16:41	4.0	1.1	ND	Yes	
SB10	MCSB10-W-32921	4/6/11	13:45	8-18	4/11/11	12:28	ND	0.4 J	ND	Yes	

TABLE F.1 (Cont.)

Location	Sample	Sample Date and Time	Depth (ft BGL)	Analysis Date and Time	Concentration (µg/L)			Reportable Result	Comment		
					Carbon Tetrachloride	Chloroform	Methylene Chloride				
SB11	MCSB11-W-32920	4/6/11	13:38	15-25	4/11/11	11:58	79	21	ND	Yes	
SB16S	MCSB16S-W-32915	4/6/11	11:45	8-18	4/8/11	21:50	111	16	ND	Yes	
SB16M	MCSB16M-W-32916	4/6/11	12:38	20-30	4/11/11	13:49	600	48	ND	Yes	
SB16M	MCSB16M-W-32916DUP	4/6/11	12:38	20-30	4/11/11	14:19	590	46	ND	Yes	QC lab duplicate.
SB16D	MCSB16D-W-32917	4/6/11	12:50	48-58	4/11/11	14:48	1.0	ND	ND	Yes	
SB17S	MCSB17S-W-32918	4/6/11	13:08	18-28	4/11/11	15:17	166	20	ND	Yes	
SB17D	MCSB17D-W-32919	4/6/11	13:15	51.3-61.3	4/11/11	15:46	1,231	47	ND	Yes	
SB17D	MCSB17DUP-W-32906	4/6/11	13:16	51.3-61.3	4/8/11	19:49	523	73	ND	Yes	QC replicate.
SB22S	MCSB22S-W-32926	4/6/11	14:40	8-18	4/8/11	17:19	ND	ND	ND	Yes	
SB22M	MCSB22M-W-32927	4/6/11	14:48	18-28	4/8/11	17:49	ND	ND	ND	Yes	
SB22D	MCSB22D-W-32928	4/6/11	15:00	57.2-67.2	4/8/11	18:19	7.7	0.4 J	ND	Yes	
SB24	MCSB24-W-32925	4/6/11	14:30	8-18	4/8/11	16:49	ND	ND	ND	Yes	
SB27S	MCSB27S-W-32892	4/6/11	13:58	20-30	4/8/11	14:52	21	10	ND	Yes	
SB27S	MCSB27S-W-32892DUP	4/6/11	13:58	20-30	4/8/11	15:51	20	10	ND	Yes	QC lab duplicate.
SB27D	MCSB27D-W-32893	4/6/11	14:18	41-51	4/8/11	16:20	3.1	0.7 J	ND	Yes	
SB29	MCSB29-W-32891	4/6/11	12:16	12-22	4/8/11	14:23	16	4.8	ND	Yes	
SB33	MCSB33-W-32870	4/5/11	12:10	12-22	4/7/11	11:59	243	38	ND	Yes	
SB34	MCSB34-W-32874	4/5/11	13:47	17-22	4/7/11	15:12	6.1	5.3	ND	Yes	
SB36S	MCSB36S-W-32901	4/6/11	15:50	15-25	4/11/11	12:58	0.5 J	1.1	ND	Yes	
SB36D	MCSB36D-W-32902	4/6/11	15:56	42.2-52.2	4/11/11	13:28	0.4 J	ND	ND	Yes	
SB37S	MCSB37S-W-32886	4/6/11	9:48	15-25	4/8/11	11:28	ND	ND	ND	Yes	
SB37D	MCSB37D-W-32887	4/6/11	10:22	35.8-45.8	4/8/11	11:58	ND	ND	ND	Yes	
SB38S	MCSB38S-W-32888	4/6/11	10:56	10-15	4/8/11	12:28	ND	ND	ND	Yes	
SB38M	MCSB38M-W-32889	4/6/11	11:17	15-25	4/8/11	12:58	ND	ND	ND	Yes	
SB38D	MCSB38D-W-32890	4/6/11	11:43	41.2-51.2	4/8/11	13:31	ND	ND	ND	Yes	
SB39S	MCSB39S-W-32898	4/6/11	16:27	23-33	4/8/11	18:45	90	22	ND	Yes	
SB39D	MCSB39D-W-32899	4/6/11	17:09	45.8-55.8	4/11/11	10:57	42	34	ND	Yes	
SB40S	MCSB40S-W-32903	4/6/11	16:12	8-18	4/11/11	13:59	ND	ND	ND	Yes	
SB40M	MCSB40M-W-32904	4/6/11	16:22	20-30	4/11/11	14:59	ND	ND	ND	Yes	
SB40D	MCSB40D-W-32905	4/6/11	16:34	43.3-53.3	4/11/11	15:29	0.2 J	ND	ND	Yes	
SB41S	MCSB41S-W-32880	4/5/11	17:09	8-18	4/7/11	11:34	57	33	2.3	Yes	
SB41S	MCSB41S-W-32880DUP	4/5/11	17:09	8-18	4/7/11	12:04	55	32	2.3	Yes	QC lab duplicate.
SB41M	MCSB41M-W-32881	4/5/11	17:41	20-30	4/7/11	12:35	1,260	502	ND	Yes	
SB41D	MCSB41D-W-32882	4/5/11	18:08	48-58	4/7/11	13:05	14	26	ND	Yes	
SB42S	MCSB42S-W-32883	4/5/11	18:36	17-27	4/7/11	13:35	918	132	1.9	Yes	
SB42D	MCSB42D-W-32884	4/5/11	19:08	47-57	4/7/11	14:05	6.8	1.4	ND	Yes	
SB43S	MCSB43S-W-32894	4/6/11	14:50	8-18	4/8/11	16:49	ND	ND	ND	Yes	
SB43M	MCSB43M-W-32895	4/6/11	15:12	20-30	4/8/11	17:18	ND	ND	ND	Yes	
SB43M	MCSB43M-W-32896	4/6/11	15:14	20-30	4/8/11	17:47	ND	ND	ND	Yes	QC replicate.
SB43D	MCSB43D-W-32897	4/6/11	15:50	37.4-47.4	4/8/11	18:16	ND	ND	ND	Yes	
SB44S	MCSB44S-W-32922	4/6/11	13:56	8-18	4/8/11	14:15	0.2 J	ND	ND	Yes	
SB44M	MCSB44M-W-32923	4/6/11	14:05	20-30	4/8/11	14:46	ND	ND	ND	Yes	
SB44D	MCSB44D-W-32924	4/6/11	14:15	50-60	4/8/11	15:16	8.1	ND	ND	Yes	
SB44D	MCSB44D-W-32924DUP	4/6/11	14:15	50-60	4/8/11	15:46	8.2	ND	ND	Yes	QC lab duplicate.
SB45S	MCSB45S-W-32929	4/6/11	15:10	18-28	4/8/11	18:49	ND	ND	ND	Yes	
SB45D	MCSB45D-W-32900	4/6/11	15:22	56-66	4/8/11	19:19	ND	ND	ND	Yes	
SB46S	MCSB46S-W-32912	4/6/11	10:38	8-18	4/11/11	13:20	7.9	8.2	ND	Yes	
SB46M	MCSB46M-W-32913	4/6/11	11:00	20-30	4/8/11	20:50	186	15	ND	Yes	

TABLE F.1 (Cont.)

Location	Sample	Sample Date and Time	Depth (ft BGL)	Analysis Date and Time	Concentration (µg/L)			Reportable Result	Comment		
					Carbon Tetrachloride	Chloroform	Methylene Chloride				
SB46M	MCSB46M-W-32913DUP	4/6/11	11:00	20-30	4/8/11	21:20	171	13	ND	Yes	QC lab duplicate.
SB46D	MCSB46D-W-32914	4/6/11	11:15	44.5-54.5	4/8/11	11:09	1,508	159	ND	Yes	
SB47S	MCSB47S-W-32910	4/6/11	9:45	20-30	4/11/11	16:00	1,560	93	ND	Yes	
SB47S	MCSB47S-W-32910DUP	4/6/11	9:45	20-30	4/11/11	16:30	1,504	89	ND	Yes	QC lab duplicate.
SB47D	MCSB47D-W-32911	4/6/11	10:23	47-57	4/11/11	17:00	135	4.3	ND	Yes	
SB48S	MCSB48S-W-32877	4/5/11	15:05	20-30	4/7/11	17:11	1,136	90	ND	Yes	
SB48D	MCSB48D-W-32878	4/5/11	15:36	44-54	4/7/11	17:40	65	94	ND	Yes	
QC	MCQCTB-W-32885	4/5/11	19:15	-	4/7/11	18:40	ND	ND	ND	Yes	QC trip blank.
QC	MCQCTB-W-32909	4/7/11	9:33	-	4/11/11	18:01	ND	0.3 J	ND	Yes	QC trip blank.
QC	MCQCTB-W-32907	4/7/11	10:22	-	4/11/11	11:27	ND	0.3 J	ND	Yes	QC trip blank.
QC	MCQCTB-W-32908	4/7/11	11:13	-	4/11/11	17:51	ND	0.2 J	ND	Yes	QC trip blank.
<i>Sampling on May 9-18, 2011</i>											
SB01S	MCSB01S-W-32419	5/13/11	14:10	8-18	5/16/11	12:55	249	346	7.5	No	Installed 5/12/11. First sample collected the day after installation. Re-sampled May 17 as 33302.
SB01S	MCSB01S-W-33302	5/17/11	10:50	8-18	5/20/11	11:20	2,796	842	3.1	Yes	
SB01M	MCSB01M-W-33290	5/17/11	10:24	20-30	5/18/11	20:00	9,150	1,437	ND	Yes	
SB01D	MCSB01D-W-33286	5/14/11	10:40	47-57	5/16/11	10:19	9.3	720	19	No	Installed 5/12/11. First sample from well. Re-sampled May 17 as 33291.
SB01D	MCSB01D-W-33291	5/17/11	10:31	47-57	5/18/11	11:55	22	869	2.8	Yes	
SB49S	MCSB49S-W-32968	5/16/11	9:30	8-18	5/17/11	11:34	ND	ND	ND	No	Installed 5/12/11. First sample from well. Re-sampled May 17 as 33292.
SB49S	MCSB49S-W-32968DUP	5/16/11	9:30	8-18	5/17/11	12:05	ND	ND	ND	No	QC lab duplicate.
SB49S	MCSB49S-W-33292	5/17/11	11:40	8-18	5/18/11	12:25	ND	0.3 J	ND	Yes	
SB49D	MCSB49D-W-32628	5/13/11	13:58	49.5-59.5	5/14/11	13:33	ND	ND	ND	No	Installed 5/12/11. First sample collected the day after installation. Re-sampled May 17 as 33293.
SB49D	MCSB49D-W-33293	5/17/11	11:26	49.5-59.5	5/18/11	12:56	ND	ND	ND	Yes	
SB50M	MCSB50M-W-33301	5/17/11	13:10	20-30	5/18/11	17:28	4.5	5.5	ND	Yes	
SB50D	MCSB50D-W-32947	5/16/11	9:45	47-57	5/17/11	10:32	99	25	ND	No	Installed 5/11/11. First sample from well. Re-sampled May 17 as 33296.
SB50D	MCSB50D-W-33296	5/17/11	13:05	47-57	5/18/11	19:29	144	45	ND	Yes	
SB51D	MCSB51D-W-32969	5/16/11	10:45	41-51	5/17/11	11:03	ND	0.2 J	ND	No	Installed 5/15/11. First sample collected the day after installation. Re-sampled May 17 as 33294.
SB51D	MCSB51D-W-33294	5/17/11	11:55	41-51	5/18/11	13:26	ND	ND	ND	Yes	
SB52S	MCSB52S-W-33297	5/17/11	9:30	8-18	5/18/11	15:27	ND	ND	ND	Yes	
SB52M	MCSB52M-W-33298	5/17/11	9:52	20-30	5/18/11	15:57	ND	ND	ND	Yes	
SB52D	MCSB52D-W-33299	5/17/11	10:02	40-50	5/18/11	16:28	0.8 J	ND	ND	Yes	

TABLE F.1 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration (µg/L)			Reportable Result	Comment
							Carbon Tetrachloride	Chloroform	Methylene Chloride		
SB53	MCSB53D-W-33300	5/17/11	10:12	43-53	5/18/11	16:58	ND	ND	ND	Yes	
SB54D	MCSB54D-W-33287	5/14/11	10:54	42-52	5/16/11	10:50	ND	ND	ND	No	Installed 5/13/11. First sample collected the day after installation. Re-sampled May 17 as 33295.
SB54D	MCSB54D-W-33288	5/14/11	11:32	42-52	5/16/11	11:22	ND	ND	ND	No	QC replicate.
SB54D	MCSB54D-W-33288DUP	5/14/11	11:32	42-52	5/16/11	11:52	ND	ND	ND	No	QC lab duplicate.
SB54D	MCSB54D-W-33295	5/17/11	12:52	42-52	5/18/11	13:56	ND	ND	ND	Yes	
QC	MCQCTB-W-32629	5/13/11	16:00	-	5/17/11	14:08	ND	ND	ND	Yes	QC trip blank.
QC	MCQCTB-W-33289	5/14/11	12:26	-	5/16/11	12:24	ND	ND	ND	Yes	QC trip blank.
QC	MCQCTB-W-32948	5/16/11	11:20	-	5/17/11	12:36	ND	ND	ND	Yes	QC trip blank.
QC	MCQCTB-W-33303	5/17/11	15:00	-	5/18/11	18:29	ND	ND	ND	Yes	QC trip blank.
<i>Sampling on June 9, 2011</i>											
SB49M	MCSB49M-W-33304	6/9/11	8:39	20-30	6/10/11	10:48	ND	ND	ND	Yes	
SB51S	MCSB51S-W-33310	6/9/11	11:54	8-18	6/10/11	13:19	ND	ND	ND	Yes	
SB51M	MCSB51M-W-33309	6/9/11	11:29	20-30	6/10/11	12:48	ND	ND	ND	Yes	
SB53M	MCSB53M-W-33307	6/9/11	10:34	20-30	6/10/11	12:18	ND	ND	ND	Yes	
SB54S	MCSB54S-W-33306	6/9/11	9:47	8-18	6/10/11	11:48	ND	ND	ND	Yes	
SB54M	MCSB54M-W-33305	6/9/11	9:14	20-30	6/10/11	11:18	ND	ND	ND	Yes	
QC	MCQCBR-W-33308	6/9/11	10:22	-	6/10/11	14:19	ND	ND	ND	Yes	QC rinsate.
QC	MCQCTB-W-33311	6/9/11	12:50	-	6/10/11	14:49	ND	ND	ND	Yes	QC trip blank.
<i>Sampling on September 1, 2011</i>											
SB50S	MCSB50S-W-33312	9/1/11	0:00	8-18	9/2/11	13:06	1.9	1.9	ND	Yes	
SB53S	MCSB53S-W-33313	9/1/11	0:00	8-18	9/2/11	14:08	ND	ND	ND	Yes	
QC	MCQCTB-W-33314	9/1/11	0:00	-	9/2/11	14:39	ND	ND	ND	Yes	QC trip blank.

<sup>a</sup> Water samples were analyzed at the AGEM Laboratory by modified EPA Method 524.2 (a purge-and-trap method by GC-MS).

<sup>b</sup> ND, not detected at an instrument detection limit of 0.1 µg/L.

<sup>c</sup> Qualifier J indicates an estimated concentration below the purge-and-trap method quantitation limit of 1.0 µg/L.

TABLE F.2 Field measurements made during groundwater sampling in 2010-2011.

Location	Sample	Depth (ft BGL)	Sample Date	Type <sup>a</sup>	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)
<i>Sampling in October 2010</i>									
SB01	MCSB01-W-32410	8-18	10/28/10	TM	-	-	-	-	-
SB01	MCSB01-W-32646	20-30	10/23/10	TM	18.8	7.66	763	6.64	24.4
SB01	MCSB0157-W-32415	52.5-57.5	10/29/10	TM	13.0	7.43	734	9.26	290.0
SB01	MCSB01-W-32330	53.5-57.5	10/23/10	TM	-	-	-	-	-
SB01M	MCSB01S-W-32411	20-30	10/28/10	PM	15.4	7.51	757	5.05	-27.8
SB10	MCSB10-W-32405	8-18	10/27/10	TM	17.5	7.91	732	8.95	194.4
SB11	MCSB11-W-32638	15-25	10/25/10	TM	19.0	7.36	829	5.24	85.3
SB22D	MCSB22-W-32409	57.2-67.2	10/28/10	TM	14.4	7.24	785	9.15	267.4
SB24	MCSB24-W-32643	8-18	10/21/10	PM	-	-	-	-	-
SB24	MCSB24-W-32651	18-22	10/20/10	PM	-	-	-	-	-
SB27D	MCSB27-W-32406	41-51	10/27/10	PM	-	-	-	-	-
SB29S	MCSB29-W-32649	11-21	10/21/10	PM	-	-	-	-	-
SB33	MCSB33-W-32636	12-22	10/25/10	TM	20.5	7.32	979	5.04	130.4
SB34	MCSB34-W-32637	17-22	10/25/10	TM	19.9	7.96	548	5.65	62.2
Creek	MCCREEK-W-32408	-	10/27/10	SW	-	-	-	-	-
Hemeyer	MICHEMEYER-W-32633	680 <sup>b</sup>	10/22/10	PW	17.4	7.23	913	2.32	-12.5
Ken Cobb	MCKCOBB-W-32635	700 <sup>c</sup>	10/22/10	PW	16.4	7.23	1455	1.92	-114.6
Subway	MCSUBWAY-W-32413	180.8	10/28/10	PW	14.9	7.33	670	1.46	63.9
PWS1	MCPWS1-W-32630	1150 <sup>b</sup>	10/22/10	PWS	17.9	7.43	1106	3.81	-33.4
PWS2	MCPWS2-W-32631	1175 <sup>b</sup>	10/22/10	PWS	16.4	7.19	1034	2.41	-7.5
PWS3	MCPWS3-W-32632	1275 <sup>b</sup>	10/22/10	PWS	18.8	7.33	1041	2.73	-28.1
City Water Supply	MCTREAT-W-32634	-	10/22/10	PWS	19.9	7.58	1101	8.34	400.2
<i>Sampling on November 15, 2010</i>									
SB09D	MCSB09D-W-32424	58-63	11/15/10	TM	15.7	7.26	752	5.90	139.3
SB17D	MCSB17D-W-32422	51.3-61.3	11/15/10	PM	14.5	7.20	771	8.33	84.4
SB22D	MCSB22D-W-32427	57.2-67.2	11/15/10	TM	15.3	7.13	787	2.48	133.4
SB22M	MCSB22S-W-32426	18-28	11/15/10	TM	-	-	-	-	-



TABLE F.2 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Type <sup>a</sup>	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)
SB27S	MCSB27S-W-32428	20-30	11/15/10	PM	-	-	-	-	-
SB36D	MCSB36D-W-32420	42.2-52.2	11/15/10	PM	14.3	7.29	788	7.29	223.4
SB36S	MCSB36S-W-32421	15-25	11/15/10	PM	14.3	6.98	891	6.67	95.2
<i>Sampling on November 29-December 10, 2010</i>									
SB08D	MCSB08D-W-32508	47-57	12/6/10	PM	9.3	7.18	781	8.37	41.8
SB09S	MCSB09S-W-32430	18-28	11/30/10	TM	11.4	7.79	1027	7.49	167.5
SB17S	MCSB17S-W-32431	18-28	11/30/10	PM	10.3	7.66	845	6.75	155.2
SB37D	MCSB37D-W-32434	35.8-45.8	12/1/10	PM	11.3	7.23	721	8.17	95.5
SB37S	MCSB37S-W-32433	15-25	11/30/10	PM	13.6	7.20	737	5.84	159.3
SB38D	MCSB38D-W-32506	41.2-51.2	12/6/10	PM	7.7	6.97	780	8.39	-37.1
SB38D	MCSB38D-W-32599	41.2-51.2	12/7/10	PM	-	-	-	-	-
SB39D	MCSB39D-W-32435	45.8-55.8	12/1/10	PM	10.2	7.23	805	4.76	-21.5
SB40D	MCSB40D-W-32601	43.3-53.3	12/7/10	PM	-	-	-	-	-
SB41D	MCSB41D-W-32439	48-58	12/5/10	TM	9.5	7.31	737	9.61	160.2
SB41D	MCSB41D-W-32595	48-58	12/7/10	TM	-	-	-	-	-
SB41M	MCSB41M-W-32500	20-30	12/2/10	TM	14.3	7.10	803	3.25	-15.7
SB42D	MCSB42D-W-32502	47-57	12/5/10	TM	8.7	7.20	761	8.98	92.0
SB42D	MCSB42D-W-32596	47-57	12/7/10	TM	-	-	-	-	-
SB43D	MCSB43D-W-32503	37.4-47.4	12/5/10	PM	12.3	7.17	786	9.72	56.0
SB44D	MCSB44D-W-32504	50-60	12/5/10	PM	11.7	7.11	771	9.72	83.5
SB45D	MCSB45D-W-32507	56-66	12/6/10	PM	9.1	7.23	805	8.06	-23.2
SB45D	MCSB45D-W-32598	56-66	12/7/10	PM	-	-	-	-	-
SB46D	MCSB46D-W-32600	44.5-54.5	12/7/10	PM	-	-	-	-	-
SB46M	MCSB46M-W-32505	20-30	12/5/10	TM	11.9	7.26	817	3.92	-131.8
SB46M	MCSB46M-W-32597	20-30	12/7/10	TM	-	-	-	-	-
SB48D	MCSB48D-W-32509	44-54	12/6/10	TM	10.4	7.33	801	5.52	-43.7
<i>Sampling on January 13-15, 2011</i>									
SB16D	MCSB16D-W-32606	48-58	1/14/11	TM	6.9	7.11	820	9.23	73.3
SB22M	MCSB22M-W-32604	18-28	1/13/11	TM	11.0	7.24	894	3.03	-63.9
SB22S	MCSB22S-W-32603	8-18	1/13/11	PM	-	-	-	-	-
SB38M	MCSB38M-W-32615	15-25	1/14/11	PM	9.9	7.35	839	7.23	-14.2
SB39S	MCSB39S-W-32617	23-33	1/14/11	PM	7.2	7.36	804	4.41	56.4

TABLE F.2 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Type <sup>a</sup>	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)
SB40M	MCSB40M-W-32612	20-30	1/14/11	PM	9.8	7.44	779	7.24	6.2
SB40S	MCSB40S-W-32613	8-18	1/14/11	PM	11.6	7.41	827	6.51	-57.4
SB41S	MCSB41S-W-32620	8-18	1/15/11	TM	6.7	-	752	7.75	21.3
SB42S	MCSB42S-W-32611	17-27	1/14/11	TM	7.7	7.41	755	7.26	52.4
SB43M	MCSB43M-W-32616	20-30	1/14/11	PM	9.7	7.43	720	8.36	41.6
SB44M	MCSB44M-W-32605	20-30	1/14/11	PM	8.2	7.17	796	7.23	24.7
SB44S	MCSB44S-W-32619	8-18	1/15/11	TM	-	-	-	-	-
SB47D	MCSB47D-W-32609	47-57	1/14/11	TM	5.6	7.32	1403	9.62	74.4
SB47S	MCSB47S-W-32610	20-30	1/14/11	TM	9.9	7.38	828	8.61	52.0
SB48D	MCSB48D-W-32608	44-54	1/14/11	TM	5.4	7.41	794	3.34	69.9
SB48S	MCSB48S-W-32621	20-30	1/15/11	TM	7.8	7.43	721	7.98	73.6
<i>Sampling on February 26, 2011</i>									
SB08S	MCSB08S-W-32566	20-30	2/26/11	PM	-	-	-	-	-
SB16M	MCSB16M-W-32568	20-30	2/26/11	TM	-	-	-	-	-
SB45S	MCSB45S-W-32567	18-28	2/26/11	PM	-	-	-	-	-
<i>Sampling on March 23, 2011</i>									
SB16S	MCSB16S-W-32623	8-18	3/23/11	PM	-	-	-	-	-
SB38S	MCSB38S-W-32624	10-15	3/23/11	PM	-	-	-	-	-
SB43S	MCSB43S-W-32625	8-18	3/23/11	PM	-	-	-	-	-
SB46S	MCSB46S-W-32626	8-18	3/23/11	PM	-	-	-	-	-
<i>Sampling on April 4-13, 2011</i>									
SB01M	MCSB1S-W-32879	20-30	4/5/11	PM	16.7	7.48	580	4.26	110.8
SB08D	MCSB8D-W-32872	47-57	4/5/11	PM	14.2	7.22	592	2.25	87.3
SB08S	MCSB8S-W-32871	20-30	4/5/11	PM	13.7	7.19	836	2.86	142.1
SB09D	MCSB9D-W-32876	58-63	4/5/11	TM	15.1	7.31	585	2.31	-43.0
SB09S	MCSB9S-W-32875	18-28	4/5/11	TM	14.0	7.34	600	3.11	171.5
SB10	MCSB10-W-32921	8-18	4/6/11	TM	17.4	6.93	788	3.16	109.3
SB11	MCSB11-W-32920	15-25	4/6/11	TM	-	-	-	-	-
SB16D	MCSB16D-W-32917	48-58	4/6/11	TM	17.8	6.92	739	4.14	92.8
SB16M	MCSB16M-W-32916	20-30	4/6/11	TM	16.5	7.15	925	1.96	86.4

TABLE F.2 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Type <sup>a</sup>	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)
SB16S	MCSB16S-W-32915	8-18	4/6/11	PM	16.6	6.65	639	16.48 (?)	100.5
SB17D	MCSB17D-W-32919	51.3-61.3	4/6/11	PM	18.1	6.96	734	1.43	98.4
SB17S	MCSB17S-W-32918	18-28	4/6/11	PM	—	—	—	—	—
SB22D	MCSB22D-W-32928	57.2-67.2	4/6/11	TM	19.7	7.05	750	1.25	-34.8
SB22M	MCSB22M-W-32927	18-28	4/6/11	TM	18.0	7.09	762	1.03	-28.4
SB22S	MCSB22S-W-32926	8-18	4/6/11	PM	18.4	6.84	539	1.12	11.7
SB24S	MCSB24-W-32925	8-18	4/6/11	PM	15.4	6.76	584	2.20	77.8
SB27D	MCSB27D-W-32893	41-51	4/6/11	PM	20.4	7.29	693	2.13	-34.0
SB27S	MCSB27S-W-32892	20-30	4/6/11	PM	20.0	7.28	697	2.53	-74.7
SB29S	MCSB29-W-32891	12-22	4/6/11	PM	19.8	7.45	595	2.89	-51.9
SB33	MCSB33-W-32870	12-22	4/5/11	TM	14.8	7.18	729	3.46	163.4
SB34	MCSB34-W-32874	17-22	4/5/11	TM	15.0	7.62	457	2.86	92.4
SB36D	MCSB36D-W-32902	42.2-52.2	4/6/11	PM	17.8	6.98	757	1.55	-31.8
SB36S	MCSB36S-W-32901	15-25	4/6/11	PM	17.5	6.86	830	2.24	44.6
SB37D	MCSB37D-W-32887	35.8-45.8	4/6/11	PM	19.4	7.36	626	1.74	-5.4
SB37S	MCSB37S-W-32886	15-25	4/6/11	PM	17.4	7.49	610	1.91	-88.5
SB38D	MCSB38D-W-32890	41.2-51.2	4/6/11	PM	20.1	7.22	690	2.27	82.3
SB38M	MCSB38M-W-32889	15-25	4/6/11	PM	19.6	7.25	749	3.62	36.3
SB38S	MCSB38S-W-32888	10-15	4/6/11	PM	19.4	7.38	676	4.87	22.6
SB39D	MCSB39D-W-32899	45.8-55.8	4/6/11	PM	17.8	7.30	675	3.44	95.8
SB39S	MCSB39S-W-32898	23-33	4/6/11	PM	17.3	7.22	674	4.51	75.1
SB40D	MCSB40D-W-32905	43.3-53.3	4/6/11	PM	17.0	7.02	743	1.76	9.6
SB40M	MCSB40M-W-32904	20-30	4/6/11	PM	18.4	7.08	744	1.97	9.3
SB40S	MCSB40S-W-32903	8-18	4/6/11	PM	18.1	7.07	690	4.07	-9.8
SB41D	MCSB41D-W-32882	48-58	4/5/11	TM	16.5	7.36	627	2.94	-28.4
SB41M	MCSB41M-W-32881	20-30	4/5/11	TM	16.7	7.29	612	3.02	34.3
SB41S	MCSB41S-W-32880	8-18	4/5/11	TM	16.6	7.21	484	5.96	55.2
SB42D	MCSB42D-W-32884	47-57	4/5/11	TM	15.8	7.23	629	3.56	104.7
SB42S	MCSB42S-W-32883	17-27	4/5/11	TM	15.6	7.34	606	3.16	46.1
SB43D	MCSB43D-W-32897	37.4-47.4	4/6/11	PM	20.3	7.12	692	3.10	-35.0
SB43M	MCSB43M-W-32895	20-30	4/6/11	PM	21.9	7.31	698	5.07	70.4
SB43S	MCSB43S-W-32894	8-18	4/6/11	PM	19.5	7.34	605	6.56	-10.4
SB44D	MCSB44D-W-32924	50-60	4/6/11	PM	18.1	7.18	752	1.84	67.0
SB44M	MCSB44M-W-32923	20-30	4/6/11	PM	16.0	7.04	721	2.24	57.5
SB44S	MCSB44S-W-32922	8-18	4/6/11	TM	15.4	6.89	683	4.70	47.5
SB45D	MCSB45D-W-32900	56-66	4/6/11	PM	18.5	6.97	738	4.49	5.6

TABLE F.2 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Type <sup>a</sup>	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)
SB45S	MCSB45S-W-32929	18-28	4/6/11	PM	19.1	7.02	755	2.55	20.0
SB46D	MCSB46D-W-32914	44.5-54.5	4/6/11	PM	16.7	7.13	766	1.88	62.5
SB46M	MCSB46M-W-32913	20-30	4/6/11	TM	15.2	7.13	743	1.61	11.2
SB46S	MCSB46S-W-32912	8-18	4/6/11	PM	13.2	7.05	916	3.75	27.4
SB47D	MCSB47D-W-32911	47-57	4/6/11	TM	15.6	7.00	972	5.33	165.2
SB47S	MCSB47S-W-32910	20-30	4/6/11	TM	15.5	7.07	1299	4.88	173.5
SB48D	MCSB48D-W-32878	44-54	4/5/11	TM	17.3	7.26	672	2.74	83.3
SB48S	MCSB48S-W-32877	20-30	4/5/11	TM	15.8	7.44	597	4.39	80.1
<i>Sampling on May 9-18, 2011</i>									
SB01D	MCSB01D-W-33286	47-57	5/14/11	PM	18.1	7.33	656	1.70	-177.9
SB01D	MCSB01D-W-33291	47-57	5/17/11	PM	16.7	7.58	880	3.93	108.4
SB01M	MCSB01M-W-33290	20-30	5/17/11	PM	13.4	7.29	589	2.23	29.9
SB01S	MCSB01S-W-32419	8-18	5/13/11	PM	15.1	6.65	871	11.01	80.6
SB01S	MCSB01S-W-33302	8-18	5/17/11	PM	–	–	–	–	–
SB49D	MCSB49D-W-32628	49.5-59.5	5/13/11	PM	–	–	–	–	–
SB49D	MCSB49D-W-33293	49.5-59.5	5/17/11	PM	14.9	7.47	704	7.82	44.2
SB49S	MCSB49S-W-32968	8-18	5/16/11	PM	12.5	7.41	783	14.00	98.2
SB49S	MCSB49S-W-33292	8-18	5/17/11	PM	14.1	7.14	840	8.95	44.2
SB50D	MCSB50D-W-32947	47-57	5/16/11	PM	–	–	–	–	–
SB50D	MCSB50D-W-33296	47-57	5/17/11	PM	17.0	7.12	674	8.23	12.6
SB50M	MCSB50M-W-33301	20-30	5/17/11	PM	–	–	–	–	–
SB51D	MCSB51D-W-32969	41-51	5/16/11	PM	14.9	7.10	671	11.39	95.1
SB51D	MCSB51D-W-33294	41-51	5/17/11	PM	15.9	7.14	700	9.50	61.6
SB52D	MCSB52D-W-33299	40-50	5/17/11	PM	13.9	7.03	645	8.77	63.9
SB52M	MCSB52M-W-33298	20-30	5/17/11	PM	12.7	7.49	610	10.45	51.7
SB52S	MCSB52S-W-33297	8-18	5/17/11	PM	11.7	7.00	407	9.75	106.0
SB53D	MCSB53D-W-33300	43-53	5/17/11	PM	14.1	7.13	635	10.56	15.0
SB54D	MCSB54D-W-33287	42-52	5/14/11	PM	14.1	7.07	676	9.23	-4.4
SB54D	MCSB54D-W-33288	42-52	5/14/11	PM	–	–	–	–	–
SB54D	MCSB54D-W-33295	42-52	5/17/11	PM	18.6	6.96	762	6.71	11.5

TABLE F.2 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Type <sup>a</sup>	Temperature (°C)	pH	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)
<i>Sampling on June 9, 2011</i>									
SB49M	MCSB49M-W-33304	20-30	6/9/11	PM	15.4	7.57	629	6.88	107.7
SB51M	MCSB51M-W-33309	20-30	6/9/11	PM	16.4	7.69	499	2.50	-15.5
SB51S	MCSB51S-W-33310	8-18	6/9/11	PM	15.5	7.68	435	1.59	1.8
SB53M	MCSB53M-W-33307	20-30	6/9/11	PM	15.8	7.61	627	5.50	73.3
SB54M	MCSB54M-W-33305	20-30	6/9/11	PM	15.6	7.59	672	4.04	90.5
SB54S	MCSB54S-W-33306	8-18	6/9/11	PM	15.6	7.49	563	1.48	51.5
<i>Sampling on September 1, 2011</i>									
SB50S	MCSB50S-W-33312	8-18	9/1/11	PM	25.7	6.84	926	–	–
SB53S	MCSB53S-W-33313	8-18	9/1/11	PM	25.3	6.83	528	–	–

<sup>a</sup> Type: PM, permanent monitoring well; PW, private well; PWS, public water supply well; SW, surface water; TM, temporary monitoring well.

<sup>b</sup> Depth obtained from MDNR well records.

<sup>c</sup> Estimated maximum depth obtained from well owner.



TABLE F.3 Inorganic analysis results from TestAmerica for groundwater samples collected on October 22, 2010.

Location	Sample	Depth (ft BGL)	Concentration <sup>a</sup> (mg/L)							
			Aluminum	Bromide	Calcium	Chloride	Iron	Magnesium	Manganese	Nitrate as N
PWS1	MCPWS1-W-32630	1150 <sup>b</sup>	U < 0.2	0.63	81 B	66 B	U < 0.2	38	0.001 J	U < 0.1 H
PWS2	MCPWS2-W-32631	1175 <sup>b</sup>	0.066 J	0.29	84 B	23	0.062 J	43	0.0023 J	U < 0.1 H
PWS3	MCPWS3-W-32632	1275 <sup>b</sup>	U < 0.2	0.75	75 B	88	U < 0.2	36	0.0012 J	U < 0.1 H
City treated	MCTREAT-W-32633	–	U < 0.2	0.14 J	75 B	16	0.032 J	40	0.0015 J	U < 0.1 H
Hemeyer	MCHEMEYER-W-32634	680 <sup>b</sup>	U < 0.2	0.42	79 B	57	U < 0.2	37	U < 0.015	0.095 J H
K. Cobb	MCKCOBB-W-32635	600-700 <sup>c</sup>	U < 0.2	0.30	150 B	13	0.032 J	48	0.23	0.065 J H

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Location	Sample	Depth (ft BGL)	Concentration <sup>a</sup> (mg/L)						
			Phosphate	Phosphorus	Potassium	Silicon	Sodium	Sulfate	Zinc
PWS1	MCPWS1-W-32630	1150 <sup>b</sup>	U < 0.2 H	5.6 J B	14	4.6 B	130	190	0.0038 J
PWS2	MCPWS2-W-32631	1175 <sup>b</sup>	U < 0.2 H	3.7 J B	18	4.2 B	98	150	0.035
PWS3	MCPWS3-W-32632	1275 <sup>b</sup>	U < 0.2 H	U < 0.25	13	4.7 B	120	110	U < 0.02
City treated	MCTREAT-W-32633	–	U < 0.2 H	4.4 J B	16	4.1 B	81	110	0.31
Hemeyer	MCHEMEYER-W-32634	680 <sup>b</sup>	U < 0.2 H	4.8 J B	14	4.6 B	130	170	0.0072 J
K. Cobb	MCKCOBB-W-32635	600-700 <sup>c</sup>	U < 0.2 H	6.6 J B	2.0 J	5.7 B	150	200	0.23

<sup>a</sup> Qualifiers: B, compound found in the blank and sample; H, holding time exceeded; J, estimated concentration below method reporting limit; U, not detected at method detection limit.

<sup>b</sup> Depth obtained from MDNR well records.

<sup>c</sup> Depth estimate provided by well owner.

**Appendix G:**  
**Coordinates Survey Data**

TABLE G.1 Survey data for the 2010-2011 investigations at Montgomery City.<sup>a</sup>

Location	Horizontal Location <sup>b</sup> (ft)		Elevation <sup>c</sup> (ft AMSL)	
	Easting	Northing	Ground	Top of Casing
<i>Temporary and permanent monitoring wells</i>				
SB01D	537099.76	1143693.67	824.03	823.93
SB01M	537100.17	1143696.70	823.87	823.55
SB01S	537100.69	1143700.45	823.79	823.58
SB08D	537108.51	1143635.25	826.03	825.84
SB08S	537108.79	1143637.30	826.09	825.88
SB09D, S	537168.57	1143619.66	825.89	–
SB10	537235.59	1143617.69	825.96	–
SB11	537246.73	1143683.47	825.77	–
SB16D, M	537223.19	1143733.08	824.35	–
SB16S	537223.21	1143735.48	824.25	823.96
SB17D	537286.23	1143807.54	824.21	824.07
SB17S	537286.50	1143811.00	824.24	824.16
SB22D, M	537315.21	1143505.60	829.68	–
SB22S	537313.59	1143505.88	829.69	829.42
SB24S	537083.91	1143545.87	827.01	826.73
SB27D	537255.85	1144027.31	817.41	817.25
SB27S	537256.05	1144029.26	817.34	817.21
SB29S	537287.81	1144057.71	817.34	817.20
SB33	537134.69	1143630.79	826.67	–
SB34	537201.05	1143620.65	826.39	–
SB36D	537096.57	1143886.71	820.15	820.03
SB36S	537098.44	1143886.59	820.16	820.05
SB37D	537105.74	1144148.25	811.55	811.55
SB37S	537107.33	1144147.97	811.63	811.33
SB38D	537389.73	1144222.36	814.88	814.68
SB38M	537390.80	1144221.40	814.84	814.72
SB38S	537394.78	1144217.57	814.95	814.74
SB39D	537452.61	1143933.52	822.77	822.65
SB39S	537450.60	1143933.79	822.77	822.65
SB40D	536953.11	1143825.56	821.73	821.63
SB40M	536954.96	1143825.49	821.78	821.63
SB40S	536949.69	1143826.04	821.93	821.80
SB41S, M, D	537082.87	1143779.08	822.27	–
SB42S, D	537148.27	1143773.36	822.80	–
SB43D	537781.82	1144171.96	817.18	816.98
SB43M	537781.72	1144173.94	817.14	816.96
SB43S	537781.65	1144175.54	817.19	817.09
SB44D	537235.38	1143546.01	827.73	827.53
SB44M	537235.46	1143548.05	827.62	827.46
SB44S	537235.73	1143547.55	827.74	–
SB45D	537421.29	1143423.82	828.57	828.46
SB45S	537420.96	1143425.50	828.58	828.49
SB46D	537045.52	1143677.80	823.65	823.33
SB46M	537043.78	1143678.69	823.61	–
SB46S	537041.96	1143679.93	823.42	823.23
SB47D, S	537042.63	1143738.97	822.42	–
SB48D, S	537165.30	1143704.60	824.40	–
SB49D	536960.05	1143595.06	825.31	825.11
SB49M	536960.28	1143597.78	825.25	825.01
SB49S	536960.70	1143600.44	825.17	824.93
SB50D	537357.21	1143679.85	827.25	830.29

TABLE G.1 (Cont.)

Location	Horizontal Location <sup>b</sup> (ft)		Elevation <sup>c</sup> (ft AMSL)	
	Easting	Northing	Ground	Top of Casing
SB50M	537357.31	1143683.27	827.14	830.07
SB50S	537357.32	1143687.48	827.07	830.15
SB51D	536994.60	1144022.50	817.27	817.13
SB51M	536995.87	1144024.80	817.19	816.85
SB51S	536997.08	1144027.28	817.10	816.73
SB52D	537523.32	1144089.19	818.89	818.75
SB52M	537523.69	1144091.64	818.83	818.58
SB52S	537524.04	1144094.21	818.71	818.45
SB53D	537638.58	1143859.95	822.89	822.72
SB53M	537636.01	1143860.33	823.01	822.69
SB53S	537633.44	1143860.68	823.03	822.67
SB54D	537735.41	1143697.76	821.75	821.58
SB54M	537735.39	1143700.34	821.72	821.41
SB54S	537735.50	1143703.25	821.71	821.42
<i>Points along intermittent surface drainage</i>				
Creek 1	1144175.90	537056.90	807.31	—
Creek 2	1144286.34	537210.01	805.15	—
Creek 3	1144374.02	537304.76	805.43	—
Creek 4	1144447.18	537407.03	805.77	—
<i>Corners of rectangular foundations of former grain buildings</i>				
Concrete	1143567.19	537250.13	826.99	—
Concrete	1143562.93	537281.66	827.04	—
Concrete	1143659.26	537292.95	826.95	—
Concrete	1143662.94	537260.62	826.94	—
Concrete	1143677.64	537160.18	826.61	—
Concrete	1143682.05	537119.74	826.47	—
Concrete	1143582.86	537108.77	826.77	—
Concrete	1143578.32	537149.34	826.83	—
<i>Corners of mud pit and race track</i>				
Fence post	1143852.18	537215.62	821.34	—
Fence post	1143878.66	536993.42	820.90	—
Fence post	1143742.95	537202.73	823.45	—
Fence post	1143769.36	536980.38	821.77	—
<i>Corners of grandstand near mud pit and race track</i>				
Corner	1143713.97	537121.82	823.87	—
Corner	1143709.85	537199.68	824.31	—
Corner	1143721.61	537055.39	823.11	—
Corner	1143718.50	537133.53	823.63	—

TABLE G.1 (Cont.)

Location	Horizontal Location <sup>b</sup> (ft)		Elevation <sup>c</sup> (ft AMSL)	
	Easting	Northing	Ground	Top of Casing
<i>Control locations</i>				
MONTY	1147090.64	549227.96	825.04	—
SCHOOL	1137766.33	540928.99	845.80	—
1/2 BAR CONTROL	1143967.78	536969.33	819.04	—
1/2 BAR CONTROL	1143606.83	536962.22	824.98	—

<sup>a</sup> GPS data for additional soil borings are in Table G.2.

<sup>b</sup> Coordinates are in the Missouri State Plane, East Zone, North American Datum (NAD) 83.

<sup>c</sup> Vertical datum is North American Vertical Datum (NAVD) 88.



TABLE G.2 GPS data for soil borings during the 2010-2011 investigations at Montgomery City.

Location	Horizontal Location <sup>a</sup> (ft)		Elevation <sup>b</sup> (ft AMSL)	
	Easting	Northing	Ground	Top of Casing
<i>Soil borings</i>				
SB02	537136.66	1143688.16	-	-
SB03	537202.04	1143678.65	-	-
SB04	537273.03	1143672.28	-	-
SB05	537259.74	1143561.49	-	-
SB06	537189.84	1143569.10	-	-
SB07	537123.41	1143577.60	-	-
SB12	537249.82	1143774.71	-	-
SB13	537259.09	1143867.96	-	-
SB14	537232.56	1143850.32	-	-
SB15	537222.70	1143788.92	-	-
SB18	537274.43	1143755.09	-	-
SB19	537314.72	1143709.88	-	-
SB20	537287.76	1143877.87	-	-
SB21	537307.69	1143612.68	-	-
SB23	537163.60	1143530.41	-	-
SB25	537236.79	1143911.45	821.01 <sup>c</sup>	-
SB26	537244.12	1143974.61	-	-
SB28	537273.23	1143988.17	-	-
SB30	537301.77	1144005.23	-	-
SB31	537294.82	1143940.89	-	-
SB32	537092.39	1143752.35	-	-
SB35	537266.62	1143616.64	-	-

<sup>a</sup> Coordinates are in the Missouri State Plane, East Zone, North American Datum (NAD) 83. GPS data were converted to state plane coordinates.

<sup>b</sup> Vertical datum is North American Vertical Datum (NAVD) 88.

<sup>c</sup> Ground elevation determined by transit from adjacent surveyed points.

**Appendix H:**

**Evaluation of Potential DNAPL Source Zones**

## Appendix H:

### Evaluation of Potential DNAPL Source Zones

#### H.1 EPA Guidance

In 2009, the EPA released a Ground Water Issue document (Kueper and Davies 2009; included in this appendix) outlining investigation methods and interpretation techniques that can be useful in the identification and characterization of potential DNAPL source zones. In Section 4.0 of the document, several evaluation criteria are outlined (in subsections 4B and 4C) that can be used to recognize potential DNAPL source areas, on the basis of (1) concentrations of a contaminant observed in vadose zone or saturated soils and (2) the site-specific physical properties of the soils.

In Section 4B of the guidance document, the EPA asserts that “chemical concentrations in soil exceeding the value corresponding to a threshold DNAPL saturation are conclusive evidence of DNAPL presence.” A threshold saturation of 5-10% of the pore space is recommended for all DNAPL types, with the higher end of this range applying to soils having high organic carbon content or for highly hydrophobic chemicals. The calculation method used to derive the corresponding threshold contaminant concentration reflecting probable DNAPL presence is outlined in Appendix A, Calculation 1, of the attached guidance document.

Section 4C of the EPA guidance document states that “chemical concentrations in soil exceeding the value corresponding to equilibrium partitioning relationships . . . are consistent with DNAPL presence.” The calculation method used to estimate this target threshold concentration is described in Appendix A, Calculation 2, of the attached guidance document.

#### H.2 Calculation of the EPA’s DNAPL Evaluation Parameters B and C on the Basis of Site-Specific Data from the Montgomery City 2010-2011 Investigations

To evaluate the expressions in the guidance, contaminant-specific chemical property data and site-specific physical property data for the soils under investigation are required. The input parameters necessary for Calculations 1 and 2 are defined in Appendix A of the guidance document, as follows:

- $S_t$  = threshold DNAPL saturation (unitless; set between 0.05 and 0.10)
- $\phi$  = effective porosity (unitless; site-specific measurement)
- $\rho_N$  = DNAPL density ( $\text{g}/\text{cm}^3$ ; site-specific measurement)
- $\rho_b$  = dry soil bulk density ( $\text{g}/\text{cm}^3$ ; site-specific measurement)
- $C$  = effective solubility of each contaminant
- $\theta_w$  = water-filled porosity (unitless; calculated from site-specific soil moisture)
- $H$  = Henry's constant (unitless; from reference data)
- $\theta_a$  = air-filled porosity (unitless; from site-specific measurements)
- $K_{oc}$  = organic carbon-water partition coefficient ( $\text{mL}/\text{g}$ ; from reference data)
- $f_{oc}$  = fraction organic carbon (unitless; site-specific measurement)

For the purposes of this analysis, soil physical property data obtained during the 2010-2011 studies at Montgomery City (Appendix D of this report) were used to calculate average values for the required soil parameters. The resulting (average) input parameters are as follows:

- $S_t$  = 0.05 (assumed), because of low  $K_{oc}$  for the Montgomery City soils (below)
- $\phi$  = 0.278
- $\rho_N$  =  $1.59 \text{ g}/\text{cm}^3$  for carbon tetrachloride (from EPA guidance)
- $\rho_b$  =  $117.4 \text{ lb}/\text{ft}^3 = 1.880 \text{ g}/\text{cm}^3$
- $C$  = 790 mg/L for carbon tetrachloride (from EPA guidance)

$\theta_w$  = 1.0, for soils assumed to be saturated

H = not required for saturated soil conditions

$\theta_a$  = 0.0, for soils assumed to be saturated

$K_{oc}$  = 158 L/kg or 158 mL/g (from EPA soil screening guidance; available online at [www.epa.gov/superfund/health/conmedia/soil/pdfs/part\\_5.pdf](http://www.epa.gov/superfund/health/conmedia/soil/pdfs/part_5.pdf))

$f_{oc}$  = 0.0053

On the basis of these parameters, EPA Calculations 1 and 2 yield the following threshold carbon tetrachloride concentrations that would be indicative of DNAPL presence in the Montgomery City soils:

Parameter B = 23,183 mg/kg (on the basis of minimum DNAPL saturation)

Parameter C = 1,082 mg/kg (on the basis of equilibrium partitioning)





# Ground Water Issue

## Assessment and Delineation of DNAPL Source Zones at Hazardous Waste Sites

Bernard H. Kueper\* and Kathryn L. Davies\*\*

### 1.0 - Introduction

Groundwater contamination from classes of chemicals such as chlorinated solvents, polychlorinated biphenyls (PCBs), creosote, and coal tar is frequently encountered at hazardous waste sites (40, 43). These types of contaminants have low solubilities in water and have densities greater than that of water. Therefore, they can exist in the subsurface as Dense, Non-Aqueous Phase Liquids (DNAPLs) and have the potential to migrate as a separate liquid phase to significant distances below the water table in both unconsolidated materials and fractured bedrock. Because of the physicochemical properties associated with DNAPLs, they migrate through the subsurface in a very selective and tortuous manner (13, 27, 29). Thus, the majority of DNAPL present in the subsurface may not be found immediately below the entry location and directly encountering DNAPLs with conventional drilling techniques may be difficult.

Determining the presence or absence of a DNAPL is an important component of the conceptual site model and is critical to the proper selection of the remediation approach. Subsurface DNAPL acts as a long-term source for dissolved-phase contamination and determines the spatial distribution and persistence of contaminant concentrations within the dissolved-phase plume. Once it has been determined that DNAPL exists within the subsurface, subsequent characterization activities are typically conducted to better delineate the boundaries of the DNAPL source zone. The DNAPL source zone is the overall volume of the subsurface containing residual and/or pooled DNAPL. It should be recognized that there will be uncertainty associated with the delineation of the DNAPL source zone. In addition to the DNAPL, there may be significant amounts of contaminant mass that have diffused into low permeability zones. Back diffusion of contaminant mass from these zones may sustain dissolved-phase plumes for significant periods of time, even after DNAPL has been removed. Establishing the presence and locations of such non-DNAPL sources is beyond the scope of this document.

In January 1992, EPA published a Fact Sheet entitled 'Estimating Potential for Occurrence of DNAPL at Superfund Sites' (42) with the goal to help site personnel determine if DNAPL-based characterization strategies should be employed at a particular site. In September 1994, EPA issued a subsequent Fact Sheet entitled 'DNAPL Site Characterization' (39) discussing direct and indirect methods to assess the presence of DNAPL in the subsurface. Since

the publication of the initial fact sheets, there have been advancements in characterization tools, site investigation approaches (14) and knowledge of DNAPL source zone architecture within the subsurface. This document builds on information from the previous fact sheets to provide a framework for not only assessing the presence of DNAPL, but also for delineating the spatial extent of the DNAPL source zone, a priority at many sites due to the more prevalent use of *in-situ* remediation technologies (38). The strategy described in the present document utilizes converging lines of evidence that incorporate the scientific advancements in the field and expands the applicability of the document to include both unconsolidated deposits and fractured bedrock. An iterative, flexible site investigation approach (7) is encouraged.

### 2.0 - Nature of the DNAPL Source Zone

Upon release to the subsurface, DNAPL will distribute itself in the form of disconnected blobs and ganglia of organic liquid referred to as residual DNAPL, and in connected distributions referred to as pooled DNAPL (Figure 1). Residual DNAPL is found both above and below the water table within the pathways of DNAPL migration, and typically occupies between 5% and 30% of pore space in porous media (6, 27, 44) and in rock fractures (21). Residual DNAPL is trapped by capillary forces, and typically will not enter an adjacent monitoring well, even under the influence of aggressive groundwater pumping (6, 27).

Pooling of DNAPL can occur above capillary barriers, which are typically layers and lenses of slightly less permeable material (Figure 1). Pooling can therefore occur at any elevation in the subsurface, and not just at the base of permeable zones. Absence of pooling above clay aquitards and bedrock may be due to the presence of dipping fractures, bedding planes, joints and faults which may allow the continued downward migration of the DNAPL. Pools represent a continuous distribution of DNAPL, and typically correspond to DNAPL saturations of between 30% and 80% of pore space in both porous media and fractures. The frequency of pool occurrence and the thickness of pools are increased by the presence of horizontal capillary barriers, lower DNAPL density, higher interfacial tension, and an upward component to groundwater flow (17, 22). The thickness of pools typically ranges from fractions of an inch to a few feet, depending on fluid and media properties (36) as well as the volume released. Because pools represent a connected distribution of DNAPL, the pooled DNAPL is susceptible to mobilization through drilling activities and can short-circuit along existing monitoring wells and piezometers. In addition, pools may also be mobilized in response to changes in hydraulic gradient. The gradient required to mobilize a pool is a function of the DNAPL-water interfacial

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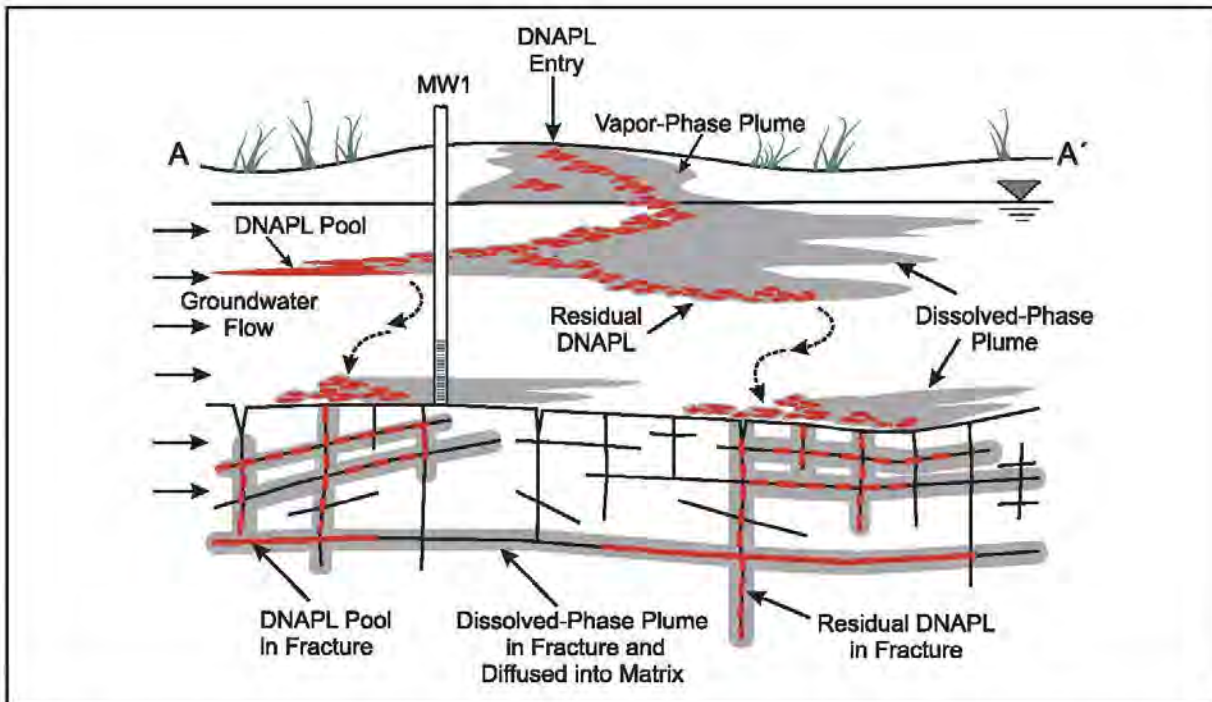


Figure 1 – Schematic illustration of contamination associated with a DNAPL release. Note that DNAPL migrates in three dimensions, and that residual DNAPL accumulated above bedrock is the result of the release at ground surface. The reader is referred to Figure 2 for a depiction of matrix diffusion. Figure is not to scale.

tension, the pool length, and the permeability of the surrounding material (6, 27). Pumping groundwater from beneath DNAPL pools, for example, can lead to an increase in capillary pressure and subsequent downward DNAPL mobilization.

The spatial distribution of residual and pooled DNAPL is strongly influenced by geology, and also by DNAPL properties and release history (frequency, intensity, duration, volume and location). DNAPL migration can occur through lenses and laminations of porous media at the scale of inches or less (17, 29). For DNAPLs that are non-wetting (see wettability in glossary) with respect to water (which is usually the case), migration below the water table is typically through the larger pores (and hence higher permeability regions) in unconsolidated media and larger aperture fractures in bedrock. The orientation of stratigraphic and structural features will largely determine the degree of lateral and vertical DNAPL spreading. DNAPL migration from the release location can occur in any direction, and is typically not greatly influenced by low ambient hydraulic gradients except for creosotes and coal tars which have densities close to that of water.

The overall region of the subsurface containing residual and pooled DNAPL is referred to as the DNAPL source zone. For high density and low viscosity DNAPLs (such as chlorinated solvents), migration in relatively permeable media can cease as soon as a few months to a few years following the time of release (3, 17, 27, 29). Some geological conditions, such as horizontal to sub-horizontal fractures, gently dipping strata and sand seams

in low permeability media can give rise to longer time scales for migration of chlorinated solvent DNAPLs, particularly for large volume DNAPL sources. For low density and high viscosity DNAPLs (such as creosote and coal tar), migration has the potential to continue for many decades (12). The overall depth of DNAPL migration is dependent not only on the presence or absence of capillary barriers, but also on the volume released, the interfacial tension, the degree of lateral spreading, and the bulk retention capacity (see glossary) of the medium. Because fractured rock has very low bulk retention capacity, small volumes of DNAPL can migrate greater distances in bedrock in comparison to the same volume released into unconsolidated deposits (18).

Groundwater flowing past residual and pooled DNAPL will result in dissolved-phase plumes of contamination. Complete dissolution of all DNAPL as a result of natural groundwater flow is expected to take from several decades to hundreds of years for most DNAPLs. For multi-component DNAPLs, the presence of more than one component typically suppresses the aqueous solubility of the other components in the DNAPL (6, 27). Exceptions to this can occur, however, when co-solvents such as alcohols are present in the DNAPL. In the absence of co-solvents, the concentration of any particular component dissolving into groundwater can often be approximated using Raoult's Law (2, 6, 27). Early in the dissolution process, the plume chemistry will be dominated by the higher effective solubility components which tend to be those present in the largest mass fraction within the DNAPL, and those

with the highest single-component (handbook) solubility values (24). The concentration of any or all components in groundwater downgradient of a multi-component-DNAPL source zone will typically be lower than expected using a single component solubility limit. With time, both the DNAPL composition and the plume composition will change in response to the dissolution process. The dissolved components that comprise the plume will migrate in groundwater subject to advection, dispersion, sorption, volatilization, and degradation processes.

Both residual and pooled DNAPL, and dissolved-phase plumes that are in direct contact with clays, silts, or a porous bedrock matrix, can diffuse into the low permeability media (forward diffusion). If concentrations outside of the low permeability zone become lower than those inside, diffusion will occur back into the higher permeability zone (back diffusion) and can result in plume persistence (5, 33). The forward and back diffusion processes are collectively referred to as matrix diffusion (Figure 2). The persistence of DNAPL in fractures in bedrock, saprolite and clay can be shortened by the matrix diffusion process (19, 28). In addition, the rate of advance of a dissolved-phase plume in fractured rock with a porous matrix can be strongly attenuated by the matrix diffusion process (20, 35). The influence of matrix diffusion on dissolved-phase plume migration in fractured rock and clay relative to other processes such as advection, dispersion, sorption, and possible degradation processes will vary depending on site specific geological conditions and contaminant properties.

In general, matrix diffusion has a greater influence on dissolved-phase plume migration in the case of wider fracture spacing, smaller fracture aperture, lower hydraulic gradient, higher matrix porosity, and higher matrix organic carbon.

Above the water table, volatile DNAPL can vaporize into air filled pore spaces (Figure 1). For DNAPLs with significant vapor pressure, this can lead to expanded vapor-phase plumes in the unsaturated zone. The concentration of contaminants in the vapor phase will be governed by the vapor pressure, and for a multi-component DNAPL can often be approximated using Raoult's Law. In relatively warm and dry environments, the persistence of some DNAPLs (e.g., chlorinated solvents) can be relatively short (on the order of months to a few years) in unsaturated media. The absence of residual and pooled DNAPL in the unsaturated zone may not, therefore, be sufficient evidence to conclude that DNAPL has not migrated below the water table at the site of interest.

### 3.0 - Types of DNAPLs

**Coal Tar** is a complex mixture of hydrocarbons produced through the gasification of coal that was produced as a by-product of manufactured gas operations as early as 1816 in the United States. It is still produced as a by-product of blast furnace coke production. Coal tar contains hundreds of hydrocarbons, including light oil fractions, middle oil fractions, heavy oil fractions, anthracene oil, and pitch. The low density (typically 1.01 g/cc to 1.10 g/cc

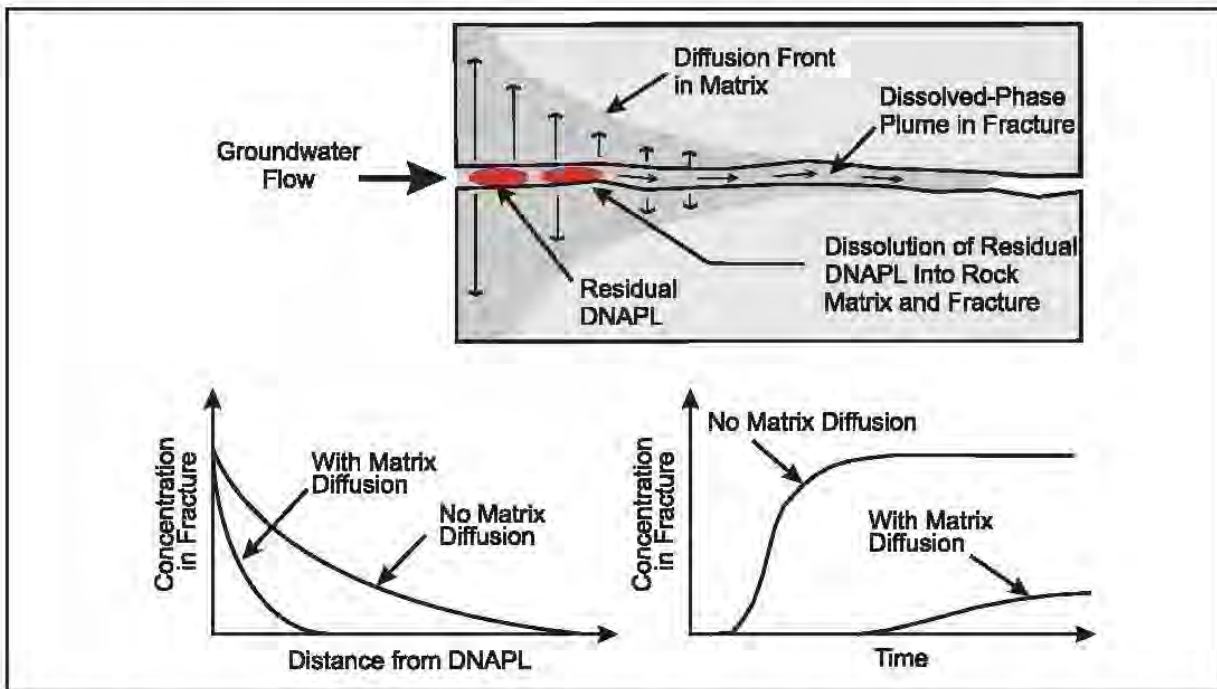


Figure 2 – Matrix diffusion of dissolved-phase contaminants adjacent to DNAPL and along length of plume in fracture. Matrix diffusion can attenuate the rate of plume advance in fractured rock (bottom left concentration vs distance plot), and can result in delayed breakthrough curves (bottom right concentration vs time figure). These factors need to be considered when relying upon groundwater concentration data to assess DNAPL presence.



compared to 1.00 g/cc of water [at 4°C]) and high viscosity (up to 200 to 300 times, or more, than that of water) facilitate long time-scales of migration, with the possibility of movement continuing for many decades following initial release. Due to the lengthy list of compounds present in coal tar, many investigators select a sub-set of coal tar compounds based on mobility and toxicity to assess water quality. These compounds may include benzene, toluene, ethylbenzene, xylenes (BTEX), benzo[a]pyrene, naphthalene, and phenanthrene. Depending on the age of the DNAPL and groundwater velocity, some of the lower molecular weight and more soluble compounds of the coal tar may have been leached out of the DNAPL by the time a site investigation is initiated. Naphthalene is often the dominant compound in present day coal tar (9). In addition, the various components in the plume will migrate at different velocities because of varying degrees of sorption and degradation (often aerobic conditions). The lower molecular weight, less sorbing compounds (e.g., BTEX) can migrate significantly further in groundwater than the higher molecular weight, more sorbing compounds (e.g., PAHs).

**Creosote** is composed of various coal tar fractions and was commonly used to treat wood products. It is still used today in certain wood treating operations and as a component of roofing and road tars. Creosote is a multi-component DNAPL that contains many hydrocarbons, primarily polycyclic aromatic hydrocarbons (PAHs), phenolic compounds, and carrier fluids such as diesel. The low density (typically 1.01 g/cc to 1.13 g/cc) and high viscosity (typically 20 to 50 times that of water) of creosote facilitate long time-scales of migration, with the possibility of movement continuing for many decades following initial release. Most investigators select a sub-set of creosote compounds, based on mobility and toxicity to characterize water quality, such as naphthalene, benzo(a)pyrene, and phenanthrene.

**Polychlorinated Biphenyls (PCBs)** are a class of 209 chemical compounds referred to as congeners, in which between one and ten chlorine atoms are attached to a biphenyl molecule. The majority of PCBs were manufactured between 1930 and 1977 under the trade-name Aroclor for use in capacitors, transformers, printing inks, paints, pesticides, and other applications. Aroclors differ based on the amount and types of congeners present. PCBs by themselves are DNAPLs, and were often blended with carrier fluids such as chlorobenzenes and mineral oil prior to distribution. The density of most PCB oils ranges from 1.10 g/cc to 1.50 g/cc, while the viscosity ranges from 10 to 50 times that of water. Most congeners are very hydrophobic and their transport can be retarded strongly relative to the rate of groundwater migration. In some cases, however, PCB transport in groundwater can be facilitated through the formation of emulsions or the presence of colloids.

**Chlorinated Solvents** such as trichloroethene (TCE), tetrachloroethene (PCE) and carbon tetrachloride (CT) have been produced in large quantities since the mid 1900's. Some chlorinated solvents contain trace amounts of stabilizers, preservatives and impurities. Typical uses vary widely and include dry cleaning, metal degreasing, pharmaceutical production, pesticide formulation, and chemical intermediates. Chlorinated solvents can be encountered as single component DNAPLs (e.g., as primarily PCE at a dry cleaning facility, or as primarily TCE at a vapor degreasing facility), or as part of a multi-component DNAPL containing other organic compounds. The relatively high density (typically

1.10 g/cc to 2.20 g/cc) and low viscosity (typically ranging from half to twice that of water) of chlorinated solvents can result in a relatively short time-scale of migration following release compared to coal tar and creosote. In a dissolved-phase plume, most chlorinated solvents are not retarded strongly relative to the rate of groundwater flow.

**Mixed DNAPLs** A DNAPL that contains two or more compounds is referred to as a multi-component DNAPL (e.g., creosote). A mixed DNAPL is a multi-component DNAPL that contains a wide variety of organic compounds as a result of blending and mixing prior to disposal operations, or as a result of contemporaneous disposal. Examples include DNAPLs encountered at former solvent recycling facilities and industrial disposal sites. Such DNAPLs can contain aromatic compounds normally associated with LNAPLs (e.g., toluene) along with chlorinated solvents, PCBs, alcohols, ketones, and tetrahydrofuran. The density of mixed DNAPLs typically ranges from 1.01 g/cc to 1.60 g/cc, and the dissolved-phase plumes associated with mixed DNAPLs usually contain a wide variety of compounds with varying mobility.

#### 4.0 – DNAPL Source Zone Investigation Methods

This section presents various site investigation methods and related interpretation techniques that can be useful when characterizing a DNAPL source zone. These methods and techniques will be relied upon in Sections 5 (Assessing DNAPL Presence) and 6 (Delineation of the DNAPL Source Zone). Additional information is provided in (6, 26, 37).

##### **A** Visual Observation

DNAPL obtained from the bottom of a monitoring well or as an emulsion from a pumped water sample is conclusive evidence of DNAPL presence (pooled DNAPL). Monitoring wells can be sampled for DNAPL using bottom loading bailers lowered to the bottom of the well or pumping from the bottom of the well. If an interface probe indicates DNAPL presence, then the sample should be retrieved and it should be confirmed (visually, or through laboratory analysis) that the substance is DNAPL. If DNAPL is visually observed in drill cuttings or in a soil sample for the first time, then a sample should be sent to the laboratory for confirmatory evidence. This line of evidence is applicable in both unconsolidated deposits and fractured rock, but it should be noted that visual observation of DNAPL in rock core is rare because of the aggressive flushing nature of the drilling process. Because of the typically sparse and tortuous nature of DNAPL distribution in the subsurface, DNAPL is not encountered and visually observed within many DNAPL source zones.

##### **B** Chemical Concentrations in Soil Above Threshold DNAPL Saturation

Chemical concentrations in soil exceeding the value corresponding to a threshold DNAPL saturation are conclusive evidence of DNAPL presence (see Calculation 1). The threshold DNAPL saturation for use in Calculation 1 should be set to be between 5% and 10% of pore space for all DNAPL types. The particular threshold saturation



tion chosen should result in a chemical concentration in soil that is an order of magnitude higher than that determined in line of evidence C. It follows that high organic carbon content soils and highly hydrophobic chemicals may require the use of threshold saturations toward the higher end of the above range. This method is applicable to unconsolidated media both above and below the water table, but is not applicable in fractured rock. The calculation requires knowledge of site-specific parameters and a quantitative chemical analysis of the soil. Care should be taken to sample soil horizons in core exhibiting the highest headspace readings and the strongest visual indication of DNAPL presence. The use of fixed depth intervals or compositing from several depth intervals is discouraged when collecting soil samples to evaluate the presence of DNAPL. Methanol preservation or a similar technique to reduce VOC losses during handling and transport of soil samples should be employed.

**C Chemical Concentrations in Soil Above Partitioning Threshold**

Chemical concentrations in soil exceeding the value corresponding to equilibrium partitioning relationships (see Calculation 2) are consistent with DNAPL presence (11). The composition of the DNAPL need not be known (see Calculation 4). The calculation is applicable to unconsolidated media both above and below the water table, but is not applicable in fractured rock. The calculation requires knowledge of site-specific parameters and a quantitative chemical analysis of the soil. Measured concentrations that only marginally exceed the calculated partitioning threshold may be false positives primarily because of uncertainty associated with estimating the soil-water partition coefficient.

**D Site Use/Site History**

Investigations during the past 30 years have shown that the subsurface occurrence of DNAPL is often associated with the industries, practices, and processes outlined in Table 1. Site Use/Site History can be ascertained using methods such as employee interviews, company purchase

and sale records, aerial photographs, and building plans. Former lagoons, underground tanks, floor drains and leach fields are sometimes coincident with the location of DNAPL source areas.

**E Vapor Concentrations**

The location of a vapor-phase plume may be coincident with the current or former presence of DNAPL in the vadose zone. Mapping the vapor-phase plume may be useful in deciding where to collect additional data. Because some DNAPLs can completely vaporize in relatively short time periods (yet the vapors will persist much longer), the presence of vapors and the mapping of a vapor-phase plume should generally not be used in isolation to conclude that DNAPL is present in the vadose zone, or to delineate the spatial extent of the DNAPL source. Care should also be taken to avoid mistaking vapors derived from off-gassing of a groundwater plume with vapors derived from DNAPL sources. In-situ vapor concentrations can be sampled using invasive techniques (soil vapor surveys), and can be monitored during drilling. This line of evidence is not applicable to DNAPLs lacking a significant vapor pressure (e.g., coal tar, creosote, PCBs).

**F Hydrophobic Dye Testing**

Hydrophobic dyes such as Oil Red O will partition into DNAPL, imparting a red color to the organic liquid. Dye techniques are particularly useful when encountering a colorless DNAPL. Hydrophobic dye techniques include the jar shake test in which a soil or water sample is placed into a jar with a small amount of dye (6), and down-hole samplers that force a dye-impregnated absorbent ribbon against the borehole wall in either fractured rock or a direct push borehole (30). It should also be noted that the absence of staining on a down-hole ribbon sampler is not evidence of the absence of DNAPL, since only pooled DNAPL can migrate towards the sampler (residual DNAPL may be present in the formation adjacent to the sampling interval, and remain undetected).

Table 1 – Industries and Industrial Processes Historically Associated With DNAPL Presence (modified after USEPA, 1992).

Industry	Industrial Process
Manufactured gas plant, Wood preservation (creosote), Electronics manufacturing, Solvent production/recycling, Pesticide/Herbicide manufacturing, Dry cleaning, Instrument manufacturing, Metal product manufacturing, Engine manufacturing, Steel industry coking operations (coal tar), Chemical production, Airplane maintenance, Transformer oil production	Storage of solvents in uncontained drum storage areas, Metal cleaning/degreasing, Metal machining, Tool and die operations, Paint stripping, Use of vapor and liquid degreasers, Storage and transfer of solvents in above and below ground tanks and piping, Burning waste liquids, Storage and treatment of waste liquids in lagoons, Use of on-site disposal wells, Loading and unloading of solvents, Transformer reprocessing, Disposal of solvents in unlined pits.



The following lines of evidence G1 through G6 all make use of groundwater quality data and can be evaluated every sampling round.

#### **G1 Magnitude of Groundwater Concentrations**

Sampled groundwater concentrations in excess of 1% effective solubility (see Calculation 3) indicate that the sampled groundwater may have come in contact with DNAPL. If the composition of the DNAPL is not known, Calculation 6 can be used. The distance to the possible DNAPL locations cannot be determined from the magnitude of the concentration alone. Sampled groundwater concentrations downgradient of a DNAPL source zone can be significantly less than the effective solubility because of hydrodynamic dispersion, wellbore dilution, non-optimal monitoring well placement, and degradation processes. In cases where significant degradation is occurring in the dissolved-phase plume, daughter product concentrations can be converted to equivalent parent product concentrations before comparing to the 1% effective solubility threshold (see Calculation 8). However, it should be noted that daughter product compounds may also be part of a multi-component DNAPL. Monitoring well points where groundwater concentrations exceed 1% effective solubility can also be useful in locating additional sampling points potentially nearer to the possible DNAPL source zones. The interpretation of groundwater concentrations exceeding 1% effective solubility is discussed further in (27).

#### **G2 Persistent Plume**

The presence of a contiguous and persistent plume extending from suspected release locations in the downgradient direction is evidence of a continuing source (e.g., DNAPL). If 'sufficient time' has passed since the last possible introduction of contaminant to the subsurface and the plume has not 'detached' itself from the suspected release locations, a DNAPL source may be present. The 'sufficient time' is dependent on site-specific conditions such as groundwater velocity and the amount of sorption occurring (see Calculation 7). This line of evidence is applicable to both unconsolidated deposits and fractured rock, but can be inconclusive in environments subject to significant amounts of back diffusion (e.g., fractured bedrock with a porous matrix, fractured clay). Significant amounts of back diffusion can be the source of a persistent plume even if DNAPL is not present. This line of evidence is therefore most applicable to high permeability settings.

#### **G3 Presence of Contamination in Apparently Anomalous Locations**

The presence of contaminated groundwater in locations that are not downgradient of known or suspected sources may be evidence of DNAPL presence hydraulically upgradient of the monitoring point in question. An example includes the presence of dissolved-phase contamination in groundwater that is older than the potential

contaminant release (using age dating) or in groundwater on the other side of a flow divide located between the monitoring location and suspected release locations. In Figure 1, for example, the presence of contamination in the illustrated monitoring well cannot be explained without the upgradient presence of DNAPL. This line of evidence is not contingent on any concentration threshold. Temporal changes in hydraulic heads and groundwater flow directions, as well as changes in historic pumping patterns should be considered at sites where groundwater extraction has, or is, occurring. Consideration should also be given to the presence of unknown or off-site sources that may account for the observed contamination.

#### **G4 Groundwater Concentration Trends with Depth**

Abrupt reversals of groundwater contaminant concentration levels with depth or increasing concentrations with depth can be associated with DNAPL presence. Concentration trends can be best detected using small interval sampling techniques [e.g., direct push sampling devices; short well screens; multilevel completions; cone penetrometer equipped with measurement probes (16, 26)]. Multilevel monitoring completions can be incorporated into open holes in bedrock to provide concentration as a function of depth. Other methods in bedrock include the use of temporary straddle-packer assemblies to sample specific depth intervals, and the use of diffusion bag samplers placed at specific depths. Use of these latter methodologies should be made only when intraborehole flow conditions have been adequately characterized.

#### **G5 Groundwater Concentration Trends with Time**

Groundwater downgradient of a multi-component DNAPL may exhibit a temporal decline in the concentration of the higher effective solubility compounds and a stable or increasing trend in time of the lower effective solubility compounds. Highly soluble and mobile compounds, such as low molecular weight alcohols, furans, ketones and some solvents such as methylene chloride may show a decreasing concentration versus time signature downgradient of a DNAPL source zone while at the same time higher molecular weight alcohols and semi-volatile compounds may show a stable concentration trend. This line of evidence is primarily applicable to mixed DNAPLs. Consideration should be given to compound specific biodegradation, which may result in the concentration of certain compounds decreasing and others (such as low molecular weight daughter products) increasing within the plume. Dissolved-phase concentrations downgradient of a single component DNAPL may decline due to removal of some of the source mass during dissolution; a declining concentration versus time signature does not preclude the presence of DNAPL.

#### **G6 Detection of Highly Sorbing Compounds in Groundwater**

The detection of highly sorbing and low solubility compounds which have low mobility in groundwater may be



associated with a nearby DNAPL source. This line of evidence can be useful in delineating the extent of the DNAPL in the downgradient direction. Examples of compounds that have very low mobility in groundwater (absent transport facilitated by colloids, cosolvents, or emulsions) include PCBs and high molecular weight PAHs.

**H Other Types of Methods**

Partitioning interwell tracer tests (PITTs) [1, 4, 15] involve the injection and withdrawal of a tracer that has the ability to partition into the DNAPL. While the method can be used to detect the presence of DNAPL, given the significant effort involved in conducting tracer tests, PITTs are typically employed after some level of source zone characterization has been completed. Literature sources suggest (for certain sites with appropriate geologic conditions and contaminant properties) measuring a depletion of Radon-222 in groundwater (34). Direct push platforms can be used to deploy a variety of probes to vertically profile contaminant concentrations. These probes include laser induced fluorescence (LIF) measurement devices (6, 31, 32) such as ROST (rapid optical screening tool) and TarGOST (tar-specific green optical screening tool), which is specifically designed for detecting the presence of coal tar and creosote (32); and probes employing Raman methods (31). LIF techniques respond well to the presence of NAPLs containing aromatic hydrocarbons, but may not be suitable for many chlorinated solvent DNAPLs. Direct push platforms can also be used to deploy a membrane interface probe (MIP) or a hydrosparge probe (8), both of which transfer contaminants to a flowing gas stream for analysis at the

surface. Another measurement probe is the precision injection/extraction (PIX) device (23). The use of measurement probes with direct push platforms is becoming increasingly popular, but care should be taken in interpreting results with respect to DNAPL presence given that most of these devices provide a relative measure of total concentration. Consideration of the potential for, and consequences of, false positives should be given to each of these methods.

**5.0 - Assessing DNAPL Presence**

Determining the presence or absence of DNAPL is an important component of the site characterization process and subsequent development of a conceptual site model. The length of time and degree of effort required to determine the presence or absence of DNAPL will vary from site to site. Once it has been determined that DNAPL resides in the subsurface, the objectives for further investigation and potential remediation strategies can be established. This section focuses on methods to assess the presence of DNAPL; Section 6 of this document focuses on methods to delineate the DNAPL source zone.

Converging lines of evidence can be used to determine whether or not DNAPL is present in the subsurface. Figure 3 presents a graphical summary of the converging lines of evidence approach. Example calculation procedures are contained in Appendix A. All lines of evidence are discussed in Section 4, and are applicable to both unconsolidated deposits and fractured rock, unless noted otherwise. As indicated in Figure 3, either line of evidence A or B will lead to the conclusion that DNAPL is present. If A and B are both found to be negative, then the determination of whether DNAPL is present must be made on the basis of a weight of evidence approach, with multiple converging lines of evidence

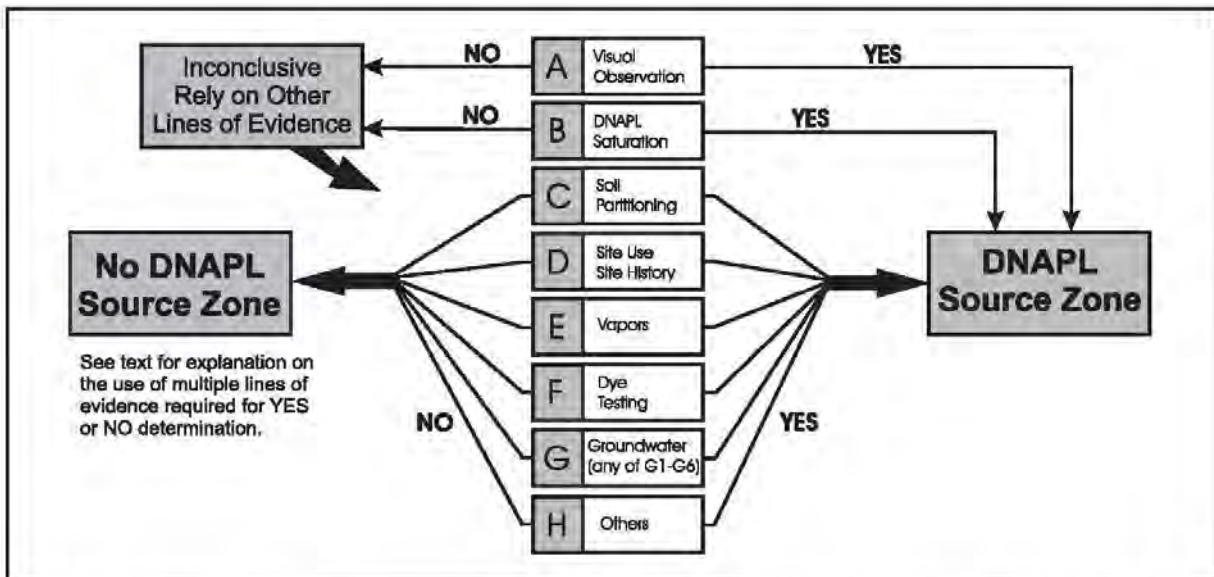


Figure 3 – Converging lines of evidence approach to assessing DNAPL presence. Methods B and C are not applicable to fractured rock.

combining to form either a positive or negative determination. Note that it is not likely that all of C through H will be satisfied at any one particular site, and that neither A nor B are necessary requirements to conclude that DNAPL is present. Most confirmed DNAPL source zones will have some of A through H determined to be negative. Because conditions vary from site to site, this document does not prescribe a specific number of lines of evidence that must be satisfied to arrive at either a positive or negative determination.

If the various lines of evidence contradict each other, it may be necessary to collect more data. It is possible that a minority of positive determinations can outweigh a majority of negative determinations if the positive lines of evidence cannot be explained without the presence of DNAPL. It should also be noted that not all sites lend themselves to collecting all of the types of data outlined here. In fractured rock, for example, soil vapor data and partitioning calculations would not be relied upon.

Evaluating the presence of DNAPL is an iterative process that incorporates new data as they are obtained. It is recognized here that certain types of data are more likely to be collected in the early stages of site investigation, while others (e.g., groundwater concentrations) can be collected on a routine basis throughout the investigation process. The fact that a number of lines of evidence are outlined in Figure 3 does not suggest that they should all be pursued at any one particular site. Site specific conditions will dictate what lines of evidence should be pursued. Care should be taken, however, to ensure that a negative response to the various lines of evidence is not simply attributable to inadequate characterization and an insufficient amount of data.

#### 6.0 - Delineation of the DNAPL Source Zone

Depending on the spatial density of sampling points installed during initial investigation efforts, the general area within which the DNAPL resides may have been identified. Once it has been determined that DNAPL is present in the subsurface, the objectives for delineation of the source zone can be established. These objectives can vary from site to site, but typically involve one or more of the following:

- Delineation of the DNAPL source zone to ensure that the flow paths and quality of the groundwater downgradient of the source zone are monitored for the presence of dissolved-phase contaminants to assess protection of current and potential receptors.
- Delineation of the DNAPL source zone to facilitate proper design of containment systems involving groundwater extraction and/or physical barriers.
- Delineation of the DNAPL source zone to facilitate implementation of DNAPL mass removal technologies.
- Delineation of the DNAPL source zone as part of establishing boundaries for institutional controls.
- Delineation of the DNAPL source zone as part of Technical Impracticability assessments (41).

Given the selective nature of DNAPL migration, it is not feasible to determine the exact location and extent of individual DNAPL migration pathways within the overall confines of the source zone in either unconsolidated deposits, or fractured bedrock. Because

data collection efforts typically involve a finite number of local-scale measurements taken at discrete locations (e.g., water quality samples, soil samples, etc.), some uncertainty will exist regarding the delineated spatial extent of the source zone.

To address the issue of uncertainty, it is recommended that both a 'Confirmed/Probable' DNAPL source zone be delineated, as well as a 'Potential' DNAPL source zone (see Figure 4). The Confirmed/Probable source zone is the volume within which compelling and multiple lines of evidence indicate that DNAPL is present. Note that what may be a compelling line of evidence at one site may not be so at another site (e.g., G2 Persistent Plume, is a stronger line of evidence in a high permeability setting than at a site where back-diffusion may dominate). The Potential source zone is of larger spatial extent, and is defined as that volume of the subsurface within which some lines of evidence indicate that DNAPL may be present, but the lines of evidence are not as numerous, consistent, or compelling as within the Confirmed/Probable source zone. Defining a Potential source zone outside of the Confirmed/Probable source zone addresses the uncertainty associated with finite amounts of data. This can be particularly useful in the hydraulically downgradient direction where it is often difficult to determine the distance to the edge of the DNAPL source zone based on groundwater quality data (e.g., using lines of evidence G1 through G6).

With respect to the various criteria for assessing DNAPL presence outlined in Section 4, lines of evidence A and B will both fall within the Confirmed/Probable source zone. All other lines of evidence (C through H) could fall within either the Confirmed/Probable source zone, or the Potential source zone. Note also that positive determinations for lines of evidence A and B are not necessary to define a Confirmed/Probable source zone. The defining feature of the Confirmed/Probable source zone is that multiple lines of evidence indicate that DNAPL is present. In practice, this will manifest itself as various lines of evidence all plotting within the same general spatial area on plan view and cross-section figures (see Figure 4 for plan view example). Within the Potential source zone, there will be fewer lines of evidence, and their occurrence may not be as contiguous as within the Confirmed/Probable source zone. Consideration should be given to known DNAPL release locations and structural aspects of the geology (e.g., dipping beds, dipping fractures) when delineating both the Confirmed/Probable and Potential source zones.

There is no prescriptive number of lines of evidence that separate the two source zone delineations. The individual lines of evidence cannot be weighted either, as the strength of the uncertainty/certainty determination is dependent on how often more than one line of evidence occurs at a particular location and how many contiguous locations have multiple lines of evidence; assigning a weighting factor to each line would negate this objectivity. Furthermore, many factors influence the transport of the DNAPL and the associated concentration of the dissolved-phase constituents such that a weighting factor could not be fairly assigned for all types of hydrogeologic environments and types of DNAPL contaminants.

The amount of acceptable uncertainty in delineating the source zone boundaries is likely to be dependent on the remedial actions considered. If hydraulic or physical containment of the DNAPL source zone were a component of the remedial actions, for example, an accurate delineation of the Potential source zone would be war-



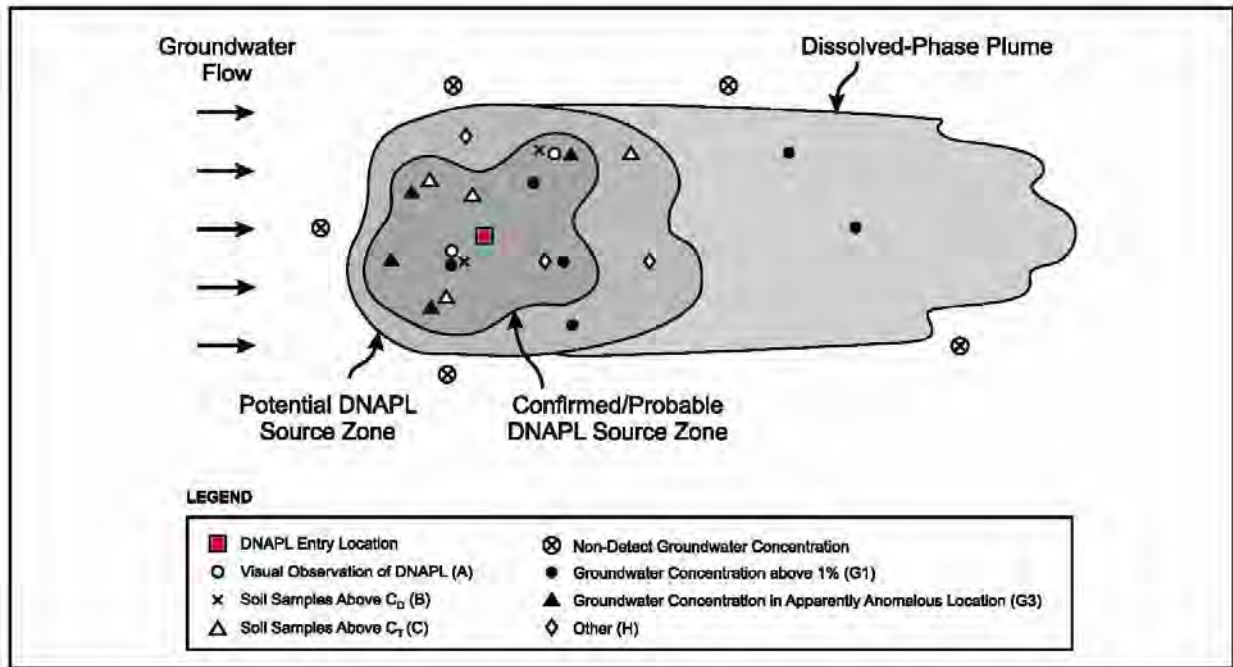


Figure 4 – Example of plan view schematic illustrating confirmed/probable and potential DNAPL source zones. Note that not all lines of evidence are depicted. Types and distribution of lines of evidence will vary from site to site.

ranted (the likely target for hydraulic containment) and accurate delineation of the Confirmed/Probable source zone may not be necessary. If the remedial actions included implementation of a DNAPL mass removal technology, however, then an accurate delineation of the Confirmed/Probable DNAPL source zone (the likely target for mass removal) would be warranted. A similar approach may be appropriate for designating a zone of technical impracticability (TI). Overestimating the size of the Confirmed/Probable source zone could overstate costs for technology application and may result in a particular technology being screened out. Underestimating the size of the Confirmed/Probable source zone, on the other hand, could lead to underestimation of costs and the perception of poor performance following completion of technology application. Monitoring points outside of an underestimated source zone may provide data showing little, if any, benefit resulting from source zone removal or treatment.

Typically, to refine the locations of the boundaries, additional drilling and sampling may be required between the Confirmed/Probable and Potential DNAPL areas. Figure 5 depicts an iterative process of data collection. Usually the degree of uncertainty in delineating these two zones will be greater in a more complex hydrogeologic environment. Although additional sampling points may be easily installed in shallow, unconsolidated materials, the same level of effort may not be feasible or may be cost prohibitive in deep fractured rock. Care must also be taken to ensure that drilling and sampling activities do not mobilize DNAPL deeper in to the subsurface. Strategies in place of extensive drilling to depth within the source zone include drilling adjacent to the suspected

source zone and using lines of evidence such as G1 through G6 to infer DNAPL presence in the upgradient direction.

In all environments, the risks of potentially mobilizing the DNAPL and the associated incremental costs of additional sampling points should be compared to the benefits of increased ability to evaluate the spatial extent of the DNAPL. Additionally, site investigators should have a DNAPL Contingency Plan on hand in the field to address actions to be taken if pooled DNAPL is encountered during drilling. At some sites, it may be desirable to adopt an 'outside in' approach to reduce the number of invasive borings that need to be placed within the DNAPL source zone.

In addition to delineating the spatial extent of the source zone, investigators may need to assess whether or not DNAPL is still migrating within the subsurface. The assessment of mobility can be carried out using screening calculations (27) and observations such as an expanding area of lines of evidence indicating DNAPL presence. Other features of the source zone that may be of interest include the mass of DNAPL present, the mass flux downgradient of the source zone, and the relative proportions of residual versus pooled DNAPL. Calculation 1 can be used to distinguish between residual and pooled DNAPL in soil samples by selecting a saturated threshold above which DNAPL is considered pooled. Also of note is the fact that residual DNAPL will not enter monitoring wells, implying that the accumulation of DNAPL in a well indicates the presence of pooled DNAPL in the formation. Details regarding how to estimate the mass of DNAPL present in a source zone or the distribution of mass flux downgradient of the source zone, however, are beyond the scope of this document.

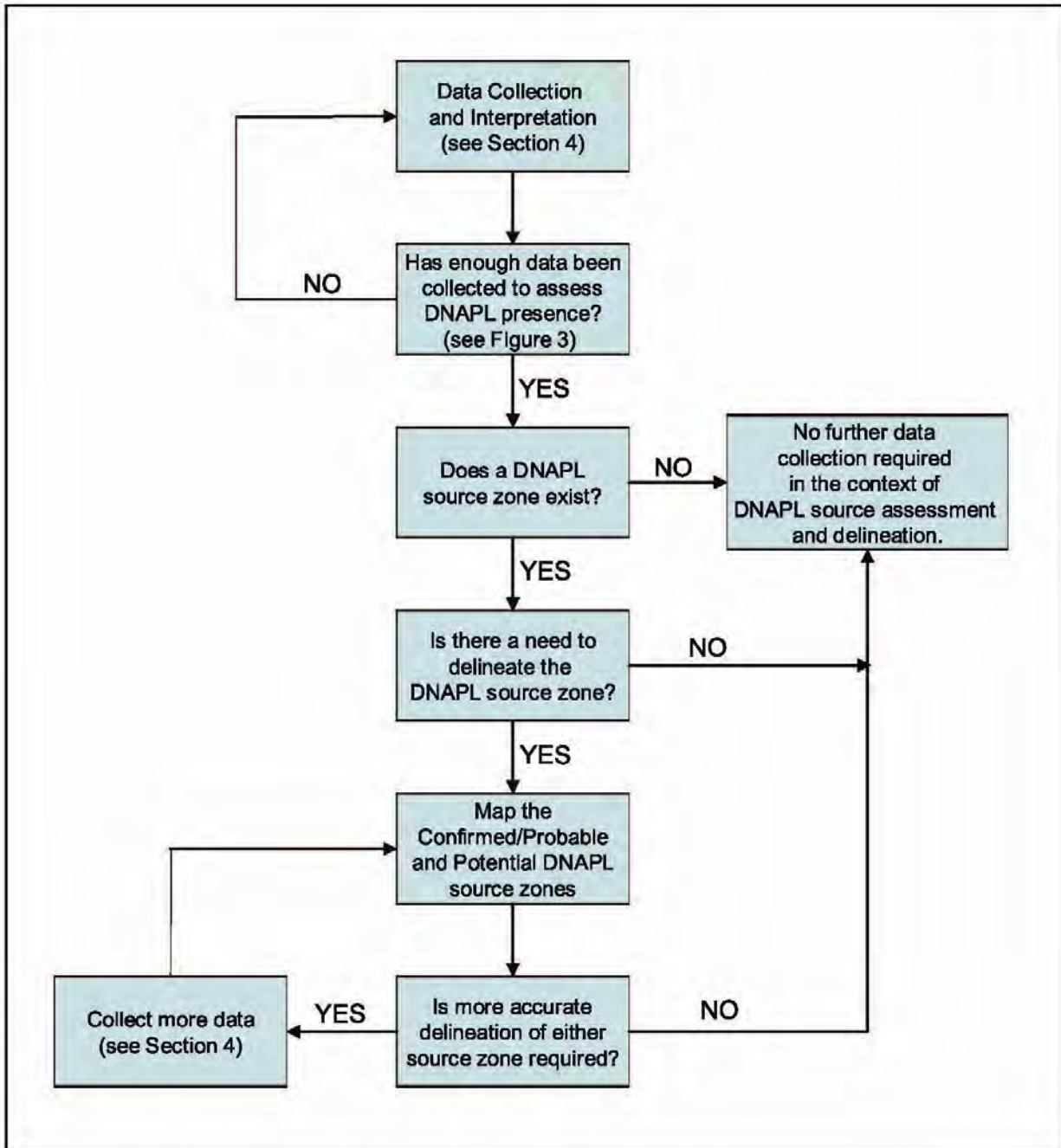


Figure 5 - Flowchart depicting iterative data collection process used in refining the DNAPL source zone boundaries.



## 7.0 - Glossary

**Bulk Retention Capacity** is defined as the total volume of DNAPL that has been retained as residual and pooled DNAPL in a unit volume of the subsurface. The bulk retention capacity accounts for the fact that not all lenses, laminations and geological units within a source zone contain DNAPL (27), and it is a function of the release history, geology and DNAPL properties. In unconsolidated media, the bulk retention capacity can be in the range from 0.005 to 0.03 (36). In fractured media, the bulk retention capacity can be in the range of 0.0002 to 0.002 (36). Fractured rock and clay cannot retain as much DNAPL per unit volume as unconsolidated deposits.

**Capillary Barriers** are fine grained lenses, layers and laminations upon which lateral spreading and pooling of DNAPL can occur. Even if the capillary barrier is penetrated by the DNAPL, it is likely that lateral spreading will have occurred along the top surface of the barrier prior to the capillary pressure having exceeded the entry pressure of the barrier. The finer grained the capillary barrier, the higher the pool height of DNAPL that it can support (17).

**Capillary Pressure** is the pressure difference between two immiscible liquids and arises because of interfacial tension. It is calculated as the non-wetting phase pressure minus the wetting phase pressure. If the DNAPL is the non-wetting phase and water is the wetting phase, for example, the capillary pressure would be the DNAPL pressure minus the water pressure.

**DNAPL** (Dense, Non-Aqueous Phase Liquid) is an organic liquid that is more dense than water and does not mix freely with water. A **single-component DNAPL** is composed of only one chemical. A **multi-component DNAPL** is composed of two or more chemical components.

**DNAPL Source Zone** The DNAPL source zone is the overall volume of the subsurface containing residual and/or pooled DNAPL. Not all portions (e.g., lenses, laminations, or fractures) of the source zone will contain residual and/or pooled DNAPL. The **Confirmed/Probable DNAPL Source Zone** is the part of the source zone within which it is known or highly likely that DNAPL exists. The **Potential DNAPL Source Zone** is the part of the source zone within which it is possible that DNAPL exists, but the lines of evidence indicating DNAPL presence are either fewer or are not as strong as those associated with the Confirmed/Probable DNAPL Source Zone.

**Dissolved-phase Plume** The zone of contamination containing dissolved-phase constituents resulting from groundwater flowing past residual and pooled DNAPL. The contaminants present in the plume are subject to advection, dispersion, and possibly sorption, decay, and matrix diffusion. Dissolved-phase plumes can be sustained by back diffusion from low permeability regions in the absence of DNAPL.

**Effective Solubility** For a multi-component DNAPL, the equilibrium solubility in water of any component of the DNAPL is referred to as the component's effective solubility. In general, the various components of a DNAPL suppress each other's aqueous solubility implying that effective solubilities are typically less than single-component (handbook) solubilities. For structurally similar compounds, the effective solubility can be estimated using Raoult's Law (2).

**Interfacial Tension (IFT)** is a tensile force that exists in the interface separating DNAPL and water. Because of interfacial tension, DNAPLs do not mix freely with water and exist in the subsurface as a separate liquid phase. IFT is a site-specific value that can be assessed with a simple laboratory test if a sample of DNAPL can be obtained. Literature values tend to overestimate the IFT encountered at sites. In general, higher IFT leads to more lateral spreading of DNAPL in horizontally bedded deposits, stronger capillary trapping forces, and a greater tendency for DNAPL pooling.

**Mole Fraction** refers to the proportion of a component, on the basis of moles, in a multi-component DNAPL. The sum of all the mole fractions is unity. Mass fractions, as provided by laboratory analysis, can be converted to mole fractions using the molecular weight of each component (see calculation 5).

**1% Rule of Thumb** is a generality that sampled groundwater concentrations in excess of 1% effective solubility (see Calculation 3) indicate that DNAPL may be present in the vicinity of (any direction) the monitoring point of interest. The distance between the monitoring point in question and the DNAPL source zone varies from site to site and is generally difficult to quantify with a high degree of accuracy.

**Pooled DNAPL** refers to local, continuous distributions of DNAPL that accumulate above capillary barriers. The capillary barriers are typically lower permeability horizons, and they can occur at any elevation in the subsurface. Within the pool, the DNAPL saturation is typically between 30% and 80% of pore space in both porous media and fractures (27). Because pools are contiguous through the pore structure they are potentially mobile and can migrate into monitoring wells, and can be mobilized by increases in the hydraulic gradient or lowering of IFT.

**Raoult's Law** is given by  $C_i = m_i S_i$  where  $C_i$  is the effective solubility (mg/l) of component  $i$ ,  $m_i$  is the mole fraction (unitless) of component  $i$  in the DNAPL, and  $S_i$  is the single-component (handbook) solubility of component  $i$  (2). This expression assumes ideal partitioning behavior and is used to estimate the maximum concentrations in groundwater immediately adjacent to residual and pooled DNAPL.

**Residual DNAPL** refers to disconnected blobs and ganglia of the DNAPL, trapped by capillary forces in the pore space of both porous media and fractures (21, 27, 44). The blobs and ganglia are typically from 1 to 10 grain diameters in size in unconsolidated deposits (44), and are left behind in the pathways that DNAPL has migrated through.

**Residual Saturation** refers to the volume of residual DNAPL present in a unit volume of pore space. Residual DNAPL saturations typically vary between 5% and 30% of pore space in both porous media and fractures (21, 27, 44).

**Source Zone Architecture** refers to (i) the overall shape and dimensions of the source zone, (ii) the ratio of residual to pooled DNAPL (also referred to as the ganglia to pool ratio), (iii) the lateral continuity of zones of residual DNAPL and DNAPL pools, (iv) the thickness of zones of residual DNAPL and DNAPL pools, and (v) the portion of lenses and layers containing DNAPL versus those void of DNAPL. The source zone architecture influences the downgradient dissolved-phase plume concentrations and mass flux distribution.

**Wettability** refers to the affinity of the DNAPL for a solid surface in the presence of water (6, 27). Many DNAPLs are non-wetting, implying that they will preferentially occupy the pore spaces within coarser grained lenses and laminations, and larger aperture fractures. Some DNAPLs are wetting with respect to water, however, implying that they will preferentially coat the aquifer materials and thereby occupy the pore spaces of the finer grained media. Coarser grained horizons and larger aperture fractures represent capillary barriers to DNAPLs that are wetting with respect to water.

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## Appendix A - Example Calculations

Note that the following calculations are generally subject to uncertainty because of input parameter variability. This variability may stem from spatial or temporal variation in site-specific conditions, or variation in textbook parameters such as contaminant chemical properties. The investigator is advised to make conservative choices with respect to input parameters and consider using a range of either measured or estimated values when performing calculations.

### Calculation 1 – Chemical Concentration in Soil Corresponding to Threshold DNAPL Saturation

$$C_D = \frac{S_r \phi \rho_N 10^6}{\rho_b} + C^T$$

- $C_D$  = soil concentration (mg/kg) corresponding to threshold DNAPL saturation [calculated],
- $S_r$  = threshold DNAPL saturation [set between 0.05 and 0.10],
- $\phi$  = effective porosity (unitless) [site specific measurement],
- $\rho_N$  = DNAPL density (g/cc) [site specific measurement],
- $\rho_b$  = dry soil bulk density (g/cc) [site specific measurement],
- $C^T$  = amount of contaminant (mg/kg) present in the soil sample in the aqueous, vapor, and sorbed phases [see Calculation 2 to evaluate  $C^T$ ].

#### Example Calculation

PCE DNAPL ( $\rho_N = 1.62$  g/cc) in a soil sample with  $S_r = 0.05$ ,  $\phi = 0.25$  and  $\rho_b = 2.0$  g/cc corresponds to (ignoring the  $C^T$  fraction)  $C_D = 10,125$  mg/kg. Note that the quantity  $C^T$  is typically negligible compared to the DNAPL saturation term. The above equation is applicable to single-component DNAPLs in unconsolidated porous media. See reference (25) for the relationship between  $C_D$  and DNAPL saturation for a multi-component DNAPL. It should be noted that  $0.05 \leq S_r \leq 0.10$  is suitable for geologic deposits having typical ranges of  $f_{oc}$  values (i.e., less than 2%). In general, the value of  $S_r$  should be chosen such that the resulting  $C_D$  is at least an order of magnitude higher than the  $C^T$  in calculation 2 arrived at using the highest  $f_{oc}$  value measured at the site.

### Calculation 2 – Threshold Chemical Concentration in Soil Based on Partitioning Relationships (see Ref. 11)

$$C_i^T = \frac{C_i}{\rho_b} (K_d \rho_b + \theta_w + H' \theta_a)$$

- $C_i^T$  = soil concentration (mg/kg) threshold for component  $i$  [calculated],
- $C_i$  = effective solubility (mg/l) [see Calculation 3] of component  $i$  [calculated],
- $\rho_b$  = dry soil bulk density (g/cc) [site specific measurement],
- $K_d$  = soil-water partition coefficient (ml/g) [calculated using  $K_d = K_{oc} f_{oc}$ ],
- $\theta_w$  = water-filled porosity (unitless) [calculated from site specific measurement of moisture content],
- $H'$  = unitless Henry's constant [handbook],
- $\theta_a$  = air-filled porosity (unitless) [site specific measurement],
- $K_{oc}$  = organic carbon - water partition coefficient (ml/g),
- $f_{oc}$  = fraction organic carbon (unitless) [site specific measurement].

$C_i^T$  represents the maximum amount of contaminant  $i$  that can be present in a porous media sample in the sorbed, aqueous, and vapor phases without a DNAPL phase present. The calculation can be applied below the water table by setting  $\theta_a = 0$ . Note that the water-filled porosity and the air-filled porosity sum to the total porosity. Note also that the calculation of  $C_i^T$  is typically more sensitive to  $f_{oc}$  than it is to the porosity values.



*Example Calculation*

Consider a single-component DNAPL composed of TCE ( $C_s = 1100$  mg/l,  $K_{oc} = 126$  ml/g,  $H' = 0.31$ ) in a soil sample having  $\theta_w = 0.15$ ,  $\theta_a = 0.10$ ,  $\rho_s = 2.0$  g/cc, and  $f_{oc} = 0.003$ . The corresponding value of  $C^T$  is 515 mg/kg. For a multi-component DNAPL, a separate value of  $C_i^T$  would be calculated using the above equation for each component detected in the soil sample.

**Calculation 3 – Effective Solubility Calculated Using Raoult's Law (see Ref. 2)**

$$C_i = m_i S_i$$

- $C_i$  = effective solubility (mg/l) of component  $i$  [calculated],
- $m_i$  = mole fraction (unitless) of component  $i$  in the DNAPL [site specific measurement],
- $S_i$  = single-component solubility (mg/l) of component  $i$  [handbook].

*Example Calculation*

Consider a 3-component DNAPL composed (by mass) of 25% TCE ( $S_i = 1100$  mg/l), 35% PCE ( $S_i = 200$  mg/l), and 40% toluene ( $S_i = 500$  mg/l); the corresponding mole fractions (see Calculation 5) are 0.23, 0.25, and 0.52 respectively, and the corresponding effective solubilities are 250 mg/l, 50 mg/l, and 260 mg/l respectively. Sampled groundwater concentrations in excess of 1% of any of these effective solubilities are evidence of possible DNAPL presence in the vicinity of the monitoring point. The distance to the DNAPL cannot be determined on the basis of the magnitude of the groundwater concentration alone. In cases where some of the components of the DNAPL are not known, the unknown mass fraction can be assigned an estimated molecular weight, or the average of the molecular weights of the known components.

**Calculation 4 – Threshold Chemical Concentration in Soil Based on Partitioning Relationships Where Composition of DNAPL is Not Known**

$$\sum_{i=1}^n \frac{C_{obs,i}^T}{C_{S,i}^T} \geq 1$$

- $C_{obs,i}^T$  = reported concentration (mg/kg) of component  $i$  [site specific measurement],
- $C_{S,i}^T$  = single component soil partitioning concentration (mg/kg) of component  $i$  (see  $C_i^T$  in Calculation 2),
- $n$  = number of components observed in the soil sample [site specific measurement].

For a multi-component DNAPL of unknown composition, the sum of the mole fractions must equal unity. DNAPL will therefore be present in a soil sample if sum of  $\frac{C_{obs,i}^T}{C_{S,i}^T}$  exceeds unity.

Note that  $C_{S,i}^T$  is calculated for each component in the summation using Calculation 2 with the single-component solubility as input. The presented technique can be prone to false negatives in cases where the soil sample was not analyzed for some of the components of the DNAPL. Because of this, it may be prudent in some cases to only use the calculation for demonstrating that DNAPL was present in a soil sample and not rely upon it to demonstrate that DNAPL was absent from a soil sample.

*Example Calculation*

The table below provides an example calculation for a soil sample in which 5 components have been detected. The sample is characterized by a porosity of 25%, a fraction organic carbon of 0.003, and a dry bulk density of 1.99 g/cc. The last column of the table sums to greater than 1.0, indicating that DNAPL was present in the soil sample.



Compound	$C_{obs,i}^T$ (mg/kg)	$K_{oc}$ (l/kg)	Handbook Solubility (mg/l)	$C_{s,i}^T$ (mg/kg)	$\frac{C_{obs,i}^T}{C_{s,i}^T}$
Trichloroethylene	145	126	1100	554	0.262
Tetrachloroethylene	155	364	200	244	0.636
Carbon Tetrachloride	200	439	790	1140	0.175
Chlorobenzene	177	330	500	558	0.317
1,1,1-Trichloroethane	213	152	1320	768	0.277
				SUM =	1.668

**Calculation 5 – Mole Fraction (n-component DNAPL)**

$$m_i = \frac{\frac{ms_i}{mw_i}}{\frac{ms_1}{mw_1} + \frac{ms_{i+1}}{mw_{i+1}} + \dots + \frac{ms_n}{mw_n}}$$

$m_i$  = mole fraction of component  $i$  (unitless) in the DNAPL [calculated].

$ms_i$  = mass fraction of component  $i$  (unitless) in the DNAPL [measured].

$mw_i$  = molecular weight (g/mol) of component  $i$  [handbook].

**Example Calculation**

Consider a 3-component DNAPL composed by mass of 25% TCE ( $mw = 131.5$  g/mol), 35% PCE ( $mw = 165.8$  g/mol), and 40% toluene ( $mw = 92.1$  g/mol). The corresponding mole fractions are 0.23, 0.25, and 0.52 respectively. In cases where some of the components of the DNAPL are not known, the unknown mass fraction can be assigned an estimated molecular weight, or the average of the molecular weights of the known components.

**Calculation 6 – 1% Effective Solubility Threshold Not Knowing DNAPL Composition**

$$\sum_{i=1}^n \frac{C_i^{obs}}{S_i} = \alpha$$

$C_i^{obs}$  = sampled groundwater concentration (mg/l) of component  $i$  [site specific measurement].

$S_i$  = single-component solubility (mg/l) of component  $i$  [handbook].

$\alpha$  = cumulative mole fraction of the sample [set].

$n$  = number of components in groundwater sample.

Calculation assumes that the degree of borehole dilution, dispersion, and degradation is identical for each component of interest in an obtained groundwater sample. If the 1% rule-of-thumb is used, DNAPL may be present in the vicinity of a monitoring well if  $\alpha > 0.01$ . The procedure can be applied on a sample-by-sample basis without having to make the assumption that the DNAPL composition is spatially uniform in the subsurface. If it is believed that a value other than 1% effective solubility indicates DNAPL presence,  $\alpha$  can be set to the corresponding value. The presented technique can be prone to false negatives where the groundwater sample was not analyzed for some of the components of the DNAPL. Because of this, it may be prudent in some cases to only use the calculation for demonstrating that  $\alpha$  has been exceeded in a sample and not rely upon it to demonstrate that  $\alpha$  was not exceeded in a sample.

*Example Calculation*

The table below presents an example calculation for 5 components. Although each component has been detected at a concentration less than 1% of  $S_i$ , the cumulative mole fractions sum to 3.4%, providing evidence of possible DNAPL presence in the vicinity of the monitoring location. If the groundwater sample is not analyzed for all components present in the DNAPL, or if any compounds are degrading in the aqueous phase, the calculation procedure will underestimate the likelihood of DNAPL presence.

Compound	$C_i^{obs}$ (mg/l)	$S_i$ (mg/l)	$\frac{C_i}{S_i}$
Trichloroethene	4.4	1100	0.004
Tetrachloroethene	1.8	200	0.009
Toluene	3.5	500	0.007
Chlorobenzene	4.0	500	0.008
Trichloromethane	48.0	8000	0.006
$\sum \frac{C_i^{obs}}{S_i}$			<b>0.034</b>

*Calculation 7 – Plume Detachment Time*

$$t = \frac{LR}{v}$$

- $t$  = time (yrs) required for contaminants to migrate through source zone of length  $L$  in the direction of groundwater flow,
- $v$  = average linear groundwater velocity (m/yr) [site specific],
- $R$  = retardation factor (unitless) for the contaminant of interest [site specific measurement – see calculation below],
- $L$  = length (m) of source zone in direction of flow [site specific measurement].

Calculation assumes unidirectional, steady-state flow conditions subject to advection and sorption only (dispersion and matrix diffusion are ignored). The calculation assumes that contaminant mass is not being added to the saturated flow system from any unsaturated zone sources (e.g., leaching and desorption). Note that  $R$  is often approximated in unconsolidated media by

$$R = 1 + \frac{\rho_b}{\phi} K_{oc} f_{oc}$$

where  $\rho_b$  is the dry bulk density (g/cc),  $\phi$  is the porosity (unitless),  $K_{oc}$  is the organic-carbon partition coefficient (ml/g), and  $f_{oc}$  is the fraction organic carbon (unitless). Calculations considering dispersion and degradation can be found in (10).

*Example Calculation*

Using  $L = 50$  m,  $v = 25$  m/yr, and  $R = 5$ , the source zone should be flushed of dissolved and sorbed contaminants in approximately 10 years following the last release of contaminants. Dispersion, which always occurs, will lengthen this time as will back-diffusion, if it is occurring. In cases where complicated flow conditions exist and where it is desired to account for dispersion and back-diffusion, numerical models can be used to perform the assessment.

*Calculation 8 – Conversion to Parent Compound*

Daughter product concentrations can be converted to equivalent parent product concentrations by converting the daughter mass/volume concentrations to moles/volume, attributing that number of moles to the parent, and then converting the parent concentration to mass/volume.

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*Example Calculation*

Consider a groundwater sample containing 500 ppb PCE, 400 ppb TCE, 1300 ppb cis-1,2 DCE and 44 ppb VC at a site where it is known that only PCE was released to the subsurface. It is assumed that biodegradation has not progressed beyond VC. The PCE concentration of 500 ppb is less than 1% of the PCE solubility (1% PCE solubility is 2000 ppb). Given TCE, cis-1,2 DCE and VC molecular weights of 131.5, 97.0 and 62.5 g/mol, respectively, the groundwater concentrations of these compounds are equal to  $3.042\text{E-}06$  mol/l,  $1.340\text{E-}05$  mol/l and  $7.040\text{E-}07$  mol/l, respectively. Assuming that each mole of daughter product derives from one mole of parent product, the equivalent total concentration of parent product is  $2.016\text{E-}05$  mol/l. This corresponds to an equivalent parent (PCE) concentration of 3343 ppb (PCE molecular weight 165.8 g/mol), which exceeds the 1% solubility value of 2000 ppb.



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**Supplement 1:**

**Water Level Data and Rainfall Data**



TABLE S1.1 Automatically recorded groundwater level data for selected monitoring wells at Montgomery City.

Date and Time	Depth to Groundwater (ft BGL)													
	SB01S	SB49S	SB50S	SB51S	SB52S	SB53S	SB54S	SB01M	SB49M	SB50M	SB51M	SB52M	SB53M	SB54M
5/20/11 20:00	1.090	15.791		15.911	3.399	15.876	2.452	1.466	27.782		27.860	6.770	28.152	27.823
5/21/11 0:00	1.113	15.794		15.914	3.256	15.876	2.239	1.380	27.782		27.862	6.425	28.155	27.823
5/21/11 4:00	1.094	15.791		15.909	3.352	15.876	2.260	1.404	27.785		27.862	6.089	28.155	27.823
5/21/11 8:00	1.111	15.794		15.909	3.327	15.873	2.274	1.445	27.782		27.862	5.775	28.155	27.823
5/21/11 12:00	0.859	15.791		15.911	3.392	15.876	2.283	1.438	27.785		27.862	5.479	28.157	27.823
5/21/11 16:00	0.600	15.791		15.911	3.380	15.873	2.288	1.389	27.782		27.860	5.216	28.155	27.823
5/21/11 20:00	0.579	15.791		15.911	3.357	15.876	2.290	1.392	27.782		27.862	4.977	28.155	27.823
5/22/11 0:00	0.646	15.794		15.911	3.362	15.873	2.295	1.408	27.782		27.862	4.764	28.157	27.823
5/22/11 4:00	0.654	15.794		15.914	3.355	15.873	2.295	1.390	27.782		27.860	4.581	28.157	27.821
5/22/11 8:00	0.660	15.791		15.914	3.355	15.873	2.295	1.383	27.782		27.862	4.447	28.155	27.823
5/22/11 12:00	0.635	15.784		15.904	3.341	15.873	2.290	1.338	27.782		27.860	4.327	28.155	27.823
5/22/11 16:00	0.681	15.725		15.909	3.315	15.873	2.286	1.317	27.782		27.862	4.219	28.155	27.821
5/22/11 20:00	1.090	15.669		15.911	2.969	15.873	1.665	1.003	27.780		27.860	4.111	28.155	27.823
5/23/11 0:00	1.097	15.615		15.914	2.953	15.873	1.593	0.926	27.782		27.862	4.022	28.155	27.821
5/23/11 4:00	1.069	15.549		15.914	3.238	15.876	1.593	0.947	27.782		27.862	3.945	28.155	27.823
5/23/11 8:00	1.083	15.493		15.911	3.296	15.873	1.590	1.026	27.782		27.862	3.881	28.155	27.823
5/23/11 12:00	0.915	15.434		15.916	3.301	15.876	1.593	1.229	27.780		27.862	3.825	28.155	27.823
5/23/11 16:00	0.845	15.378		15.911	3.301	15.873	1.590	1.341	27.782		27.855	3.785	28.155	27.753
5/23/11 20:00	0.677	15.317		15.909	3.284	15.873	1.590	1.308	27.782		27.729	3.752	28.155	27.646
5/24/11 0:00	0.579	15.258		15.906	3.313	15.873	1.590	1.240	27.782		27.605	3.724	28.155	27.541
5/24/11 4:00	0.528	15.202		15.911	3.306	15.873	1.590	1.285	27.782		27.486	3.698	28.155	27.436
5/24/11 8:00	0.231	15.148		15.914	3.320	15.873	1.593	1.364	27.782		27.358	3.680	28.155	27.320
5/24/11 12:00	0.224	15.091		15.911	3.313	15.873	1.593	1.317	27.782		27.234	3.663	28.155	27.205
5/24/11 16:00	0.257	15.037		15.914	3.303	15.876	1.593	1.243	27.782		27.105	3.644	28.155	27.093
5/24/11 20:00	0.290	14.979		15.914	3.277	15.873	1.593	1.245	27.782		26.991	3.623	28.155	26.979
5/25/11 0:00	0.348	14.927		15.906	3.275	15.873	1.593	1.250	27.782		26.902	3.607	28.155	26.893
5/25/11 4:00	0.430	14.885		15.909	3.156	15.873	1.588	1.094	27.778		26.820	3.579	28.157	26.814
5/25/11 8:00	0.486	14.836		3.942	3.018	15.873	1.544	1.049	27.785		26.739	3.555	28.155	26.732
5/25/11 12:00	0.509	14.791		3.754	3.254	15.873	1.530	1.510	27.785		26.645	3.534	28.155	26.655
5/25/11 16:00	0.493	14.742		0.367	2.897	15.876	1.513	1.103	27.782		26.554	3.506	28.157	26.578
5/25/11 20:00	0.479	14.695		0.319	3.025	15.873	1.490	1.152	27.787		26.454	3.483	28.155	26.506
5/26/11 0:00	0.497	14.652		0.304	3.126	15.873	1.487	0.987	27.782		26.365	3.466	28.157	26.434
5/26/11 4:00	0.497	14.605		0.297	2.922	15.873	1.469	0.865	27.782		21.731	3.433	28.155	26.361
5/26/11 8:00	0.516	14.561		0.292	3.004	15.873	1.450	0.733	27.782		12.473	3.433	28.155	26.294
5/26/11 12:00	0.544	14.516		0.285	3.067	15.876	1.441	0.803	27.782		6.131	3.433	28.159	26.228
5/26/11 16:00	0.586	14.469		0.290	3.254	15.873	1.438	0.868	27.785		0.372	3.440	28.155	26.163
5/26/11 20:00	0.586	14.420		0.297	3.294	15.876	1.436	0.947	27.703		0.353	3.440	28.157	26.093
5/27/11 0:00	0.565	14.349		0.304	3.313	15.873	1.436	0.961	27.619		0.350	3.443	28.157	26.021
5/27/11 4:00	0.196	14.277		0.311	3.317	15.873	1.436	1.143	27.530		0.350	3.445	28.155	25.946
5/27/11 8:00	0.154	14.202		0.319	3.324	15.873	1.438	1.245	27.446		0.355	3.450	28.155	25.876
5/27/11 12:00	0.168	14.133		0.333	3.308	15.873	1.438	1.224	27.357		0.357	3.447	28.155	25.802
5/27/11 16:00	0.238	14.065		0.338	3.266	15.873	1.438	1.150	27.266		0.362	3.443	28.157	25.729
5/27/11 20:00	0.262	14.004		0.348	3.242	15.873	1.438	1.140	27.177		0.367	3.436	28.155	25.659
5/28/11 0:00	0.271	13.939		0.367	3.235	15.873	1.438	1.143	27.089		0.374	3.429	28.157	25.589
5/28/11 4:00	0.278	13.878		0.374	3.219	15.873	1.438	1.129	26.993		0.383	3.422	28.157	25.517
5/28/11 8:00	0.299	13.816		0.388	3.221	15.873	1.438	1.136	26.918		0.393	3.415	28.157	25.445

TABLE S1.1 (Cont.)

Date and Time	Depth to Groundwater (ft BGL)													
	SB01S	SB49S	SB50S	SB51S	SB52S	SB53S	SB54S	SB01M	SB49M	SB50M	SB51M	SB52M	SB53M	SB54M
5/28/11 12:00	0.290	13.760		0.398	3.191	15.873	1.438	1.087	26.846		0.400	3.403	28.155	25.373
5/28/11 16:00	0.287	13.704		0.427	3.172	15.873	1.438	1.091	26.783		0.407	3.393	28.155	25.300
5/28/11 20:00	0.294	13.652		0.425	3.156	15.873	1.438	1.084	26.717		0.407	3.384	28.155	25.228
5/29/11 0:00	0.304	13.596		0.415	3.168	15.873	1.438	1.056	26.652		0.418	3.377	28.157	25.149
5/29/11 4:00	0.252	13.544		0.420	3.156	15.873	1.441	1.094	26.589		0.430	3.368	28.155	25.077
5/29/11 8:00	0.245	13.488		0.429	3.186	15.873	1.441	1.194	26.528		0.446	3.356	28.157	25.002
5/29/11 12:00	0.280	13.443		0.444	3.172	15.873	1.441	1.096	26.463		0.458	3.351	28.157	24.925
5/29/11 16:00	0.369	13.391		0.454	3.165	15.875	1.443	1.096	26.397		0.493	3.344	28.155	24.850
5/29/11 20:00	0.502	13.342		0.466	3.165	15.873	1.443	1.145	26.337		0.495	3.342	28.155	24.780
5/30/11 0:00	0.744	13.295		0.502	3.189	15.873	1.443	1.187	26.278		0.505	3.340	28.152	24.713
5/30/11 4:00	0.854	13.246		0.502	3.198	15.873	1.443	1.196	26.220		0.512	3.340	28.157	24.640
5/30/11 8:00	0.882	13.206		0.509	3.231	15.873	1.443	1.226	26.159		0.523	3.344	28.157	24.568
5/30/11 12:00	0.933	13.157		0.514	3.252	15.873	1.443	1.217	26.101		0.528	3.351	28.155	24.494
5/30/11 16:00	0.971	13.112		0.521	3.240	15.873	1.445	1.210	26.040		0.533	3.354	28.155	24.424
5/30/11 20:00	1.045	13.063		0.528	3.240	15.873	1.445	1.259	25.977		0.537	3.356	28.155	24.351
5/31/11 0:00	1.085	13.020		0.533	3.259	15.873	1.448	1.296	25.914		0.544	3.363	28.157	24.281
5/31/11 4:00	1.097	12.971		0.543	3.250	15.873	1.448	1.282	25.848		0.549	3.363	28.155	24.207
5/31/11 8:00	1.157	12.929		0.550	3.299	15.873	1.448	1.336	25.785		0.558	3.372	28.155	24.137
5/31/11 12:00	1.195	12.884		0.552	3.320	15.876	1.448	1.350	25.720		0.563	3.384	28.110	24.065
5/31/11 16:00	1.209	12.840		0.555	3.331	15.873	1.450	1.340	25.655		0.568	3.393	28.043	23.997
5/31/11 20:00	1.253	12.800		0.562	3.341	15.873	1.450	1.396	25.589		0.575	3.405	27.975	23.927
6/1/11 0:00	1.290	12.755		0.572	3.364	15.873	1.450	1.438	25.524		0.582	3.417	27.906	23.859
6/1/11 4:00	1.304	12.715		0.574	3.376	15.873	1.452	1.447	25.456		0.586	3.429	27.836	23.787
6/1/11 8:00	1.337	12.673		0.581	3.406	15.873	1.455	1.471	25.391		0.593	3.445	27.759	23.717
6/1/11 12:00	1.351	12.631		0.591	3.422	15.875	1.455	1.445	25.325		0.598	3.457	27.685	23.647
6/1/11 16:00	1.355	12.588		0.588	3.390	15.873	1.455	1.417	25.260		0.603	3.464	27.603	23.575
6/1/11 20:00	1.348	12.553		0.593	3.362	15.873	1.455	1.445	25.197		0.607	3.469	27.531	23.505
6/2/11 0:00	1.353	12.511		0.588	3.343	15.873	1.455	1.438	25.136		0.612	3.469	27.452	23.435
6/2/11 4:00	1.365	12.471		0.596	3.345	15.873	1.457	1.443	25.071		0.617	3.471	27.376	23.365
6/2/11 8:00	1.383	12.424		0.601	3.343	15.873	1.457	1.447	25.008		0.621	3.471	27.308	23.295
6/2/11 12:00	1.411	12.386		0.601	3.352	15.873	1.457	1.440	24.947		0.628	3.473	27.250	23.232
6/2/11 16:00	1.404	12.349	15.747	0.605	3.324	15.873	1.457	1.396	24.884	22.227	0.631	3.469	27.194	23.169
6/2/11 20:00	1.395	12.309	15.764	0.610	3.292	15.875	1.457	1.410	24.823	22.192	0.635	3.462	27.138	23.106
6/3/11 0:00	1.423	12.271	15.768	0.610	3.292	15.873	1.459	1.424	24.760	22.157	0.640	3.457	27.085	23.041
6/3/11 4:00	1.439	12.236	15.773	0.610	3.294	15.873	1.459	1.433	24.702	22.119	0.645	3.452	27.036	22.976
6/3/11 8:00	1.460	12.199	15.775	0.617	3.306	15.873	1.459	1.447	24.641	22.089	0.649	3.450	26.985	22.908
6/3/11 12:00	1.486	12.161	15.778	0.622	3.308	15.873	1.459	1.415	24.580	22.061	0.652	3.447	26.934	22.836
6/3/11 16:00	1.507	12.126	15.778	0.622	3.294	15.873	1.462	1.406	24.519	22.030	0.656	3.445	26.880	22.763
6/3/11 20:00	1.502	12.088	15.778	0.627	3.267	15.873	1.462	1.454	24.461	21.997	0.661	3.440	26.827	22.694
6/4/11 0:00	1.516	12.053	15.778	0.839	3.301	15.873	1.464	1.487	24.405	21.967	0.666	3.440	26.778	22.619
6/4/11 4:00	1.526	12.015	15.780	1.405	3.313	15.873	1.462	1.503	24.344	21.936	0.671	3.443	26.727	22.551
6/4/11 8:00	1.544	11.978	15.780	1.612	3.383	15.873	1.464	1.522	24.288	21.906	0.675	3.445	26.678	22.477
6/4/11 12:00	1.570	11.943	15.780	1.661	3.357	15.873	1.464	1.496	24.232	21.878	0.680	3.450	26.627	22.409
6/4/11 16:00	1.563	11.905	15.782	1.658	3.343	15.873	1.466	1.485	24.169	21.847	0.685	3.452	26.580	22.337
6/4/11 20:00	1.565	11.872	15.782	1.661	3.334	15.873	1.466	1.517	24.111	21.815	0.689	3.454	26.534	22.264
6/5/11 0:00	1.568	11.839	15.785	1.663	3.345	15.873	1.466	1.559	24.055	21.786	0.694	3.457	26.487	22.197

TABLE S1.1 (Cont.)

Date and Time	Depth to Groundwater (ft BGL)													
	SB01S	SB49S	SB50S	SB51S	SB52S	SB53S	SB54S	SB01M	SB49M	SB50M	SB51M	SB52M	SB53M	SB54M
6/5/11 4:00	1.568	11.804	15.785	1.668	3.343	15.873	1.466	1.552	23.996	21.756	0.703	3.459	26.443	22.129
6/5/11 8:00	1.579	11.767	15.787	1.673	3.359	15.873	1.469	1.566	23.938	21.725	0.720	3.462	26.394	22.059
6/5/11 12:00	1.586	11.731	15.787	1.687	3.373	15.875	1.469	1.557	23.880	21.697	0.738	3.469	26.350	21.987
6/5/11 16:00	1.565	11.699	15.789	1.675	3.355	15.873	1.469	1.515	23.821	21.667	0.755	3.466	26.303	21.917
6/5/11 20:00	1.556	11.661	15.787	1.665	3.324	15.873	1.469	1.529	23.760	21.636	0.771	3.464	26.257	21.845
6/6/11 0:00	1.582	11.628	15.789	1.670	3.322	15.873	1.469	1.548	23.704	21.606	0.787	3.464	26.210	21.782
6/6/11 4:00	1.584	11.591	15.789	1.663	3.306	15.873	1.469	1.527	23.646	21.575	0.804	3.459	26.166	21.710
6/6/11 8:00	1.607	11.555	15.792	1.673	3.317	15.873	1.471	1.534	23.588	21.547	0.820	3.454	26.131	21.639
6/6/11 12:00	1.619	11.520	15.792	1.673	3.318	15.873	1.471	1.506	23.529	21.521	0.836	3.452	26.106	21.574
6/6/11 16:00	1.600	11.487	15.792	1.665	3.310	15.873	1.473	1.480	23.468	21.491	0.850	3.450	26.094	21.502
6/6/11 20:00	1.575	11.452	15.792	1.663	3.275	15.873	1.471	1.513	23.410	21.458	0.864	3.443	26.087	21.439
6/7/11 0:00	1.579	11.417	15.792	1.675	3.282	15.873	1.473	1.536	23.354	21.430	0.883	3.438	26.071	21.371
6/7/11 4:00	1.579	11.384	15.792	1.673	3.275	15.873	1.473	1.531	23.296	21.402	0.897	3.433	26.055	21.306
6/7/11 8:00	1.603	11.346	15.794	1.678	3.289	15.873	1.473	1.536	23.237	21.376	0.913	3.429	26.034	21.236
6/7/11 12:00	1.612	11.313	15.792	1.673	3.289	15.873	1.476	1.506	23.176	21.348	0.927	3.426	26.017	21.171
6/7/11 16:00	1.598	11.281	15.794	1.675	3.271	15.875	1.476	1.485	23.113	21.318	0.941	3.424	25.999	21.106
6/7/11 20:00	1.628	11.241	15.792	1.673	3.257	15.873	1.476	1.517	23.050	21.287	0.958	3.417	25.983	21.045
6/8/11 0:00	1.654	11.205	15.794	1.690	3.275	15.873	1.476	1.555	22.990	21.257	0.974	3.417	25.955	20.982
6/8/11 4:00	1.642	11.173	15.794	1.687	3.271	15.873	1.476	1.548	22.922	21.226	0.988	3.412	25.924	20.919
6/8/11 8:00	1.649	11.137	15.794	1.687	3.282	15.873	1.478	1.548	22.863	21.196	1.002	3.410	25.892	20.861
6/8/11 12:00	1.663	11.100	15.796	1.690	3.315	15.873	1.480	1.524	22.803	21.165	1.019	3.410	25.855	20.795
6/8/11 16:00	1.640	11.101	15.794	1.690	3.280	15.873	1.480	1.510	22.740	21.130	1.030	3.410	25.820	20.730
6/8/11 20:00	1.634	11.063	15.794	1.690	3.283	15.873	1.476	1.543	22.688	21.104	1.025	3.412	25.795	20.686
6/9/11 0:00	1.648	11.028	15.796	1.724	3.308	15.873	1.476	1.580	22.627	21.071	1.041	3.412	25.748	20.623
6/9/11 4:00	1.671	10.993	15.796	1.794	3.308	15.873	1.478	1.580	22.567	21.036	1.055	3.416	25.700	20.556
6/9/11 8:00	1.685	10.962	15.796	1.871	3.334	15.875	1.478	1.606	22.508	21.006	1.076	3.419	25.653	20.488
6/9/11 12:00	1.688	10.927	15.796	0.370	3.346	15.873	1.495	1.589	23.830	20.978	4.773	3.426	26.783	22.157
6/9/11 16:00	1.676	10.892	15.796	4.249	3.332	15.873	1.497	1.552	23.797	20.942	4.743	3.428	26.602	22.092
6/9/11 20:00	1.695	10.854	15.796	4.222	3.318	15.873	1.495	1.582	23.739	20.910	4.722	3.428	26.483	22.027
6/10/11 0:00	1.706	10.826	15.796	4.208	3.332	15.875	1.497	1.617	23.681	20.879	4.706	3.433	26.397	21.962
6/10/11 4:00	1.688	10.791	15.799	4.177	3.301	15.873	1.497	1.578	23.620	20.844	4.685	3.430	26.337	21.885
6/10/11 8:00	1.695	10.763	15.796	4.167	3.330	15.873	1.499	1.608	23.566	20.816	4.671	3.433	26.292	21.812
6/10/11 12:00	1.702	10.732	15.799	4.155	3.344	15.873	1.499	1.594	23.510	20.788	4.657	3.435	26.260	21.740
6/10/11 16:00	1.702	10.702	15.799	4.131	3.320	15.875	1.499	1.557	23.452	20.752	4.636	3.435	26.230	21.668
6/10/11 20:00	1.697	10.674	15.796	4.112	3.294	15.873	1.499	1.587	23.393	20.720	4.619	3.430	26.204	21.596
6/11/11 0:00	1.676	10.641	15.799	4.100	3.070	15.873	1.459	1.552	23.337	20.689	4.605	3.419	26.181	21.526
6/11/11 4:00	1.664	10.615	15.799	4.088	3.301	15.873	1.462	1.603	23.281	20.659	4.591	3.416	26.162	21.451
6/11/11 8:00	1.685	10.587	15.799	4.080	3.332	15.873	1.464	1.631	23.225	20.628	4.580	3.421	26.146	21.388
6/11/11 12:00	1.709	10.563	15.799	4.071	3.351	15.873	1.466	1.629	23.167	20.598	4.566	3.428	26.132	21.316
6/11/11 16:00	1.709	10.533	15.799	4.054	3.355	15.873	1.466	1.624	23.108	20.565	4.552	3.433	26.116	21.246
6/11/11 20:00	1.720	10.507	15.799	4.042	3.360	15.873	1.466	1.622	23.048	20.534	4.535	3.440	26.099	21.176
6/12/11 0:00	1.725	10.479	15.799	4.027	3.376	15.873	1.469	1.638	22.985	20.504	4.524	3.447	26.081	21.111
6/12/11 4:00	1.732	10.450	15.799	4.023	3.374	15.875	1.469	1.629	22.919	20.471	4.507	3.454	26.060	21.043
6/12/11 8:00	1.744	10.420	15.799	4.010	3.390	15.873	1.471	1.641	22.863	20.441	4.496	3.461	26.039	20.975
6/12/11 12:00	1.758	10.396	15.801	4.001	3.411	15.873	1.474	1.654	22.802	20.413	4.484	3.470	26.018	20.912
6/12/11 16:00	1.748	10.364	15.799	3.979	3.395	15.873	1.476	1.622	22.742	20.380	4.468	3.475	25.988	20.840

TABLE S1.1 (Cont.)

Date and Time	Depth to Groundwater (ft BGL)													
	SB01S	SB49S	SB50S	SB51S	SB52S	SB53S	SB54S	SB01M	SB49M	SB50M	SB51M	SB52M	SB53M	SB54M
6/12/11 20:00	1.758	10.338	15.799	3.967	3.400	15.873	1.476	1.643	22.683	20.347	4.454	3.480	25.958	20.777
6/13/11 0:00	1.779	10.310	15.799	3.957	3.407	15.873	1.476	1.654	22.620	20.314	4.442	3.487	25.927	20.710
6/13/11 4:00	1.774	10.279	15.799	3.941	3.395	15.873	1.478	1.643	22.557	20.281	4.428	3.491	25.890	20.640
6/13/11 8:00	1.802	10.253	15.799	3.941	3.425	15.873	1.478	1.671	22.492	20.251	4.416	3.496	25.858	20.574
6/13/11 12:00	1.807	10.220	15.801	3.921	3.416	15.873	1.481	1.657	22.429	20.218	4.400	3.501	25.816	20.504
6/13/11 16:00	1.790	10.195	15.801	3.907	3.395	15.873	1.483	1.624	22.370	20.183	4.386	3.503	25.769	20.430
6/13/11 20:00	1.779	10.159	15.801	3.885	3.376	15.875	1.483	1.620	22.310	20.148	4.370	3.503	25.716	20.360
6/14/11 0:00	1.790	10.138	15.801	3.876	3.374	15.873	1.485	1.620	22.251	20.115	4.358	3.498	25.667	20.287
6/14/11 4:00	1.804	10.108	15.801	3.866	3.383	15.875	1.483	1.594	22.190	20.082	4.346	3.498	25.618	20.225
6/14/11 8:00	1.809	10.082	15.801	3.861	3.393	15.873	1.471	1.641	22.132	20.049	4.335	3.496	25.581	20.152
6/14/11 12:00	1.790	10.047	15.799	3.837	3.386	15.875	1.469	1.724	22.069	20.012	4.318	3.496	25.539	20.061
6/14/11 16:00	1.765	10.016	15.801	3.813	3.327	15.873	1.471	1.561	22.004	19.979	4.299	3.467	25.500	19.947
6/14/11 20:00	1.748	9.988	15.801	3.794	3.302	15.873	1.471	1.561	21.941	19.949	4.285	3.473	25.458	19.837
6/15/11 0:00	1.737	9.955	15.801	3.774	3.281	15.873	1.471	1.540	21.880	19.918	4.269	3.461	25.416	19.730
6/15/11 4:00	1.730	9.929	15.801	3.762	3.264	15.873	1.476	1.526	21.824	19.888	4.257	3.449	25.369	19.632
6/15/11 8:00	1.660	9.899	15.801	3.753	3.201	15.873	0.980	1.526	21.768	19.862	4.243	3.430	25.325	19.541
6/15/11 12:00	1.604	9.873	15.801	3.748	3.257	15.873	0.984	1.517	21.712	19.834	4.234	3.419	25.285	19.455
6/15/11 16:00	1.571	9.845	15.801	3.738	3.276	15.873	0.987	1.517	21.658	19.796	4.220	3.414	25.244	19.366
6/15/11 20:00	1.541	9.817	15.801	3.731	3.278	15.873	0.991	1.533	21.602	19.742	4.206	3.409	25.199	19.271
6/16/11 0:00	1.529	9.786	15.801	3.724	3.299	15.875	0.998	1.561	21.548	19.709	4.197	3.409	25.158	19.191
6/16/11 4:00	1.508	9.760	15.801	3.714	3.292	15.873	1.003	1.540	21.494	19.655	4.183	3.407	25.111	19.091
6/16/11 8:00	1.492	9.730	15.801	3.700	3.299	15.873	1.010	1.536	21.441	19.611	4.171	3.409	25.069	19.007
6/16/11 12:00	1.480	9.699	15.801	3.697	3.316	15.873	1.017	1.519	21.385	19.566	4.159	3.409	25.025	18.919
6/16/11 16:00	1.489	9.669	15.803	3.683	3.318	15.873	1.022	1.533	21.331	19.515	4.145	3.412	24.983	18.828
6/16/11 20:00	1.440	9.636	15.801	3.664	3.288	15.875	1.026	1.501	21.272	19.447	4.129	3.409	24.937	18.716
6/17/11 0:00	1.447	9.608	15.801	3.664	3.297	15.873	1.033	1.524	21.219	19.405	4.120	3.407	24.897	18.639
6/17/11 4:00	1.459	9.579	15.801	3.652	3.304	15.873	1.040	1.524	21.163	19.358	4.110	3.409	24.855	18.550
6/17/11 8:00	1.454	9.547	15.803	3.640	3.292	15.875	1.045	1.505	21.107	19.301	4.096	3.409	24.811	18.455
6/17/11 12:00	1.340	9.535	15.803	3.685	3.215	15.875	0.614	1.540	21.058	19.276	4.129	3.405	24.781	18.408
6/17/11 16:00	0.867	9.495	15.803	3.625	3.271	15.875	0.537	1.512	20.995	19.217	4.075	3.407	24.732	18.294
6/17/11 20:00	0.669	9.467	15.801	3.613	3.255	15.873	0.554	1.480	20.936	19.163	4.061	3.400	24.690	18.196
6/18/11 0:00	0.620	9.441	15.801	3.606	3.267	15.873	0.572	1.491	20.880	19.116	4.052	3.398	24.651	18.114
6/18/11 4:00	0.608	9.410	15.803	3.587	3.253	15.873	0.589	1.468	20.822	19.058	4.038	3.390	24.609	18.016
6/18/11 8:00	0.657	9.399	15.803	3.627	3.071	15.875	0.453	1.287	20.775	19.039	0.357	3.369	24.569	17.900
6/18/11 12:00	0.652	9.359	15.803	3.584	3.320	15.873	0.434	1.547	20.707	18.983	0.357	3.372	24.525	17.867
6/18/11 16:00	0.277	9.328	15.803	3.570	3.264	15.873	0.453	1.426	20.647	18.926	0.394	3.369	24.476	17.769
6/18/11 20:00	0.386	9.300	15.803	3.550	3.253	15.873	0.472	1.426	20.586	18.872	0.418	3.367	24.437	17.678
6/19/11 0:00	0.435	9.272	15.803	3.538	3.232	15.873	0.486	1.415	20.525	18.819	0.425	3.365	24.390	17.583
6/19/11 4:00	0.473	9.244	15.803	3.521	3.232	15.873	0.502	1.391	20.469	18.779	0.436	3.360	24.346	17.508
6/19/11 8:00	0.508	9.213	15.803	3.529	3.208	15.873	0.507	1.377	20.406	18.727	0.443	3.353	24.302	17.410
6/19/11 12:00	0.524	9.183	15.803	3.517	3.243	15.875	0.518	1.366	20.345	18.680	0.450	3.355	24.260	17.345
6/19/11 16:00	0.531	9.152	15.803	3.497	3.232	15.873	0.530	1.326	20.282	18.624	0.457	3.351	24.216	17.245
6/19/11 20:00	0.547	9.117	15.803	3.490	3.218	15.875	0.540	1.340	20.224	18.570	0.474	3.348	24.174	17.158
6/20/11 0:00	0.582	9.084	15.803	3.478	3.213	15.873	0.549	1.345	20.170	18.523	0.497	3.344	24.132	17.074
6/20/11 4:00	0.606	9.053	15.803	3.459	3.187	15.873	0.558	1.310	20.114	18.462	0.497	3.337	24.086	16.979
6/20/11 8:00	0.622	9.021	15.803	3.454	3.199	15.875	0.570	1.314	20.053	18.425	0.502	3.329	24.041	16.911



TABLE S1.1 (Cont.)

Date and Time	Depth to Groundwater (ft BGL)													
	SB01S	SB49S	SB50S	SB51S	SB52S	SB53S	SB54S	SB01M	SB49M	SB50M	SB51M	SB52M	SB53M	SB54M
6/20/11 12:00	0.659	8.990	15.803	3.449	3.211	15.873	0.579	1.296	19.983	18.387	0.506	3.327	24.000	16.841
6/20/11 16:00	0.736	8.953	15.803	3.435	3.201	15.873	0.589	1.275	19.899	18.331	0.509	3.327	23.951	16.746
6/20/11 20:00	0.855	8.917	15.803	3.428	3.192	15.873	0.596	1.291	19.813	18.277	0.516	3.322	23.906	16.662
6/21/11 0:00	0.953	8.884	15.803	3.418	3.201	15.873	0.605	1.314	19.743	18.239	0.523	3.320	23.869	16.592
6/21/11 4:00	1.007	8.854	15.801	3.420	3.225	15.873	0.614	1.342	19.687	18.214	0.527	3.322	23.827	16.533
6/21/11 8:00	1.072	8.814	15.801	3.394	3.141	15.875	0.621	1.296	19.593	18.153	0.530	3.311	23.783	16.435
6/21/11 12:00	0.965	8.783	15.803	3.396	3.201	15.875	0.631	1.296	19.516	18.108	0.537	3.311	23.737	16.359
6/21/11 16:00	0.913	8.748	15.803	3.382	3.194	15.875	0.640	1.273	19.437	18.059	0.539	3.308	23.690	16.277
6/21/11 20:00	0.969	8.713	15.803	3.377	3.211	15.873	0.650	1.312	19.374	18.024	0.544	3.311	23.648	16.212
6/22/11 0:00	1.049	8.683	15.803	3.367	3.208	15.875	0.659	1.321	19.301	17.982	0.548	3.313	23.604	16.137
6/22/11 4:00	1.102	8.650	15.803	3.365	3.215	15.873	0.666	1.324	19.231	17.942	0.551	3.315	23.560	16.065
6/22/11 8:00	1.142	8.621	15.803	3.370	3.241	15.873	0.678	1.347	19.175	17.911	0.558	3.322	23.513	16.004
6/22/11 12:00	1.179	8.589	15.803	3.360	3.251	15.873	0.687	1.331	19.100	17.871	0.562	3.325	23.472	15.932
6/22/11 16:00	1.210	8.558	15.803	3.348	3.255	15.873	0.696	1.331	19.026	17.825	0.565	3.332	23.425	15.855
6/22/11 20:00	1.261	8.530	15.803	3.343	3.267	15.873	0.703	1.377	18.960	17.789	0.569	3.341	23.383	15.792
6/23/11 0:00	1.308	8.495	15.803	3.341	3.272	15.873	0.713	1.386	18.890	17.750	0.574	3.346	23.339	15.715
6/23/11 4:00	1.333	8.459	15.803	3.334	3.272	15.873	0.722	1.386	18.820	17.705	0.579	3.351	23.295	15.645
6/23/11 8:00	1.361	8.429	15.803	3.339	3.286	15.873	0.731	1.403	18.757	17.672	0.581	3.360	23.248	15.584
6/23/11 12:00	1.392	8.398	15.803	3.329	3.300	15.875	0.738	1.410	18.692	17.635	0.588	3.369	23.207	15.514
6/23/11 16:00	1.419	8.361	15.803	3.324	3.309	15.873	0.748	1.407	18.619	17.595	0.590	3.376	23.165	15.447
6/23/11 20:00	1.445	8.326	15.803	3.317	3.314	15.875	0.755	1.433	18.549	17.553	0.595	3.383	23.118	15.377
6/24/11 0:00	1.473	8.293	15.803	3.319	3.325	15.873	0.764	1.457	18.484	17.515	0.600	3.393	23.076	15.312
6/24/11 4:00	1.501	8.260	15.803	3.310	3.325	15.875	0.774	1.454	18.416	17.473	0.604	3.398	23.032	15.244
6/24/11 8:00	1.531	8.229	15.803	3.310	3.346	15.873	0.781	1.482	18.360	17.445	0.609	3.409	22.990	15.186
6/24/11 12:00	1.564	8.194	15.803	3.300	3.358	15.875	0.790	1.470	18.290	17.405	0.612	3.419	22.946	15.120
6/24/11 16:00	1.564	8.171	15.803	3.290	3.349	15.873	0.797	1.449	18.203	17.353	0.619	3.423	22.904	15.036
6/24/11 20:00	1.578	8.142	15.803	3.288	3.342	15.875	0.804	1.487	18.126	17.304	0.621	3.428	22.855	14.962
6/25/11 0:00	1.608	8.112	15.803	3.290	3.360	15.873	0.811	1.522	18.070	17.274	0.626	3.435	22.816	14.901
6/25/11 4:00	1.627	8.070	15.803	3.283	3.358	15.873	0.820	1.522	17.998	17.232	0.630	3.442	22.772	14.836
6/25/11 8:00	1.636	8.025	15.803	3.271	3.363	15.873	0.827	1.526	17.932	17.192	0.635	3.444	22.732	14.771
6/25/11 12:00	1.650	7.995	15.803	3.278	3.381	15.873	0.837	1.538	17.872	17.164	0.640	3.451	22.686	14.712
6/25/11 16:00	1.648	7.936	15.803	3.261	3.360	15.873	0.844	1.524	17.785	17.105	0.642	3.451	22.641	14.626
6/25/11 20:00	1.648	7.882	15.803	3.254	3.337	15.873	0.851	1.501	17.706	17.051	0.647	3.452	22.595	14.549
6/26/11 0:00	1.676	7.842	15.803	3.247	3.342	15.873	0.858	1.522	17.643	17.014	0.651	3.451	22.553	14.491
6/26/11 4:00	1.685	7.804	15.803	3.247	3.293	15.873	0.858	1.543	17.575	16.976	0.656	3.447	22.507	14.428
6/26/11 8:00	1.657	7.772	15.803	3.249	3.274	15.873	0.851	1.533	17.519	16.950	0.658	3.444	22.465	14.379
6/26/11 12:00	1.599	7.727	15.803	3.242	3.374	15.875	0.827	1.708	17.451	16.906	0.663	3.454	22.418	14.307
6/26/11 16:00	1.529	7.675	15.803	3.230	3.335	15.875	0.830	1.501	17.370	16.854	0.665	3.452	22.372	14.230
6/26/11 20:00	1.454	7.631	15.803	3.218	3.314	15.873	0.834	1.501	17.290	16.805	0.668	3.444	22.328	14.153
6/27/11 0:00	1.420	7.593	15.803	3.216	3.321	15.875	0.841	1.515	17.227	16.765	0.672	3.442	22.283	14.097
6/27/11 4:00	1.245	7.647	15.803	3.247	3.108	15.873	0.666	1.494	17.248	16.749	0.682	3.430	22.239	14.057
6/27/11 8:00	0.888	7.640	15.803	3.266	3.005	15.873	0.612	1.484	17.190	16.721	0.682	3.405	22.202	14.036
6/27/11 12:00	0.736	7.504	15.803	0.421	3.367	15.873	0.540	1.843	17.059	16.655	0.315	3.400	22.148	13.936
6/27/11 16:00	0.636	7.464	15.803	0.443	3.328	15.875	0.540	1.477	16.996	16.627	0.352	3.407	22.111	13.878
6/27/11 20:00	0.610	7.424	15.803	0.440	3.342	15.873	0.549	1.515	16.933	16.599	0.397	3.414	22.067	13.822
6/28/11 0:00	0.603	7.391	15.803	0.455	3.365	15.875	0.561	1.536	16.877	16.573	0.418	3.426	22.023	13.773



TABLE S1.1 (Cont.)

Date and Time	Depth to Groundwater (ft BGL)													
	SB01S	SB49S	SB50S	SB51S	SB52S	SB53S	SB54S	SB01M	SB49M	SB50M	SB51M	SB52M	SB53M	SB54M
6/28/11 4:00	0.603	7.351	15.803	0.469	3.379	15.873	0.575	1.529	16.818	16.538	0.420	3.437	21.979	13.717
6/28/11 8:00	0.608	7.321	15.803	0.486	3.407	15.875	0.589	1.545	16.767	16.517	0.429	3.449	21.941	13.672
6/28/11 12:00	0.629	7.278	15.803	0.496	3.426	15.873	0.598	1.524	16.706	16.481	0.439	3.466	21.893	13.621
6/28/11 16:00	0.697	7.236	15.803	0.522	3.435	15.873	0.610	1.510	16.641	16.444	0.446	3.477	21.853	13.558
6/28/11 20:00	0.769	7.189	15.803	0.525	3.417	15.873	0.619	1.515	16.564	16.392	0.453	3.487	21.802	13.488
6/29/11 0:00	0.830	7.152	15.803	0.530	3.419	15.873	0.628	1.524	16.503	16.355	0.467	3.494	21.758	13.428
6/29/11 4:00	0.879	7.121	15.803	0.539	3.438	15.873	0.643	1.538	16.452	16.329	0.497	3.503	21.716	13.383
6/29/11 8:00	0.909	7.084	15.803	0.544	3.445	15.875	0.654	1.533	16.389	16.296	0.352	3.510	21.676	13.332
6/29/11 12:00	0.932	7.044	15.803	0.554	3.438	15.875	0.666	1.494	16.314	16.249	0.485	3.517	21.632	13.264
6/29/11 16:00	0.960	6.992	15.803	0.556	3.426	15.873	0.673	1.459	16.235	16.202	0.504	3.520	21.586	13.192
6/29/11 20:00	1.016	6.945	15.803	0.561	3.407	15.875	0.680	1.477	16.162	16.156	0.509	3.520	21.541	13.124
6/30/11 0:00	1.086	6.912	15.803	0.566	3.407	15.873	0.692	1.494	16.101	16.116	0.516	3.517	21.497	13.073
6/30/11 4:00	1.128	6.877	15.803	0.571	3.403	15.873	0.701	1.487	16.041	16.078	0.523	3.515	21.455	13.012
6/30/11 8:00	1.177	6.849	15.803	0.571	3.415	15.873	0.710	1.496	15.984	16.050	0.527	3.515	21.411	12.968
6/30/11 12:00	1.191	6.807	15.803	0.578	3.424	15.875	0.720	1.463	15.917	16.010	0.530	3.517	21.369	12.908
6/30/11 16:00	1.217	6.764	15.803	0.585	3.407	15.873	0.727	1.438	15.840	15.961	0.532	3.515	21.320	12.838
6/30/11 20:00	1.252	6.724	15.803	0.587	3.391	15.873	0.734	1.470	15.774	15.916	0.537	3.510	21.279	12.772
7/1/11 0:00	1.303	6.699	15.803	0.592	3.396	15.873	0.741	1.494	15.718	15.886	0.544	3.508	21.237	12.726
7/1/11 4:00	1.331	6.668	15.803	0.597	3.396	15.875	0.748	1.496	15.662	15.851	0.548	3.508	21.197	12.677
7/1/11 8:00	1.371	6.642	15.803	0.607	3.412	15.875	0.755	1.512	15.613	15.827	0.553	3.508	21.153	12.632
7/1/11 12:00	1.399	6.607	15.803	0.612	3.422	15.873	0.760	1.487	15.552	15.790	0.558	3.510	21.109	12.579
7/1/11 16:00	1.434	6.574	15.803	0.614	3.424	15.875	0.769	1.487	15.489	15.752	0.562	3.515	21.060	12.523
7/1/11 20:00	1.429	6.541	15.803	0.616	3.422	15.873	0.771	1.524	15.429	15.712	0.565	3.515	21.021	12.469
7/2/11 0:00	1.441	6.513	15.803	0.624	3.419	15.875	0.778	1.543	15.370	15.677	0.569	3.520	20.979	12.413
7/2/11 4:00	1.473	6.485	15.803	0.633	3.424	15.875	0.785	1.545	15.314	15.644	0.577	3.522	20.934	12.364
7/2/11 8:00	1.508	6.459	15.803	0.638	3.501	15.872	0.792	1.554	15.263	15.619	0.579	3.527	20.893	12.327
7/2/11 12:00	1.527	6.431	15.803	0.640	3.447	15.875	0.799	1.526	15.204	15.583	0.584	3.527	20.851	12.271
7/2/11 16:00	1.545	6.393	15.803	0.645	3.445	15.875	0.806	1.512	15.139	15.539	0.588	3.529	20.804	12.210
7/2/11 20:00	1.555	6.363	15.801	0.650	3.433	15.872	0.811	1.550	15.076	15.497	0.593	3.529	20.758	12.152
7/3/11 0:00	1.569	6.339	15.791	0.655	3.440	15.872	0.818	1.577	15.025	15.469	0.598	3.534	20.714	12.108
7/3/11 4:00	1.580	6.309	15.782	0.662	3.438	15.872	0.823	1.575	14.966	15.431	0.602	3.536	20.672	12.052
7/3/11 8:00	1.590	6.278	15.773	0.667	3.436	15.875	0.830	1.563	14.908	15.394	0.609	3.538	20.630	12.003
7/3/11 12:00	1.611	6.252	15.763	0.669	3.517	15.875	0.837	1.543	14.852	15.361	0.612	3.538	20.593	11.952
7/3/11 16:00	1.618	6.224	15.754	0.674	3.422	15.875	0.841	1.545	14.800	15.330	0.616	3.538	20.560	11.900
7/3/11 20:00	1.615	6.194	15.740	0.679	3.144	15.875	0.816	1.540	14.751	15.281	0.626	3.494	20.521	11.844
7/4/11 0:00	1.501	6.161	15.731	0.681	3.296	15.872	0.764	1.519	14.681	15.246	0.626	3.482	20.476	11.791
7/4/11 4:00	1.431	6.137	15.721	0.686	3.398	15.872	0.774	1.540	14.616	15.211	0.630	3.487	20.416	11.744
7/4/11 8:00	1.354	6.109	15.712	0.693	3.380	15.872	0.650	1.566	14.564	15.180	0.630	3.489	20.362	11.700
7/4/11 12:00	1.228	6.086	15.702	0.693	3.417	15.872	0.565	1.536	14.520	15.150	0.640	3.501	20.304	11.662
7/4/11 16:00	1.112	6.051	15.693	0.698	3.408	15.872	0.570	1.498	14.452	15.108	0.642	3.501	20.234	11.599
7/4/11 20:00	1.072	6.020	15.681	0.701	3.391	15.872	0.577	1.496	14.387	15.065	0.647	3.498	20.172	11.539
7/5/11 0:00	1.056	6.001	15.672	0.703	3.405	15.872	0.589	1.514	14.338	15.042	0.649	3.501	20.121	11.502
7/5/11 4:00	1.021	5.975	15.660	0.708	3.401	15.872	0.596	1.501	14.282	15.009	0.654	3.501	20.062	11.455
7/5/11 8:00	0.986	5.954	15.651	0.715	3.408	15.872	0.605	1.494	14.230	14.976	0.658	3.503	20.002	11.411
7/5/11 12:00	0.956	5.933	15.641	0.720	3.419	15.872	0.614	1.468	14.177	14.946	0.663	3.508	19.944	11.364
7/5/11 16:00	0.974	5.900	15.632	0.722	3.412	15.837	0.619	1.440	14.111	14.904	0.663	3.510	19.876	11.303

TABLE S1.1 (Cont.)

Date and Time	Depth to Groundwater (ft BGL)													
	SB01S	SB49S	SB50S	SB51S	SB52S	SB53S	SB54S	SB01M	SB49M	SB50M	SB51M	SB52M	SB53M	SB54M
7/5/11 20:00	1.039	5.874	15.620	0.722	3.401	15.818	0.626	1.463	14.053	14.864	0.668	3.508	19.811	11.245
7/6/11 0:00	1.107	5.856	15.611	0.735	3.412	15.809	0.633	1.489	14.006	14.838	0.675	3.510	19.760	11.212
7/6/11 4:00	1.128	5.825	15.597	0.735	3.422	15.790	0.642	1.466	13.948	14.798	0.677	3.510	19.695	11.159
7/6/11 8:00	1.154	5.811	15.588	0.747	3.415	15.778	0.652	1.477	13.903	14.775	0.682	3.513	19.646	11.121
7/6/11 12:00	1.175	5.788	15.578	0.761	3.424	15.757	0.659	1.452	13.852	14.744	0.686	3.515	19.588	11.079
7/6/11 16:00	1.200	5.757	15.562	0.771	3.410	15.750	0.664	1.431	13.787	14.700	0.689	3.515	19.518	11.019
7/6/11 20:00	1.242	5.731	15.550	0.790	3.403	15.728	0.668	1.456	13.731	14.660	0.693	3.513	19.458	10.968
7/7/11 0:00	1.270	5.717	15.536	0.809	3.403	15.705	0.675	1.473	13.684	14.632	0.700	3.513	19.402	10.928
7/7/11 4:00	1.303	5.712	15.522	0.819	3.389	15.688	0.685	1.447	13.621	14.587	0.712	3.510	19.335	10.872
7/7/11 8:00	1.331	5.705	15.510	0.836	3.396	15.679	0.692	1.452	13.574	14.561	0.731	3.508	19.283	10.832
7/7/11 12:00	1.354	5.705	15.498	0.850	3.380	15.662	0.699	1.428	13.516	14.521	0.747	3.503	19.216	10.779
7/7/11 16:00	1.345	5.677	15.484	0.860	3.338	15.641	0.706	1.421	13.455	14.479	0.763	3.496	19.153	10.720
7/7/11 20:00	1.219	5.663	15.470	0.874	3.307	15.620	0.582	1.424	13.413	14.437	0.780	3.477	19.086	10.676
7/8/11 0:00	0.960	5.635	15.461	0.889	3.321	15.605	0.591	1.398	13.357	14.400	0.796	3.470	19.030	10.625
7/8/11 4:00	0.771	5.619	15.449	0.906	3.326	15.589	0.600	1.393	13.303	14.372	0.812	3.461	18.979	10.585
7/8/11 8:00	0.659	5.616	15.440	0.923	3.345	15.572	0.610	1.412	13.256	14.348	0.829	3.459	18.925	10.553
7/8/11 12:00	0.613	5.602	15.430	0.944	3.361	15.558	0.621	1.396	13.198	14.318	0.845	3.456	18.862	10.511
7/8/11 16:00	0.659	5.583	15.416	0.959	3.350	15.537	0.628	1.368	13.142	14.283	0.857	3.459	18.802	10.459
7/8/11 20:00	0.783	5.569	15.405	0.973	3.352	15.530	0.635	1.396	13.093	14.250	0.871	3.454	18.746	10.415
7/9/11 0:00	0.862	5.558	15.395	0.990	3.359	15.504	0.642	1.412	13.049	14.224	0.887	3.456	18.695	10.380
7/9/11 4:00	0.907	5.539	15.384	1.004	3.364	15.487	0.652	1.414	13.004	14.193	0.903	3.456	18.644	10.338
7/9/11 8:00	0.932	5.527	15.374	1.026	3.375	15.476	0.661	1.417	12.957	14.167	0.920	3.463	18.593	10.305
7/9/11 12:00	0.958	5.508	15.362	1.041	3.387	15.454	0.671	1.398	12.908	14.142	0.934	3.468	18.539	10.263
7/9/11 16:00	0.995	5.480	15.348	1.048	3.371	15.440	0.678	1.365	12.845	14.095	0.943	3.468	18.474	10.210
7/9/11 20:00	1.084	5.464	15.337	1.062	3.368	15.421	0.682	1.400	12.794	14.060	0.960	3.470	18.416	10.163
7/10/11 0:00	1.158	5.454	15.323	1.077	3.373	15.416	0.692	1.419	12.750	14.034	0.976	3.470	18.367	10.126
7/10/11 4:00	1.198	5.440	15.311	1.091	3.373	15.383	0.701	1.414	12.700	14.001	0.990	3.473	18.309	10.084
7/10/11 8:00	1.217	5.438	15.302	1.106	3.366	15.369	0.708	1.400	12.647	13.966	1.004	3.470	18.253	10.037
7/10/11 12:00	1.226	5.412	15.290	1.118	3.368	15.357	0.715	1.375	12.598	13.935	1.020	3.470	18.200	9.995
7/10/11 16:00	1.254	5.393	15.276	1.127	3.364	15.334	0.720	1.358	12.539	13.898	1.032	3.468	18.137	9.944
7/10/11 20:00	1.298	5.384	15.262	1.135	3.352	15.305	0.727	1.389	12.486	13.858	1.044	3.466	18.079	9.897
7/11/11 0:00	1.336	5.370	15.250	1.156	3.354	15.289	0.734	1.410	12.444	13.830	1.060	3.463	18.028	9.862
7/11/11 4:00	1.364	5.351	15.236	1.171	3.354	15.277	0.738	1.412	12.397	13.799	1.074	3.463	17.974	9.820
7/11/11 8:00	1.394	5.346	15.227	1.192	3.389	15.268	0.748	1.447	12.369	13.793	1.090	3.468	17.939	9.804
7/11/11 12:00	1.438	5.332	15.217	1.209	3.408	15.249	0.753	1.431	12.329	13.767	1.104	3.477	17.890	9.764
7/11/11 16:00	1.452	5.302	15.203	1.217	3.399	15.232	0.757	1.412	12.273	13.727	1.118	3.482	17.828	9.718
7/11/11 20:00	1.464	5.304	15.189	1.231	3.403	15.220	0.762	1.456	12.224	13.694	1.130	3.484	17.776	9.676
7/12/11 0:00	1.492	5.283	15.177	1.248	3.415	15.204	0.767	1.486	12.187	13.671	1.146	3.491	17.730	9.643
7/12/11 4:00	1.525	5.262	15.163	1.258	3.413	15.187	0.776	1.482	12.140	13.640	1.160	3.498	17.676	9.606
7/12/11 8:00	1.553	5.262	15.154	1.274	3.424	15.171	0.778	1.491	12.100	13.617	1.174	3.503	17.630	9.571
7/12/11 12:00	1.578	5.245	15.142	1.291	3.436	15.154	0.785	1.461	12.053	13.589	1.188	3.513	17.577	9.536
7/12/11 16:00	1.578	5.227	15.126	1.296	3.422	15.138	0.790	1.440	11.997	13.549	1.200	3.515	17.514	9.480
7/12/11 20:00	1.588	5.205	15.112	1.315	3.420	15.121	0.797	1.503	11.953	13.518	1.216	3.517	17.465	9.445
7/13/11 0:00	1.613	5.198	15.102	1.337	3.492	15.109	0.806	1.543	11.927	13.509	1.233	3.527	17.430	9.429
7/13/11 4:00	1.608	5.173	15.086	1.344	3.354	15.088	0.813	1.584	11.874	13.469	1.240	3.522	17.372	9.382
7/13/11 8:00	1.632	5.158	15.077	1.361	3.457	15.076	0.818	1.545	11.834	13.448	1.259	3.529	17.328	9.349

TABLE S1.1 (Cont.)

Date and Time	Depth to Groundwater (ft BGL)													
	SB01S	SB49S	SB50S	SB51S	SB52S	SB53S	SB54S	SB01M	SB49M	SB50M	SB51M	SB52M	SB53M	SB54M
7/13/11 12:00	1.653	5.140	15.067	1.380	3.483	15.057	0.825	1.531	11.797	13.422	1.270	3.538	17.279	9.314
7/13/11 16:00	1.655	5.175	15.051	1.390	3.457	15.038	0.830	1.496	11.738	13.385	1.284	3.543	17.218	9.265
7/13/11 20:00	1.671	5.163	15.037	1.400	3.450	15.024	0.839	1.514	11.689	13.347	1.296	3.545	17.162	9.223
7/14/11 0:00	1.690	5.161	15.027	1.419	3.474	15.017	0.846	1.556	11.661	13.333	1.312	3.552	17.125	9.198
7/14/11 4:00	1.683	5.137	15.013	1.426	3.457	14.998	0.853	1.531	11.605	13.293	1.324	3.555	17.065	9.154
7/14/11 8:00	1.713	5.137	15.004	1.446	3.474	14.989	0.860	1.547	11.570	13.272	1.338	3.559	17.021	9.123
7/14/11 12:00	1.725	5.116	14.992	1.453	3.478	14.975	0.867	1.519	11.519	13.242	1.350	3.562	16.970	9.086
7/14/11 16:00	1.718	5.100	14.978	1.460	3.462	14.960	0.874	1.498	11.467	13.202	1.359	3.564	16.911	9.037
7/14/11 20:00	1.716	5.079	14.964	1.465	3.439	14.949	0.879	1.517	11.411	13.164	1.373	3.559	16.851	8.988
7/15/11 0:00	1.751	5.076	14.955	1.489	3.460	14.937	0.888	1.554	11.381	13.145	1.387	3.559	16.811	8.965
7/15/11 4:00	1.758	5.062	14.943	1.499	3.457	14.925	0.895	1.556	11.339	13.117	1.399	3.559	16.765	8.927
7/15/11 8:00	1.772	5.046	14.934	1.518	3.474	14.916	0.902	1.568	11.304	13.096	1.413	3.562	16.721	8.902
7/15/11 12:00	1.760	5.032	14.924	1.530	3.483	14.904	0.909	1.542	11.257	13.068	1.427	3.566	16.670	8.864
7/15/11 16:00	1.755	5.018	14.912	1.539	3.476	14.890	0.914	1.533	11.208	13.035	1.438	3.566	16.616	8.822
7/15/11 20:00	1.762	5.006	14.898	1.549	3.467	14.880	0.923	1.568	11.161	13.002	1.448	3.566	16.565	8.783
7/16/11 0:00	1.793	5.004	14.889	1.571	3.483	14.868	0.930	1.605	11.131	12.984	1.464	3.571	16.523	8.759
7/16/11 4:00	1.774	4.982	14.877	1.583	3.481	14.857	0.937	1.596	11.086	12.953	1.476	3.576	16.476	8.720
7/16/11 8:00	1.809	4.975	14.870	1.602	3.506	14.849	0.947	1.619	11.058	12.942	1.490	3.581	16.439	8.701
7/16/11 12:00	1.818	4.968	14.863	1.614	3.530	14.835	0.954	1.615	11.023	12.920	1.504	3.592	16.397	8.673
7/16/11 16:00	1.828	4.945	14.854	1.626	3.535	14.823	0.961	1.605	10.979	12.890	1.515	3.602	16.346	8.638
7/16/11 20:00	1.856	4.935	14.842	1.583	3.530	14.812	0.966	1.635	10.935	12.859	1.527	3.609	16.297	8.598
7/17/11 0:00	1.870	4.926	14.833	1.595	3.546	14.802	0.975	1.670	10.904	12.843	1.541	3.618	16.260	8.577
7/17/11 4:00	1.872	4.907	14.821	1.605	3.551	14.790	0.982	1.670	10.865	12.817	1.555	3.625	16.214	8.547
7/17/11 8:00	1.879	4.898	14.814	1.687	3.577	14.781	0.991	1.698	10.839	12.803	1.572	3.637	16.179	8.524
7/17/11 12:00	1.790	4.889	14.805	1.706	3.598	14.769	0.998	1.680	10.804	12.784	1.583	3.649	16.135	8.501
7/17/11 16:00	1.709	4.872	14.795	1.715	3.602	14.755	1.008	1.677	10.759	12.754	1.595	3.663	16.086	8.461
7/17/11 20:00	1.678	4.853	14.781	1.727	3.593	14.743	1.017	1.701	10.715	12.719	1.607	3.667	16.032	8.421
7/18/11 0:00	1.685	4.842	14.772	1.742	3.600	14.734	1.026	1.724	10.680	12.695	1.621	3.677	15.991	8.389
7/18/11 4:00	1.697	4.832	14.760	1.754	3.595	14.720	1.031	1.717	10.638	12.667	1.635	3.681	15.944	8.358
7/18/11 8:00	1.709	4.823	14.751	1.768	3.612	14.710	1.040	1.726	10.605	12.648	1.646	3.686	15.902	8.335
7/18/11 12:00	1.718	4.806	14.744	1.785	3.623	14.696	1.050	1.684	10.568	12.625	1.663	3.696	15.856	8.305
7/18/11 16:00	1.723	4.788	14.730	1.790	3.609	14.679	1.059	1.661	10.521	12.588	1.672	3.698	15.804	8.258
7/18/11 20:00	1.723	4.774	14.716	1.797	3.588	14.668	1.064	1.680	10.470	12.550	1.684	3.698	15.749	8.216
7/19/11 0:00	1.748	4.762	14.704	1.809	3.584	14.656	1.071	1.696	10.430	12.522	1.695	3.696	15.702	8.181
7/19/11 4:00	1.760	4.745	14.692	1.819	3.577	14.642	1.078	1.687	10.390	12.489	1.709	3.693	15.653	8.148
7/19/11 8:00	1.783	4.741	14.685	1.834	3.584	14.630	1.085	1.691	10.355	12.468	1.721	3.691	15.611	8.120
7/19/11 12:00	1.786	4.727	14.676	1.843	3.591	14.618	1.092	1.656	10.316	12.440	1.735	3.691	15.565	8.088
7/19/11 16:00	1.804	4.705	14.664	1.853	3.581	14.604	1.094	1.635	10.269	12.407	1.744	3.689	15.511	8.043
7/19/11 20:00	1.795	4.689	14.648	1.860	3.560	14.592	1.099	1.666	10.222	12.370	1.756	3.686	15.458	8.009
7/20/11 0:00	1.802	4.677	14.638	1.867	3.546	14.580	1.108	1.666	10.180	12.339	1.768	3.677	15.409	7.974
7/20/11 4:00	1.818	4.666	14.626	1.882	3.556	14.568	1.115	1.680	10.147	12.318	1.779	3.674	15.374	7.946
7/20/11 8:00	1.832	4.654	14.617	1.896	3.563	14.559	1.120	1.682	10.115	12.297	1.793	3.672	15.332	7.920
7/20/11 12:00	1.821	4.640	14.610	1.906	3.570	14.545	1.129	1.647	10.075	12.269	1.807	3.672	15.286	7.885
7/20/11 16:00	1.814	4.621	14.598	1.916	3.568	14.533	1.136	1.635	10.035	12.238	1.817	3.670	15.237	7.852
7/20/11 20:00	1.823	4.612	14.584	1.920	3.544	14.521	1.153	1.661	9.991	12.205	1.826	3.665	15.186	7.843
7/21/11 0:00	1.839	4.597	14.575	1.937	3.546	14.512	1.155	1.687	9.961	12.184	1.840	3.658	15.146	7.894

TABLE S1.1 (Cont.)

Date and Time	Depth to Groundwater (ft BGL)													
	SB01S	SB49S	SB50S	SB51S	SB52S	SB53S	SB54S	SB01M	SB49M	SB50M	SB51M	SB52M	SB53M	SB54M
7/21/11 4:00	1.851	4.583	14.563	1.949	3.553	14.497	1.160	1.675	9.921	12.154	1.854	3.658	15.100	7.934
7/21/11 8:00	1.867	4.576	14.556	1.966	3.575	14.488	1.162	1.698	9.895	12.142	1.868	3.660	15.070	7.988
7/21/11 12:00	1.888	4.558	14.547	1.978	3.584	14.476	1.167	1.666	9.860	12.119	1.880	3.665	15.023	8.009
7/21/11 16:00	1.877	4.544	14.540	1.985	3.586	14.464	1.169	1.652	9.820	12.088	1.891	3.670	14.976	8.020
7/21/11 20:00	1.886	4.532	14.526	2.000	3.558	14.453	1.172	1.684	9.781	12.058	1.901	3.667	14.932	8.167
7/22/11 0:00	1.895	4.520	14.516	2.012	3.544	14.441	1.174	1.710	9.750	12.039	1.915	3.663	14.895	8.335
7/22/11 4:00	1.912	4.508	14.507	2.029	3.560	14.427	1.176	1.713	9.718	12.016	1.927	3.663	14.853	8.433
7/22/11 8:00	1.914	4.497	14.498	2.043	3.577	14.419	1.181	1.719	9.690	11.999	1.941	3.665	14.816	8.424
7/22/11 12:00	1.937	4.492	14.490	2.058	3.596	14.405	1.186	1.701	9.659	11.980	1.957	3.670	14.777	8.393
7/22/11 16:00	1.914	4.473	14.479	2.062	3.586	14.391	1.186	1.675	9.615	11.948	1.966	3.674	14.728	8.398
7/22/11 20:00	1.933	4.461	14.467	2.079	3.507	14.382	1.188	1.708	9.580	11.922	1.978	3.672	14.686	8.501
7/23/11 0:00	1.949	4.450	14.458	2.091	3.558	14.370	1.209	1.726	9.552	11.901	1.992	3.658	14.649	8.468
7/23/11 4:00	1.951	4.438	14.448	2.106	3.612	14.356	1.204	1.731	9.519	11.880	2.004	3.670	14.607	8.433
7/23/11 8:00	1.949	4.436	14.441	2.123	3.635	14.346	1.211	1.752	9.498	11.868	2.018	3.681	14.574	8.412
7/23/11 12:00	1.944	4.419	14.434	2.140	3.652	14.334	1.211	1.726	9.465	11.849	2.032	3.696	14.537	8.379
7/23/11 16:00	1.930	4.407	14.423	2.149	3.649	14.320	1.207	1.712	9.426	11.816	2.046	3.705	14.490	8.333
7/23/11 20:00	1.921	4.396	14.411	2.161	3.572	14.308	1.221	1.733	9.393	11.793	2.057	3.710	14.449	8.298
7/24/11 0:00	1.933	4.389	14.401	2.178	3.652	14.299	1.230	1.782	9.370	11.781	2.071	3.710	14.419	8.274
7/24/11 4:00	1.949	4.375	14.392	2.190	3.682	14.287	1.235	1.780	9.335	11.755	2.085	3.724	14.372	8.237
7/24/11 8:00	1.975	4.370	14.385	2.210	3.701	14.275	1.218	1.799	9.311	11.741	2.099	3.738	14.339	8.214
7/24/11 12:00	1.996	4.358	14.378	2.224	3.740	14.261	1.225	1.808	9.288	11.727	2.113	3.757	14.309	8.186
7/24/11 16:00	2.000	4.344	14.366	2.238	3.759	14.249	1.225	1.815	9.251	11.701	2.127	3.778	14.267	8.148
7/24/11 20:00	1.984	4.325	14.355	2.246	3.750	14.235	1.223	1.808	9.211	11.669	2.139	3.792	14.221	8.109
7/25/11 0:00	2.000	4.323	14.348	2.265	3.778	14.226	1.239	1.845	9.190	11.657	2.155	3.808	14.188	8.088
7/25/11 4:00	2.000	4.306	14.336	2.272	3.769	14.212	1.232	1.829	9.153	11.626	2.165	3.820	14.146	8.048
7/25/11 8:00	2.007	4.292	14.326	2.289	3.773	14.200	1.244	1.831	9.122	11.605	2.179	3.829	14.109	8.016
7/25/11 12:00	2.010	4.288	14.319	2.299	3.780	14.186	1.244	1.803	9.089	11.584	2.190	3.839	14.070	7.983
7/25/11 16:00	1.998	4.271	14.305	2.306	3.771	14.174	1.242	1.775	9.050	11.554	2.202	3.846	14.023	7.941
7/25/11 20:00	1.982	4.264	14.294	2.311	3.750	14.160	1.253	1.796	9.008	11.521	2.214	3.848	13.974	7.897
7/26/11 0:00	1.986	4.255	14.282	2.328	3.759	14.148	1.260	1.817	8.977	11.500	2.225	3.850	13.939	7.995
7/26/11 4:00	2.005	4.234	14.273	2.340	3.752	14.136	1.251	1.808	8.945	11.474	2.237	3.850	13.900	7.962
7/26/11 8:00	2.010	4.224	14.263	2.354	3.757	14.124	1.260	1.810	8.917	11.453	2.251	3.850	13.863	7.936
7/26/11 12:00	2.005	4.213	14.256	2.364	3.766	14.112	1.258	1.780	8.886	11.434	2.263	3.853	13.825	7.906
7/26/11 16:00	1.991	4.203	14.247	2.369	3.755	14.096	1.251	1.752	8.844	11.401	2.275	3.855	13.779	7.864
7/26/11 20:00	1.991	4.189	14.235	2.383	3.755	14.084	1.270	1.792	8.809	11.375	2.286	3.853	13.739	7.827
7/27/11 0:00	1.996	4.184	14.226	2.395	3.759	14.072	1.277	1.810	8.783	11.357	2.300	3.855	13.704	7.806
7/27/11 4:00	1.996	4.173	14.216	2.414	3.776	14.060	1.277	1.822	8.760	11.343	2.314	3.860	13.674	7.794
7/27/11 8:00	2.003	4.168	14.209	2.426	3.780	14.049	1.272	1.822	8.732	11.324	2.326	3.860	13.637	7.796
7/27/11 12:00	2.026	4.159	14.197	2.436	3.794	14.037	1.263	1.796	8.702	11.300	2.340	3.867	13.597	7.768
7/27/11 16:00	2.012	4.145	14.190	2.443	3.787	14.023	1.268	1.775	8.667	11.272	2.352	3.872	13.553	7.729
7/27/11 20:00	2.005	4.130	14.181	2.460	3.797	14.011	1.277	1.815	8.634	11.251	2.363	3.874	13.518	7.745
7/28/11 0:00	2.091	4.128	14.172	2.479	3.813	14.001	1.286	1.845	8.615	11.242	2.377	3.881	13.493	7.724
7/28/11 4:00	2.054	4.112	14.162	2.489	3.818	13.989	1.279	1.843	8.587	11.218	2.389	3.890	13.453	7.724
7/28/11 8:00	2.052	4.112	14.155	2.508	3.848	13.978	1.310	1.873	8.573	11.214	2.405	3.900	13.428	7.719
7/28/11 12:00	2.045	4.100	14.148	2.525	3.869	13.964	1.298	1.859	8.545	11.195	2.419	3.914	13.393	7.703
7/28/11 16:00	2.073	4.083	14.137	2.537	3.872	13.952	1.317	1.831	8.510	11.167	2.431	3.925	13.353	7.680



TABLE S1.1 (Cont.)

Date and Time	Depth to Groundwater (ft BGL)													
	SB01S	SB49S	SB50S	SB51S	SB52S	SB53S	SB54S	SB01M	SB49M	SB50M	SB51M	SB52M	SB53M	SB54M
7/28/11 20:00	2.035	4.079	14.127	2.552	3.881	13.942	1.312	1.873	8.484	11.148	2.443	3.935	13.318	7.661
7/29/11 0:00	2.038	4.072	14.120	2.566	3.902	13.930	1.314	1.903	8.463	11.136	2.457	3.951	13.291	7.638
7/29/11 4:00	2.082	4.069	14.111	2.581	3.914	13.919	1.328	1.908	8.440	11.120	2.473	3.963	13.258	7.647
7/29/11 8:00	2.082	4.062	14.101	2.598	3.939	13.907	1.331	1.931	8.421	11.108	2.485	3.979	13.230	7.635
7/29/11 12:00	2.094	4.053	14.097	2.614	3.963	13.897	1.335	1.915	8.398	11.094	2.501	3.996	13.198	7.638
7/29/11 16:00	2.087	4.037	14.085	2.629	3.960	13.883	1.321	1.903	8.365	11.068	2.513	4.010	13.158	7.598
7/29/11 20:00	2.084	4.025	14.073	2.641	3.970	13.871	1.349	1.938	8.337	11.045	2.527	4.022	13.125	7.570
7/30/11 0:00	2.094	4.020	14.066	2.663	3.995	13.862	1.338	1.973	8.323	11.040	2.541	4.038	13.100	7.568
7/30/11 4:00	2.087	4.020	14.057	2.670	3.993	13.848	1.385	1.957	8.293	11.014	2.555	4.050	13.060	7.531
7/30/11 8:00	2.073	4.011	14.047	2.687	4.012	13.838	1.378	1.973	8.272	11.000	2.569	4.064	13.032	7.538
7/30/11 12:00	2.112	4.008	14.045	2.708	4.038	13.831	1.401	2.022	8.258	10.998	2.583	4.078	13.011	7.521
7/30/11 16:00	2.131	3.992	14.031	2.716	4.028	13.812	1.385	1.966	8.223	10.968	2.597	4.090	12.965	7.482
7/30/11 20:00	2.126	3.985	14.017	2.723	4.031	13.803	1.363	1.964	8.190	10.942	2.609	4.097	12.928	7.482
7/31/11 0:00	2.105	3.978	14.010	2.742	4.045	13.791	1.361	1.985	8.169	10.925	2.623	4.106	12.898	7.463
7/31/11 4:00	2.117	3.966	14.001	2.759	4.052	13.779	1.382	1.989	8.146	10.909	2.637	4.116	12.865	7.447
7/31/11 8:00	2.126	3.968	13.991	2.776	4.070	13.767	1.401	2.010	8.127	10.897	2.651	4.127	12.839	7.444
7/31/11 12:00	2.166	3.964	13.984	2.788	4.082	13.756	1.396	1.992	8.101	10.881	2.662	4.139	12.805	7.414
7/31/11 16:00	2.157	3.943	13.972	2.795	4.077	13.741	1.392	1.959	8.066	10.853	2.672	4.146	12.765	7.379
7/31/11 20:00	2.150	3.931	13.958	2.800	4.073	13.730	1.406	1.997	8.036	10.827	2.686	4.151	12.728	7.353
8/1/11 0:00	2.157	3.889	13.949	2.819	4.084	13.718	1.417	2.022	8.017	10.813	2.700	4.158	12.698	7.461
8/1/11 4:00	2.154	3.900	13.937	2.834	4.084	13.706	1.406	2.015	7.989	10.792	2.711	4.165	12.665	7.423
8/1/11 8:00	2.159	3.900	13.928	2.848	4.096	13.694	1.413	2.015	7.966	10.775	2.725	4.169	12.635	7.400
8/1/11 12:00	2.159	3.957	13.921	2.858	4.098	13.682	1.431	1.987	7.938	10.757	2.737	4.177	12.600	7.379
8/1/11 16:00	2.138	3.954	13.907	2.860	4.084	13.668	1.401	1.948	7.900	10.726	2.746	4.177	12.556	7.337
8/1/11 20:00	2.133	3.915	13.895	2.870	4.075	13.656	1.448	1.985	7.868	10.700	2.760	4.177	12.518	7.302
8/2/11 0:00	2.136	3.854	13.886	2.884	4.082	13.642	1.464	1.999	7.844	10.682	2.772	4.177	12.491	7.288
8/2/11 4:00	2.175	3.875	13.874	2.889	4.070	13.630	1.455	1.978	7.814	10.656	2.784	4.174	12.449	7.265
8/2/11 8:00	2.147	3.884	13.862	2.896	4.066	13.614	1.459	1.969	7.788	10.635	2.795	4.174	12.416	7.248
8/2/11 12:00	2.147	3.919	13.851	2.906	4.057	13.602	1.466	1.931	7.753	10.609	2.807	4.169	12.377	7.232
8/2/11 16:00	2.122	3.908	13.839	2.911	4.038	13.590	1.438	1.885	7.718	10.581	2.816	4.162	12.335	7.220
8/2/11 20:00	2.103	3.870	13.825	2.921	4.033	13.578	1.466	1.917	7.688	10.555	2.828	4.155	12.300	7.211
8/3/11 0:00	2.098	3.802	13.815	2.935	4.038	13.569	1.434	1.936	7.665	10.536	2.840	4.151	12.270	7.199
8/3/11 4:00	2.098	3.785	13.806	2.949	4.049	13.557	1.450	1.948	7.644	10.522	2.854	4.148	12.239	7.174
8/3/11 8:00	2.108	3.760	13.799	2.959	4.068	13.550	1.492	1.962	7.630	10.510	2.865	4.151	12.218	7.157
8/3/11 12:00	2.119	3.800	13.792	2.981	4.094	13.538	1.464	1.957	7.611	10.501	2.879	4.160	12.191	7.153
8/3/11 16:00	2.138	3.847	13.780	2.995	4.108	13.526	1.408	1.950	7.588	10.480	2.891	4.167	12.160	7.143
8/3/11 20:00	2.150	3.802	13.773	3.005	4.115	13.517	1.410	1.987	7.562	10.461	2.905	4.174	12.125	7.115
8/4/11 0:00	2.147	3.748	13.761	3.022	4.134	13.505	1.417	2.013	7.545	10.449	2.917	4.186	12.102	7.232
8/4/11 4:00	2.133	3.746	13.752	3.034	4.145	13.493	1.427	2.015	7.527	10.435	2.929	4.200	12.072	7.220
8/4/11 8:00	2.171	3.757	13.747	3.056	4.180	13.484	1.415	2.048	7.517	10.435	2.945	4.216	12.056	7.206
8/4/11 12:00	2.180	3.774	13.738	3.075	4.204	13.474	1.415	2.048	7.499	10.424	2.959	4.235	12.030	7.181
8/4/11 16:00	2.166	3.832	13.726	3.075	4.187	13.460	1.410	2.013	7.466	10.393	2.968	4.245	11.988	7.176
8/4/11 20:00	2.164	3.774	13.715	3.084	4.194	13.448	1.410	2.024	7.440	10.374	2.980	4.254	11.956	7.148
8/5/11 0:00	2.168	3.746	13.705	3.104	4.211	13.439	1.417	2.046	7.424	10.360	2.994	4.266	11.930	7.127
8/5/11 4:00	2.182	3.762	13.696	3.113	4.204	13.427	1.436	2.034	7.396	10.337	3.006	4.273	11.898	7.108
8/5/11 8:00	2.192	3.717	13.689	3.133	4.222	13.415	1.450	2.055	7.382	10.330	3.020	4.284	11.874	7.195



TABLE S1.1 (Cont.)

Date and Time	Depth to Groundwater (ft BGL)													
	SB01S	SB49S	SB50S	SB51S	SB52S	SB53S	SB54S	SB01M	SB49M	SB50M	SB51M	SB52M	SB53M	SB54M
8/5/11 12:00	2.199	3.729	13.679	3.147	4.241	13.406	1.448	2.057	7.366	10.316	3.034	4.294	11.851	7.171
8/5/11 16:00	2.196	3.743	13.670	3.154	4.229	13.392	1.455	2.043	7.335	10.292	3.043	4.301	11.814	7.146
8/5/11 20:00	2.194	3.764	13.658	3.154	4.220	13.380	1.450	2.034	7.307	10.269	3.052	4.303	11.779	7.129
8/6/11 0:00	2.201	3.727	13.649	3.169	4.227	13.370	1.445	2.041	7.286	10.253	3.066	4.308	11.751	7.099
8/6/11 4:00	2.215	3.743	13.640	3.178	4.213	13.356	1.462	2.022	7.253	10.227	3.076	4.308	11.716	7.067
8/6/11 8:00	2.222	3.715	13.633	3.190	4.223	13.347	1.462	2.039	7.232	10.215	3.090	4.310	11.688	7.057
8/6/11 12:00	2.227	3.753	13.623	3.203	4.227	13.335	1.459	2.027	7.207	10.199	3.099	4.310	11.660	7.062
8/6/11 16:00	2.234	3.741	13.614	3.215	4.234	13.326	1.478	2.034	7.183	10.180	3.108	4.317	11.632	7.039
8/6/11 20:00	2.245	3.729	13.602	3.222	4.232	13.314	1.485	2.038	7.158	10.159	3.120	4.315	11.600	7.006
8/7/11 0:00	2.252	3.673	13.595	3.239	4.241	13.302	1.488	2.057	7.141	10.147	3.132	4.322	11.577	6.983
8/7/11 4:00	2.264	3.666	13.586	3.251	4.251	13.290	1.492	2.064	7.123	10.133	3.143	4.327	11.549	6.962
8/7/11 8:00	2.273	3.673	13.579	3.258	4.253	13.281	1.502	2.064	7.104	10.121	3.155	4.334	11.523	7.001
8/7/11 12:00	2.283	3.710	13.569	3.272	4.262	13.269	1.527	2.055	7.083	10.102	3.167	4.338	11.495	7.088
8/7/11 16:00	2.278	3.753	13.560	3.282	4.262	13.257	1.504	2.034	7.055	10.084	3.176	4.341	11.465	7.160
8/7/11 20:00	2.259	3.739	13.543	3.284	4.239	13.243	1.509	2.043	7.022	10.053	3.185	4.343	11.426	7.118
8/8/11 0:00	2.269	3.614	13.548	3.306	4.272	13.236	1.532	2.085	7.015	10.051	3.199	4.350	11.412	7.106
8/8/11 4:00	2.271	3.666	13.529	3.311	4.255	13.222	1.506	2.060	6.985	10.025	3.209	4.350	11.377	7.067
8/8/11 8:00	2.283	3.612	13.522	3.321	4.272	13.212	1.532	2.076	6.966	10.016	3.220	4.352	11.353	7.046
8/8/11 12:00	2.313	3.699	13.515	3.330	4.272	13.200	1.525	2.062	6.943	9.999	3.232	4.355	11.323	7.015
8/8/11 16:00	2.313	3.732	13.501	3.340	4.262	13.186	1.548	2.041	6.912	9.974	3.239	4.357	11.291	7.106
8/8/11 20:00	2.315	3.666	13.490	3.352	4.267	13.177	1.555	2.057	6.889	9.955	3.251	4.357	11.263	7.078
8/9/11 0:00	2.315	3.588	13.480	3.366	4.279	13.167	1.565	2.078	6.875	9.945	3.263	4.362	11.239	7.055
8/9/11 4:00	2.322	3.588	13.471	3.378	4.288	13.155	1.548	2.085	6.859	9.931	3.274	4.364	11.214	7.032
8/9/11 8:00	2.335	3.560	13.464	3.393	4.307	13.148	1.574	2.106	6.842	9.924	3.286	4.374	11.195	7.011
8/9/11 12:00	2.343	3.626	13.457	3.410	4.323	13.137	1.532	2.101	6.824	9.915	3.295	4.383	11.170	6.987
8/9/11 16:00	2.345	3.673	13.445	3.412	4.319	13.122	1.518	2.085	6.791	9.891	3.305	4.388	11.137	6.945
8/9/11 20:00	2.352	3.612	13.433	3.422	4.330	13.113	1.525	2.115	6.772	9.877	3.314	4.395	11.114	6.920
8/10/11 0:00	2.364	3.541	13.426	3.444	4.356	13.104	1.546	2.148	6.763	9.873	3.326	4.406	11.095	6.908
8/10/11 4:00	2.369	3.607	13.417	3.456	4.358	13.092	1.541	2.143	6.740	9.854	3.337	4.416	11.070	6.878
8/10/11 8:00	2.385	3.567	13.412	3.480	4.393	13.082	1.567	2.176	6.730	9.859	3.349	4.430	11.056	6.871
8/10/11 12:00	2.406	3.534	13.407	3.499	4.424	13.075	1.572	2.183	6.721	9.859	3.363	4.449	11.044	6.861
8/10/11 16:00	2.404	3.633	13.393	3.497	4.398	13.061	1.546	2.360	6.695	9.833	3.372	4.460	11.005	6.822
8/10/11 20:00	2.413	3.588	13.384	3.504	4.410	13.049	1.562	2.171	6.672	9.816	3.384	4.470	10.981	6.796
8/11/11 0:00	2.432	3.546	13.377	3.526	4.442	13.042	1.572	2.209	6.660	9.812	3.398	4.486	10.963	6.782
8/11/11 4:00	2.460	3.560	13.368	3.540	4.447	13.030	1.572	2.211	6.634	9.795	3.407	4.493	10.937	6.754
8/11/11 8:00	2.474	3.534	13.363	3.554	4.463	13.021	1.579	2.230	6.618	9.791	3.417	4.505	10.921	6.738
8/11/11 12:00	2.495	3.577	13.358	3.566	4.494	13.011	1.583	2.250	6.604	9.786	3.426	4.521	10.902	6.721
8/11/11 16:00	2.495	3.652	13.347	3.574	4.482	12.997	1.558	2.216	6.574	9.763	3.433	4.533	10.867	6.929
8/11/11 20:00	2.502	3.591	13.335	3.586	4.487	12.988	1.569	2.241	6.550	9.744	3.445	4.543	10.842	7.032
8/12/11 0:00	2.516	3.525	13.325	3.603	4.496	12.976	1.598	2.255	6.534	9.732	3.456	4.554	10.821	7.011
8/12/11 4:00	2.523	3.532	13.316	3.610	4.499	12.964	1.605	2.248	6.513	9.716	3.466	4.561	10.795	6.980
8/12/11 8:00	2.546	3.481	13.309	3.624	4.529	12.957	1.640	2.283	6.506	9.720	3.480	4.571	10.784	6.969
8/12/11 12:00	2.546	3.586	13.297	3.632	4.515	12.943	1.609	2.250	6.476	9.702	3.487	4.575	10.753	6.927
8/12/11 16:00	2.532	3.619	13.283	3.634	4.489	12.931	1.485	2.250	6.448	9.673	3.496	4.582	10.719	6.894
8/12/11 20:00	2.504	3.565	13.274	3.651	4.482	12.922	1.434	2.211	6.429	9.659	3.508	4.582	10.695	6.868
8/13/11 0:00	2.483	3.518	13.269	3.663	4.489	12.912	1.434	2.227	6.410	9.648	3.517	4.580	10.677	6.847

TABLE S1.1 (Cont.)

Date and Time	Depth to Groundwater (ft BGL)													
	SB01S	SB49S	SB50S	SB51S	SB52S	SB53S	SB54S	SB01M	SB49M	SB50M	SB51M	SB52M	SB53M	SB54M
8/13/11 4:00	2.469	3.523	13.257	3.673	4.494	12.900	1.427	2.230	6.389	9.631	3.529	4.582	10.649	6.812
8/13/11 8:00	2.467	3.504	13.250	3.682	4.517	12.891	1.438	2.253	6.375	9.624	3.538	4.587	10.633	6.801
8/13/11 12:00	2.469	3.549	13.243	3.697	4.531	12.881	1.455	2.257	6.359	9.617	3.547	4.596	10.609	6.777
8/13/11 16:00	2.462	3.603	13.234	3.706	4.529	12.867	1.436	2.241	6.331	9.601	3.554	4.599	10.584	6.745
8/13/11 20:00	2.462	3.551	13.222	3.716	4.531	12.858	1.448	2.267	6.312	9.582	3.564	4.606	10.560	6.717
8/14/11 0:00	2.478	3.471	13.218	3.728	4.559	12.848	1.471	2.306	6.310	9.582	3.578	4.618	10.546	6.705
8/14/11 4:00	2.483	3.481	13.208	3.742	4.569	12.836	1.485	2.306	6.289	9.570	3.590	4.625	10.526	6.684
8/14/11 8:00	2.497	3.546	13.201	3.759	4.595	12.829	1.485	2.330	6.275	9.568	3.601	4.639	10.512	6.675
8/14/11 12:00	2.506	3.563	13.196	3.774	4.611	12.820	1.480	2.332	6.258	9.561	3.608	4.653	10.491	6.656
8/14/11 16:00	2.511	3.560	13.185	3.779	4.609	12.806	1.483	2.309	6.235	9.542	3.615	4.662	10.463	6.621
8/14/11 20:00	2.523	3.544	13.173	3.783	4.606	12.796	1.485	2.327	6.212	9.523	3.625	4.669	10.437	6.593
8/15/11 0:00	2.537	3.488	13.164	3.795	4.616	12.784	1.492	2.346	6.200	9.512	3.634	4.676	10.419	6.575
8/15/11 4:00	2.548	3.483	13.154	3.808	4.616	12.775	1.494	2.339	6.179	9.498	3.646	4.683	10.393	6.547
8/15/11 8:00	2.565	3.457	13.147	3.829	4.637	12.766	1.513	2.362	6.170	9.495	3.655	4.690	10.381	6.540
8/15/11 12:00	2.572	3.530	13.140	3.836	4.644	12.754	1.513	2.360	6.149	9.484	3.664	4.700	10.358	6.516
8/15/11 16:00	2.574	3.549	13.131	3.841	4.634	12.742	1.497	2.332	6.123	9.462	3.674	4.707	10.330	6.481
8/15/11 20:00	2.579	3.521	13.119	3.844	4.634	12.730	1.509	2.346	6.104	9.446	3.683	4.709	10.307	6.458
8/16/11 0:00	2.588	3.476	13.112	3.858	4.648	12.723	1.525	2.367	6.095	9.437	3.695	4.718	10.291	6.432
8/16/11 4:00	2.602	3.469	13.105	3.875	4.658	12.711	1.530	2.374	6.079	9.427	3.704	4.723	10.274	6.356
8/16/11 8:00	2.621	3.443	13.100	3.889	4.672	12.702	1.546	2.397	6.069	9.427	3.713	4.730	10.261	6.318
8/16/11 12:00	2.632	3.495	13.091	3.897	4.686	12.692	1.546	2.400	6.051	9.416	3.723	4.740	10.240	6.421
8/16/11 16:00	2.625	3.577	13.077	3.894	4.660	12.678	1.530	2.539	6.030	9.392	3.730	4.747	10.207	6.446
8/16/11 20:00	2.637	3.502	13.072	3.913	4.674	12.669	1.537	2.358	6.011	9.383	3.741	4.749	10.184	6.339
8/17/11 0:00	2.651	3.471	13.065	3.928	4.688	12.659	1.544	2.397	5.997	9.376	3.751	4.756	10.165	6.255
8/17/11 4:00	2.660	3.485	13.056	3.933	4.688	12.647	1.551	2.395	5.978	9.359	3.760	4.761	10.144	6.304
8/17/11 8:00	2.677	3.476	13.049	3.945	4.698	12.638	1.565	2.421	5.966	9.354	3.772	4.768	10.128	6.290
8/17/11 12:00	2.691	3.525	13.044	3.955	4.709	12.629	1.569	2.418	5.952	9.345	3.779	4.775	10.107	6.561
8/17/11 16:00	2.702	3.532	13.035	3.964	4.716	12.617	1.560	2.418	5.931	9.333	3.788	4.782	10.084	6.782
8/17/11 20:00	2.707	3.523	13.023	3.979	4.716	12.607	1.567	2.414	5.910	9.317	3.795	4.787	10.058	6.782
8/18/11 0:00	2.719	3.474	13.016	3.988	4.726	12.595	1.593	2.430	5.901	9.310	3.804	4.794	10.042	6.759
8/18/11 4:00	2.726	3.469	13.007	3.998	4.726	12.586	1.581	2.425	5.885	9.296	3.814	4.798	10.023	6.733
8/18/11 8:00	2.740	3.464	13.000	4.005	4.730	12.577	1.590	2.434	5.871	9.287	3.825	4.801	10.005	6.707
8/18/11 12:00	2.747	3.523	12.992	4.017	4.737	12.567	1.607	2.430	5.852	9.277	3.832	4.808	9.981	6.682
8/18/11 16:00	2.733	3.600	12.981	4.012	4.712	12.553	1.637	2.379	5.824	9.254	3.835	4.808	9.953	6.649
8/18/11 20:00	2.723	3.554	12.964	4.012	4.688	12.541	1.588	2.372	5.801	9.228	3.844	4.803	9.926	6.612
8/19/11 0:00	2.730	3.469	12.957	4.022	4.702	12.532	1.612	2.358	5.787	9.221	3.851	4.801	9.910	6.593
8/19/11 4:00	2.740	3.441	12.950	4.034	4.709	12.522	1.605	2.325	5.773	9.211	3.863	4.803	9.888	6.570
8/19/11 8:00	2.723	3.441	12.939	4.039	4.679	12.510	1.609	2.290	5.754	9.193	3.870	4.791	9.863	6.540
8/19/11 12:00	2.730	3.462	12.934	4.056	4.705	12.501	1.644	2.383	5.740	9.188	3.881	4.791	9.849	6.514
8/19/11 16:00	2.721	3.504	12.924	4.056	4.702	12.492	1.633	2.351	5.719	9.174	3.886	4.791	9.826	6.491
8/19/11 20:00	2.719	3.460	12.913	4.065	4.646	12.480	1.651	2.330	5.698	9.160	3.893	4.787	9.805	6.467
8/20/11 0:00	2.730	3.408	12.906	4.077	4.728	12.473	1.644	2.376	5.691	9.153	3.905	4.791	9.788	6.453
8/20/11 4:00	2.733	3.403	12.896	4.092	4.737	12.461	1.623	2.388	5.679	9.146	3.914	4.798	9.772	6.437
8/20/11 8:00	2.756	3.478	12.894	4.118	4.789	12.456	1.658	2.476	5.693	9.158	3.926	4.817	9.768	6.435
8/20/11 12:00	2.740	3.481	12.887	4.116	4.747	12.444	1.616	2.574	5.665	9.139	3.935	4.817	9.740	6.405
8/20/11 16:00	2.735	3.488	12.875	4.126	4.705	12.432	1.649	2.404	5.646	9.127	3.940	4.810	9.721	6.381

TABLE S1.1 (Cont.)

Date and Time	Depth to Groundwater (ft BGL)													
	SB01S	SB49S	SB50S	SB51S	SB52S	SB53S	SB54S	SB01M	SB49M	SB50M	SB51M	SB52M	SB53M	SB54M
8/20/11 20.00	2.723	3.481	12.864	4.128	4.758	12.423	1.607	2.376	5.630	9.111	3.949	4.817	9.700	6.351
8/21/11 0:00	2.728	3.441	12.859	4.150	4.791	12.414	1.640	2.439	5.623	9.108	3.959	4.831	9.686	6.353
8/21/11 4:00	2.721	3.455	12.849	4.155	4.789	12.402	1.651	2.439	5.607	9.094	3.968	4.840	9.667	6.377
8/21/11 8:00	2.735	3.415	12.845	4.174	4.815	12.395	1.689	2.472	5.609	9.097	3.980	4.852	9.656	6.414
8/21/11 12:00	2.756	3.471	12.840	4.183	4.833	12.385	1.668	2.479	5.597	9.092	3.991	4.869	9.642	6.444
8/21/11 16:00	2.758	3.528	12.831	4.186	4.836	12.373	1.647	2.572	5.576	9.075	3.996	4.880	9.619	6.463
8/21/11 20:00	2.768	3.471	12.819	4.200	4.843	12.362	1.654	2.581	5.560	9.064	4.003	4.890	9.603	6.498
8/22/11 0:00	2.784	3.413	12.814	4.217	4.868	12.354	1.679	2.609	5.558	9.064	4.015	4.906	9.593	6.544
8/22/11 4:00	2.796	3.424	12.807	4.224	4.878	12.343	1.679	2.609	5.548	9.057	4.024	4.916	9.577	6.589
8/22/11 8:00	2.807	3.403	12.800	4.237	4.894	12.333	1.698	2.628	5.544	9.055	4.036	4.932	9.565	6.635
8/22/11 12:00	2.812	3.486	12.793	4.246	4.903	12.324	1.710	2.619	5.532	9.045	4.043	4.944	9.547	6.675
8/22/11 16:00	2.805	3.539	12.781	4.249	4.889	12.312	1.700	2.581	5.509	9.026	4.050	4.951	9.519	6.698
8/22/11 20:00	2.798	3.500	12.770	4.258	4.882	12.300	1.717	2.591	5.490	9.010	4.059	4.955	9.503	6.726
8/23/11 0:00	2.805	3.443	12.763	4.265	4.887	12.291	1.736	2.602	5.478	9.000	4.066	4.958	9.484	6.761
8/23/11 4:00	2.805	3.443	12.753	4.270	4.873	12.279	1.743	2.588	5.462	8.986	4.075	4.958	9.463	6.782
8/23/11 8:00	2.810	3.436	12.746	4.275	4.880	12.269	1.764	2.593	5.450	8.977	4.085	4.962	9.447	6.808
8/23/11 12:00	2.803	3.507	12.737	4.282	4.875	12.260	1.761	2.558	5.432	8.961	4.092	4.960	9.421	6.820
8/23/11 16:00	2.791	3.542	12.728	4.273	4.840	12.248	1.768	2.514	5.401	8.937	4.096	4.955	9.396	6.829
8/23/11 20:00	2.786	3.457	12.718	4.285	4.843	12.236	1.726	2.553	5.390	8.923	4.103	4.951	9.377	6.852
8/24/11 0:00	2.791	3.450	12.709	4.292	4.857	12.229	1.799	2.574	5.380	8.916	4.113	4.951	9.363	6.876
8/24/11 4:00	2.786	3.460	12.699	4.297	4.843	12.217	1.771	2.558	5.364	8.902	4.120	4.948	9.342	6.885
8/24/11 8:00	2.786	3.443	12.692	4.314	4.857	12.208	1.789	2.570	5.354	8.895	4.131	4.948	9.323	6.880
8/24/11 12:00	2.784	3.481	12.688	4.321	4.868	12.199	1.801	2.553	5.343	8.888	4.138	4.948	9.307	6.878
8/24/11 16:00	2.779	3.507	12.676	4.323	4.862	12.189	1.796	2.532	5.322	8.872	4.145	4.946	9.289	6.862
8/24/11 20:00	2.777	3.441	12.669	4.335	4.873	12.180	1.832	2.579	5.312	8.867	4.155	4.951	9.275	6.862
8/25/11 0:00	2.789	3.349	12.667	4.355	4.915	12.175	1.740	2.633	5.319	8.872	4.166	4.958	9.272	6.878
8/25/11 4:00	2.800	3.331	12.662	4.374	4.955	12.165	1.796	2.665	5.324	8.879	4.176	4.974	9.265	6.885
8/25/11 8:00	2.812	3.342	12.657	4.396	4.988	12.158	1.726	2.693	5.322	8.881	4.187	4.991	9.258	6.892
8/25/11 12:00	2.821	3.434	12.652	4.408	5.018	12.149	1.780	2.695	5.317	8.883	4.197	5.012	9.249	6.894
8/25/11 16:00	2.814	3.535	12.643	4.412	5.016	12.139	1.787	2.668	5.296	8.867	4.204	5.031	9.228	6.880
8/25/11 20:00	2.826	3.490	12.634	4.417	5.023	12.130	1.832	2.702	5.282	8.855	4.211	5.047	9.210	6.873
8/26/11 0:00	2.831	3.425	12.624	4.434	5.037	12.123	1.759	2.721	5.275	8.848	4.222	5.063	9.198	6.876
8/26/11 4:00	2.835	3.413	12.617	4.444	5.048	12.111	1.789	2.726	5.268	8.841	4.232	5.077	9.184	6.866
8/26/11 8:00	2.845	3.382	12.615	4.458	5.067	12.104	1.836	2.742	5.261	8.846	4.243	5.094	9.177	6.862
8/26/11 12:00	2.847	3.504	12.606	4.461	5.076	12.095	1.864	2.726	5.252	8.834	4.250	5.110	9.158	6.841
8/26/11 16:00	2.845	3.547	12.594	4.465	5.062	12.085	1.785	2.691	5.231	8.818	4.255	5.120	9.137	6.820
8/26/11 20:00	2.842	3.502	12.582	4.475	5.053	12.073	1.792	2.709	5.212	8.799	4.262	5.124	9.114	6.801
8/27/11 0:00	2.847	3.434	12.575	4.487	5.072	12.066	1.782	2.735	5.205	8.794	4.271	5.134	9.105	6.806
8/27/11 4:00	2.847	3.429	12.566	4.492	5.069	12.057	1.813	2.728	5.191	8.785	4.281	5.138	9.089	6.792
8/27/11 8:00	2.852	3.413	12.559	4.504	5.084	12.050	1.881	2.744	5.184	8.780	4.290	5.143	9.077	6.794
8/27/11 12:00	2.852	3.486	12.552	4.514	5.091	12.040	1.869	2.723	5.172	8.771	4.300	5.153	9.058	6.778
8/27/11 16:00	2.847	3.533	12.540	4.514	5.079	12.028	1.850	2.693	5.154	8.754	4.307	5.157	9.037	6.757
8/27/11 20:00	2.842	3.453	12.531	4.528	5.081	12.021	1.871	2.733	5.140	8.743	4.314	5.160	9.024	6.750
8/28/11 0:00	2.845	3.399	12.524	4.535	5.100	12.012	1.768	2.756	5.133	8.738	4.323	5.167	9.012	6.745
8/28/11 4:00	2.845	3.401	12.514	4.547	5.100	12.002	1.817	2.749	5.121	8.726	4.332	5.171	8.998	6.738
8/28/11 8:00	2.852	3.385	12.509	4.555	5.116	11.995	1.888	2.758	5.114	8.726	4.342	5.176	8.984	6.733

TABLE S1.1 (Cont.)

Date and Time	Depth to Groundwater (ft BGL)													
	SB01S	SB49S	SB50S	SB51S	SB52S	SB53S	SB54S	SB01M	SB49M	SB50M	SB51M	SB52M	SB53M	SB54M
8/28/11 12:00	2.849	3.460	12.502	4.569	5.126	11.986	1.920	2.751	5.102	8.719	4.351	5.185	8.970	6.729
8/28/11 16:00	2.845	3.509	12.491	4.569	5.121	11.974	1.789	2.730	5.064	8.705	4.358	5.188	8.949	6.710
8/28/11 20:00	2.842	3.453	12.479	4.574	5.112	11.967	1.799	2.749	5.070	8.689	4.365	5.192	8.935	6.696
8/29/11 0:00	2.847	3.401	12.472	4.584	5.130	11.958	1.876	2.768	5.063	8.686	4.374	5.197	8.924	6.696
8/29/11 4:00	2.854	3.375	12.467	4.598	5.154	11.950	1.923	2.789	5.060	8.689	4.386	5.206	8.917	6.694
8/29/11 8:00	2.863	3.349	12.465	4.622	5.184	11.943	1.799	2.819	5.062	8.696	4.395	5.218	8.912	6.703
8/29/11 12:00	2.870	3.451	12.458	4.632	5.203	11.934	1.857	2.819	5.055	8.693	4.405	5.232	8.900	6.694
8/29/11 16:00	2.872	3.528	12.444	4.632	5.191	11.925	1.874	2.782	5.032	8.675	4.409	5.242	8.879	6.675
8/29/11 20:00	2.872	3.474	12.432	4.639	5.189	11.915	1.928	2.807	5.020	8.663	4.416	5.251	8.865	6.661
8/30/11 0:00	2.882	3.399	12.427	4.653	5.212	11.908	1.799	2.835	5.016	8.661	4.428	5.260	8.854	6.663
8/30/11 4:00	2.882	3.413	12.418	4.663	5.214	11.898	1.890	2.831	5.004	8.651	4.435	5.270	8.840	6.654
8/30/11 8:00	2.886	3.415	12.409	4.678	5.226	11.889	1.944	2.840	4.995	8.646	4.444	5.279	8.828	6.645
8/30/11 12:00	2.889	3.502	12.399	4.678	5.224	11.880	1.810	2.821	4.981	8.637	4.454	5.286	8.812	6.631
8/30/11 16:00	2.882	3.554	12.388	4.974	5.203	11.868	1.853	2.786	4.960	8.616	4.458	5.289	8.789	6.610
8/30/11 20:00	2.882	3.458	12.378	5.188	5.201	11.858	1.817	2.765	4.948	8.609	4.468	5.289	8.775	6.607
8/31/11 0:00	2.886	3.490	12.373	5.318	5.217	11.851	1.899	2.814	4.946	8.604	4.477	5.291	8.763	6.605
8/31/11 4:00	2.889	3.495	12.366	5.388	5.226	11.842	1.911	2.828	4.934	8.597	4.486	5.296	8.754	6.600
8/31/11 8:00	2.907	3.488	12.362	5.439	5.243	11.832	1.867	2.845	4.925	8.595	4.493	5.303	8.747	6.596
8/31/11 12:00	2.910	3.563	12.352	5.465	5.252	11.825	1.862	2.838	4.915	8.590	4.500	5.310	8.733	6.584
8/31/11 16:00	2.905	3.620	12.343	5.485	5.245	11.813	1.913	2.803	4.897	8.578	4.505	5.314	8.714	6.568
8/31/11 20:00	2.912	3.530	12.336	5.506	5.259	11.804	1.885	2.852	4.890	8.571	4.514	5.319	8.700	6.565
9/1/11 0:00	2.924	3.479	12.329	5.518	5.282	11.797	1.874	2.884	4.887	8.574	4.524	5.331	8.696	6.563
9/1/11 4:00	2.926	3.472	12.322	5.528	5.299	11.790	1.822	2.896	4.885	8.569	4.533	5.343	8.689	6.561
9/1/11 8:00	2.933	3.479	12.317	5.533	5.315	11.780	1.808	2.910	4.883	8.569	4.542	5.354	8.682	6.552
9/1/11 12:00	2.935	3.547	12.313	5.540	5.334	11.771	1.892	2.896	4.876	8.569	4.554	5.368	8.668	6.531
9/1/11 16:00	2.928	3.591		5.542	5.317	11.761	1.862	2.859	4.857		4.556	5.378	8.647	6.503
9/1/11 20:00	2.933	3.533		5.547	5.320		1.937	2.896	4.845		4.566	5.382	8.635	6.481
9/2/11 0:00	2.938	3.483		5.552	5.338		1.925	2.921	4.841		4.575	5.392	8.626	6.465
9/2/11 4:00	2.938	3.589		5.557	5.348		1.913	2.924	4.836		4.584	5.401	8.614	6.447
9/2/11 8:00	2.942	3.645		5.557	5.367		1.958	2.940	4.831		4.594	5.411	8.607	6.435

TABLE S1.2 Daily precipitation data for the Commercial Agriculture Automated Weather Network Station in Audrain County, Missouri, 6 mi northwest of Auxvasse.<sup>a</sup>

Date	Total Precip. (in.)	Date	Total Precip. (in.)	Date	Total Precip. (in.)
10/01/10	0.00	11/17/10	0.33	01/03/11	0.00
10/02/10	0.00	11/18/10	0.01	01/04/11	0.00
10/03/10	0.00	11/19/10	0.01	01/05/11	0.00
10/04/10	0.00	11/20/10	0.00	01/06/11	0.00
10/05/10	0.00	11/21/10	0.00	01/07/11	0.00
10/06/10	0.00	11/22/10	0.17	01/08/11	0.00
10/07/10	0.00	11/23/10	0.00	01/09/11	0.00
10/08/10	0.00	11/24/10	0.49	01/10/11	0.00
10/09/10	0.00	11/25/10	0.02	01/11/11	0.00
10/10/10	0.00	11/26/10	0.00	01/12/11	0.00
10/11/10	0.10	11/27/10	0.00	01/13/11	0.00
10/12/10	0.00	11/28/10	0.00	01/14/11	0.00
10/13/10	0.00	11/29/10	0.13	01/15/11	0.05
10/14/10	0.00	11/30/10	0.00	01/16/11	0.01
10/15/10	0.00	12/01/10	0.00	01/17/11	0.10
10/16/10	0.00	12/02/10	0.00	01/18/11	0.01
10/17/10	0.00	12/03/10	0.00	01/19/11	0.00
10/18/10	0.00	12/04/10	0.00	01/20/11	0.00
10/19/10	0.00	12/05/10	0.00	01/21/11	0.00
10/20/10	0.00	12/06/10	0.00	01/22/11	0.15
10/21/10	0.00	12/07/10	0.00	01/23/11	0.00
10/22/10	0.00	12/08/10	0.00	01/24/11	0.02
10/23/10	0.12	12/09/10	0.00	01/25/11	0.02
10/24/10	0.01	12/10/10	0.00	01/26/11	0.00
10/25/10	0.09	12/11/10	0.37	01/27/11	0.00
10/26/10	0.27	12/12/10	0.00	01/28/11	0.00
10/27/10	0.00	12/13/10	0.00	01/29/11	0.00
10/28/10	0.00	12/14/10	0.00	01/30/11	0.00
10/29/10	0.00	12/15/10	0.00	01/31/11	0.00
10/30/10	0.00	12/16/10	0.00	02/01/11	0.01
10/31/10	0.00	12/17/10	0.01	02/02/11	0.00
11/01/10	0.00	12/18/10	0.00	02/03/11	0.02
11/02/10	0.00	12/19/10	0.01	02/04/11	0.00
11/03/10	0.00	12/20/10	0.00	02/05/11	0.26
11/04/10	0.00	12/21/10	0.00	02/06/11	0.01
11/05/10	0.00	12/22/10	0.00	02/07/11	0.00
11/06/10	0.00	12/23/10	0.00	02/08/11	0.00
11/07/10	0.00	12/24/10	0.00	02/09/11	0.00
11/08/10	0.00	12/25/10	0.00	02/10/11	0.00
11/09/10	0.00	12/26/10	0.01	02/11/11	0.00
11/10/10	0.00	12/27/10	0.00	02/12/11	0.00
11/11/10	0.00	12/28/10	0.24	02/13/11	0.00
11/12/10	0.24	12/29/10	0.04	02/14/11	0.00
11/13/10	0.01	12/30/10	0.00	02/15/11	0.00
11/14/10	0.00	12/31/10	1.34	02/16/11	0.00
11/15/10	0.00	01/01/11	0.00	02/17/11	0.00
11/16/10	0.00	01/02/11	0.00	02/18/11	0.00



TABLE S1.2 (Cont.)

Date	Total Precip. (in.)	Date	Total Precip. (in.)	Date	Total Precip. (in.)
02/20/11	0.15	04/09/11	0.01	05/27/11	0.00
02/21/11	0.28	04/10/11	0.09	05/28/11	0.01
02/22/11	0.00	04/11/11	0.00	05/29/11	0.00
02/23/11	0.02	04/12/11	0.00	05/30/11	0.00
02/24/11	0.01	04/13/11	0.00	05/31/11	0.17
02/25/11	0.00	04/14/11	0.00	06/01/11	0.00
02/26/11	0.40	04/15/11	0.58	06/02/11	0.00
02/27/11	0.73	04/16/11	0.04	06/03/11	0.00
02/28/11	0.00	04/17/11	0.00	06/04/11	0.00
03/01/11	0.00	04/18/11	0.00	06/05/11	0.00
03/02/11	0.00	04/19/11	0.52	06/06/11	0.00
03/03/11	0.00	04/20/11	0.00	06/07/11	0.00
03/04/11	0.82	04/21/11	0.06	06/08/11	0.00
03/05/11	0.00	04/22/11	0.54	06/09/11	0.00
03/06/11	0.00	04/23/11	0.00	06/10/11	0.58
03/07/11	0.00	04/24/11	0.00	06/11/11	0.01
03/08/11	0.64	04/25/11	0.25	06/12/11	0.00
03/09/11	0.04	04/26/11	0.05	06/13/11	0.17
03/10/11	0.00	04/27/11	0.00	06/14/11	0.25
03/11/11	0.00	04/28/11	0.02	06/15/11	0.00
03/12/11	0.00	04/29/11	0.00	06/16/11	0.00
03/13/11	0.01	04/30/11	0.00	06/17/11	0.85
03/14/11	0.25	05/01/11	0.23	06/18/11	0.29
03/15/11	0.35	05/02/11	0.00	06/19/11	0.03
03/16/11	0.00	05/03/11	0.00	06/20/11	0.00
03/17/11	0.00	05/04/11	0.00	06/21/11	0.00
03/18/11	0.05	05/05/11	0.08	06/22/11	0.00
03/19/11	0.22	05/06/11	0.01	06/23/11	0.00
03/20/11	0.00	05/07/11	0.00	06/24/11	0.00
03/21/11	0.00	05/08/11	0.00	06/25/11	0.00
03/22/11	0.00	05/09/11	0.00	06/26/11	0.00
03/23/11	0.02	05/10/11	0.00	06/27/11	2.00
03/24/11	0.00	05/11/11	0.00	06/28/11	0.00
03/25/11	0.33	05/12/11	0.91	06/29/11	0.00
03/26/11	0.00	05/13/11	0.34	06/30/11	0.00
03/27/11	0.04	05/14/11	0.15	07/01/11	0.00
03/28/11	0.00	05/15/11	0.33	07/02/11	0.00
03/29/11	0.00	05/16/11	0.01	07/03/11	0.93
03/30/11	0.04	05/17/11	0.00	07/04/11	0.05
03/31/11	0.00	05/18/11	0.00	07/05/11	0.00
04/01/11	0.00	05/19/11	0.01	07/06/11	0.00
04/02/11	0.00	05/20/11	0.36	07/07/11	0.15
04/03/11	0.30	05/21/11	0.01	07/08/11	0.00
04/04/11	0.10	05/22/11	1.23	07/09/11	0.00
04/05/11	0.00	05/23/11	0.02	07/10/11	0.00
04/06/11	0.00	05/24/11	0.11	07/11/11	0.00
04/07/11	0.00	05/25/11	0.99	07/12/11	0.22
04/08/11	0.29	05/26/11	0.03	07/13/11	0.02

TABLE S1.2 (Cont.)

Date	Total Precip. (in.)	Date	Total Precip. (in.)	Date	Total Precip. (in.)
07/14/11	0.00	08/27/11	0.00		
07/15/11	0.00	08/28/11	0.08		
07/16/11	0.00	08/29/11	0.00		
07/17/11	0.00	08/30/11	0.05		
07/18/11	0.00	08/31/11	0.00		
07/19/11	0.00	09/01/11	0.00		
07/20/11	0.00	09/02/11	0.00		
07/21/11	0.00				
07/22/11	0.00				
07/23/11	0.00				
07/24/11	0.00				
07/25/11	0.00				
07/26/11	0.00				
07/27/11	0.00				
07/28/11	0.00				
07/29/11	0.00				
07/30/11	0.38				
07/31/11	0.00				
08/01/11	0.00				
08/02/11	0.00				
08/03/11	0.00				
08/04/11	0.00				
08/05/11	0.04				
08/06/11	0.03				
08/07/11	0.05				
08/08/11	0.00				
08/09/11	0.00				
08/10/11	0.01				
08/11/11	0.00				
08/12/11	0.63				
08/13/11	0.00				
08/14/11	0.00				
08/15/11	0.00				
08/16/11	0.29				
08/17/11	0.00				
08/18/11	0.00				
08/19/11	0.27				
08/20/11	0.29				
08/21/11	0.01				
08/22/11	0.00				
08/23/11	0.00				
08/24/11	0.00				
08/25/11	0.00				
08/26/11	0.00				

<sup>a</sup> Data source: Missouri Historical Agricultural Weather Database, Missouri University Extension (<http://agebb.missouri.edu/weather/history/index.asp>).

**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 2010-2011 investigation to complete the scope of work presented in the Montgomery City *Work Plan* (Argonne 2010). The QA/QC procedures for sample collection, handling, and analysis are described in detail in the *Master Work Plan* (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 EPA (1994) guidelines.

### **S2.1 Sampling to Monitor Sample 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 the handling and shipment of samples. Trip blanks, equipment rinsates, and a field blank were collected to monitor sample collection and handling activities. Field replicate samples were collected, and other samples were selected for duplicate analysis as a measure of analytical precision. The QA/QC samples are listed in Table S2.1. Analytical results for carbon tetrachloride and chloroform in the QA/QC samples collected to monitor sample collection and handling are in Table S2.2.

#### **S2.1.1 Field Blank**

One field blank was collected to represent waters used during equipment decontamination. The waters used were from the Montgomery City water supply. Carbon tetrachloride was not detected in the field blank. Chloroform was detected at 1.8 µg/L, a result consistent with chlorination of the public water supply.

### **S2.1.2 Equipment Rinsates**

Six equipment rinsates were collected to monitor decontamination procedures for reusable sampling equipment. Carbon tetrachloride was not detected in any of the rinsate samples, while chloroform was detected in one rinsate sample at  $< 1.0 \mu\text{g/L}$  (Table S2.2). These results indicate that cross-contamination did not occur during the collection of groundwater samples.

### **S2.1.3 Trip Blanks**

As an indicator of potential cross-contamination of samples during shipment, 65 trip blanks were prepared and shipped with soil or water samples to laboratories for organic analysis. Included in this total were 25 water trip blanks and 28 soil trip blanks sent to the AGEM Laboratory, as well as 8 water trip blanks and 4 soil trip blanks sent to TestAmerica. Analytical results (Table S2.2) indicate that sample handling procedures were followed during the investigation and cross-contamination of samples did not occur during shipment.

### **S2.1.4 Replicate Samples and Duplicate Analyses**

As an indicator of the consistency of the sampling methodology and to provide a measure of analytical precision, replicate soil and groundwater samples were collected, and other samples were selected by the AGEM Laboratory for duplicate organic analysis. In addition, selected soil and groundwater samples were submitted for verification organic analysis at a secondary laboratory. Replicate samples, samples selected for duplicate analysis, and samples selected for verification organic analysis are listed in Table S2.1.

### **S2.1.5 Sample Representativeness**

Several groundwater samples were rejected as non-representative of site conditions, as indicated in Table S2.1. The locations were subsequently resampled. The non-representative samples were as follows:



- Five samples collected on December 5-6, 2010, and shipped to the AGEM Laboratory on December 6 under chain-of-custody 4667 were received frozen. Because of the potential for loss of volatiles, the samples were re-collected on December 7, as indicated in Table S2.1.
- Seven wells were sampled just after installation, prior to stabilization. These field evaluation samples were analyzed to provide data to guide the field program, but they were not considered part of the accumulated investigation data. The wells were subsequently sampled after stabilization, as indicated in Table S2.1, to provide representative data on contaminant distribution.

## **S2.2 Quality Control for Organic Analysis of Soil and Water Samples at the AGEM Laboratory**

To investigate the potential presence of soil sources of carbon tetrachloride, two soil sampling/analysis methodologies were used. Shallow subsurface soil samples (4-20 ft BGL) were initially collected at 35 locations across the site. Analysis of these samples by the headspace method provided a sensitive indicator of possible soil contamination in deeper soils. The headspace data are not quantitative, but they were evaluated to determine contaminant distribution patterns and prioritize follow-up sampling of deeper subsurface soils. Subsequently, all of the soil samples were subjected to purge-and-trap sample preparation with analysis by GC-MS to provide a quantitative measure of contamination.

Shallow subsurface soil sampling was conducted initially at 35 locations to determine a contaminant distribution pattern. The samples were analyzed at the AGEM Laboratory with a modification of EPA Method 5021 (headspace analysis on a GC with electron capture detection). An 11-point calibration of the GC system was based on the mass of known quantities of carbon tetrachloride and chloroform in the concentration range 0.125-4.0 ng. 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 for carbon tetrachloride and chloroform of approximately 10% and 12 %, respectively. The analytical data obtained with this method are acceptable for qualitative determination of contaminant distribution.

On the basis of the headspace analysis results, 19 locations were selected for deeper subsurface soil sampling. In total 373 shallow subsurface and deeper soil samples were collected.

In addition, 23 replicate samples were collected for quality control purposes. The samples were analyzed at the AGEM Laboratory for carbon tetrachloride and chloroform (the contaminants of concern in the investigation) by a modification of EPA Method 8260B (the purge-and-trap method), as referenced in the EPA's SW-846 (EPA 1998), to achieve a quantitation limit of 10 µg/kg.

Soil samples were quick-frozen on dry ice as they were collected. At the laboratory, the VOCs in each soil sample were extracted with methanol from the sample matrix. 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 32 locations across the investigation area, as well as at 3 private wells and 3 public wells. In addition, the municipal water distribution system was sampled, and 1 surface water sample was collected. In total, 143 water samples and 6 additional field replicate samples were collected for organic analysis at the AGEM Laboratory by EPA Method 524.2 (EPA 1995), with a quantitation limit of 1.0 µg/L.

Water samples shipped to the AGEM Laboratory were analyzed by the purge-and-trap method with a GC-MS system. For these analyses, VOCs in each 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 and/or the response for internal standards. 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 analysis by the purge-and-trap method were analyzed in 55 SDGs, as shown in Table S2.3. The QA/QC procedures followed included analysis of instrument calibration check standards and laboratory blanks, monitoring of

surrogate spike recovery, and duplicate laboratory analyses. Significant results include the following:

- Samples shipped to 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 range of  $\pm 20\%$  for carbon tetrachloride and chloroform.
- Surrogate standard determinations were performed on samples and blanks by using surrogate spike compounds fluorobenzene, dichlorobenzene-d<sub>4</sub>, and bromofluorobenzene. As shown in Table S2.3, the surrogate recoveries were within the specified range of 80-120% for all samples in either the initial analysis or a successful reanalysis.
- Secondary analyses of soil and groundwater samples were conducted at the AGEM Laboratory by the purge-and-trap method throughout the investigation as a measure of the consistency in the sampling and analytical methodologies. This was accomplished through the analysis of replicate samples submitted to the laboratory or duplicate analysis of samples selected by the laboratory. Table S2.4 summarizes the analytical results for carbon tetrachloride and chloroform in the primary samples and the associated replicate or duplicate analyses. Consistency in both the sampling and analytical methodologies is indicated by the average RPD values of 4% for carbon tetrachloride and 3% for chloroform for 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 by EPA Method 8260B were subjected to verification analysis at a second laboratory with the same analytical procedure. Of the 373 vertical-profile soil samples analyzed at the AGEM Laboratory, 39 samples (10% of the soil samples) were also analyzed by TestAmerica in South Burlington, Vermont. The results were reported in 4 SDGs (200-2223, 200-2345, 200-2954, and 200-5266; Supplement 3).

The QA/QC procedures followed in the soil verification analyses at TestAmerica included initial and continuing calibration of instruments, analysis of laboratory blanks, monitoring of surrogate spike recovery, and analyses of laboratory control samples. Quality control limits were met for the analyses.

Analytical results for soil samples analyzed at the AGEM Laboratory with EPA Method 8260B are supported by the TestAmerica data from the same analytical method. The verification organic results for the soil samples are summarized in Table S2.5. Agreement is good over the range of contaminant concentrations detected, with average RPD values of 6% for carbon tetrachloride and 10% for chloroform, for samples in which contamination was detected. The carbon tetrachloride and chloroform concentrations detected in analyses at the AGEM Laboratory are supported by the verification analyses.

### **S2.4 Quality Control for Verification Organic Analysis of Groundwater Samples by TestAmerica**

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 143 groundwater samples collected as part of the investigation, 16 samples (10% of the groundwater samples) were also analyzed by CLP methodology at TestAmerica. The results were reported in 8 sample

delivery groups (200-2183, 200-2245, 200-2520, 200-2822, 200-3367, 200-4605, 200-5223 and 200-5483; Supplement 3).

The QA/QC procedures followed in the CLP analyses included initial and continuing calibration of instruments, analysis of laboratory blanks, monitoring of surrogate spike recovery, and analyses of laboratory control samples. Quality control limits were met for these analyses.

Analytical results for groundwater samples analyzed at the AGEM Laboratory by EPA Method 524.2 are supported by the analytical results from TestAmerica, obtained by EPA CLP methodology. The verification organic results for the groundwater samples are summarized in Table S2.6. Agreement is good over the range of contaminant concentrations detected, with average RPD values of 5% for carbon tetrachloride and 7% for chloroform for samples in which contamination was detected. The carbon tetrachloride and chloroform concentrations detected in analysis at the AGEM Laboratory are supported by the verification 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, University Park, Illinois, for filtration and analysis. The analyses included dissolved anion concentrations (bromide, chloride, sulfate, nitrate, nitrite, and phosphate) by EPA Method 300 and dissolved metals (aluminum, calcium, iron, magnesium, manganese, phosphorus, potassium, silicon, sodium, and zinc) by EPA Method 6010.

Inorganic analyses of the groundwater samples were conducted in one SDG (500-28786; Supplement 3). The QA/QC procedures followed included instrument calibration through analysis of spiked calibration check standards, verification of interelement and background correction factors through the analysis of interference check samples for the inductively coupled plasma procedure, and the analyses of laboratory control samples. Quality control limits were met.



On the basis of the recovery of known concentrations of the analytes of concern in laboratory control 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 during the 2010-2011 investigation at Montgomery City.

Location	Depth from (ft BGL)	Sample	Sample Medium	Sample Date and Time	Chain of Custody	Shipping Date	Sample Description
<i>Field blank</i>							
QC	–	MCHYD-W-32416	Water	10/29/10 9:30	2694	10/29/10	Field blank of city water from yard hydrant at fairgrounds, used for equipment decontamination.
<i>Equipment rinsates</i>							
QC	–	MCQCBR-W-32333	Water	10/25/10 14:06	2270	10/25/10	Rinsate of decontaminated sampling bailer after collection of sample MCSB11-W-32638.
QC	–	MCQCBR-W-32412	Water	10/28/10 13:26	3018	10/28/10	Rinsate of decontaminated sampling bailer after collection of sample MCSB01-W-32410.
QC	–	MCDECON-W-32417	Water	10/29/10 9:25	2694	10/29/10	Rinsate of decontaminated bailer after collection of sample MCSB0157-W-32415.
QC	–	MCQCBR-W-32423	Water	11/15/10 12:22	2557	11/15/10	Rinsate of decontaminated bailer after collection of sample MCSB17D-W-32422.
QC	–	MCQCBR-W-32614	Water	1/14/11 13:15	4801	1/14/11	Rinsate of decontaminated bailer after collection of sample MCSB40S-W-32613.
QC	–	MCQCBR-W-33308	Water	6/9/11 10:22	4803	6/9/11	Rinsate of decontaminated bailer prior to sampling from SB53M and after SB54S.
<i>Trip blanks</i>							
QC	–	MCQCTB-S-32660	Soil	10/18/10 16:46	2258	10/18/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on chain-of-custody forms (COCs) 2257 and 2258.
QC	–	MCQCTB-S-32661	Soil	10/19/10 9:09	2259	10/19/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 2259.
QC	–	MCQCTB-S-32666	Soil	10/19/10 14:12	2263	10/19/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COCs 2261 and 2266.
QC	–	MCQCTB-S-32667	Soil	10/19/10 17:00	2260	10/19/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 2260.

TABLE S2.1 (Cont.)

Location	Depth from (ft BGL)	Sample	Sample Medium	Sample Date and Time	Chain of Custody	Shipping Date	Sample Description
<i>Trip blanks (cont.)</i>							
QC	–	MCQCTB-S-32668	Soil	10/20/10 8:40	3001	10/20/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COCs 2264 and 3001.
QC	–	MCQCTB-S-32269	Soil	10/20/10 8:41	3002	10/20/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COCs 3002 and 3004.
QC	–	MCQCTB-S-32655	Soil	10/20/10 12:25	2265	10/20/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 2265.
QC	–	MCQCTB-S-32657	Soil	10/20/10 14:50	2266	10/20/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 2266.
QC	–	MCQCTB-S-32640	Soil	10/21/10 14:20	2267	10/21/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 2267.
QC	–	MCQCTB-S-32642	Soil	10/21/10 17:05	2268	10/22/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 2268.
QC	–	MCQCTB-W-32645	Water	10/21/10 17:22	3013	10/22/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COCs 3013 and 3014.
QC	–	MCQCTB-W-32331	Water	10/23/10 10:37	3015	10/25/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COCs 2270 and 3015.
QC	–	MCQCTB-W-32332	Water	10/23/10 10:39	3012	10/25/10	Trip blank sent to TestAmerica for verification VOCs analysis with water samples listed on COC 3012.
QC	–	MCQCTB-S-32348	Soil	10/24/10 15:57	3016	10/25/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COCs 3008 and 3016.
QC	–	MCQCTB-S-32359	Soil	10/25/10 8:57	2269	10/25/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 2269.
QC	–	MCQCTB-S-32375	Soil	10/25/10 16:42	3005	10/25/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 3005.
QC	–	MCQCTB-S-32388	Soil	10/26/10 9:26	3006	10/26/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 3006.
QC	–	MCQCTB-S-32404	Soil	10/26/10 11:19	3007	10/26/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 3007.

TABLE S2.1 (Cont.)

Location	Depth from (ft BGL)	Sample	Sample Medium	Sample Date and Time	Chain of Custody	Shipping Date	Sample Description
<i>Trip blanks (cont.)</i>							
QC	–	MC-S-MEOH-27Oct10	Soil	10/27/10 11:30	4902	10/27/10	Trip blank sent to TestAmerica for verification VOCs analysis with soil samples listed on COCs 4901 and 4902.
QC	–	MCQCTB-W-32407	Water	10/27/10 15:45	3017	10/27/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 3017.
QC	–	MCQCTB-W-32414	Water	10/28/10 16:36	3018	10/28/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 3018.
QC	–	MCQCTB-W-32414	Water	10/28/10 16:36	3019	10/28/10	Trip blank sent to TestAmerica for verification VOCs analysis with water samples listed on COC 3019.
QC	–	MCQCTB-W-32418	Water	10/29/10 10:00	2694	10/29/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 2694.
QC	–	MC-S-MEOH-3Nov10	Soil	11/5/10 11:25	4903	11/5/10	Trip blank sent to TestAmerica for verification VOCs analysis with soil samples listed on COCs 4903.
QC	–	MCQCTB-W-32429	Water	11/15/10 15:55	2557	11/15/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 2557.
QC	–	MCQCTB-W-32429	Water	11/15/10 15:55	2558	11/15/10	Trip blank sent to TestAmerica for verification VOCs analysis with water samples listed on COC 2558.
QC	–	MCQCTB-W-32432	Water	11/30/10 13:25	2646	11/30/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 2646.
QC	–	MCQCTB-S-32436	Soil	12/1/10 16:45	4678	12/1/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4678.
QC	–	MCQCTB-W-32437	Water	12/1/10 17:00	4656	12/1/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4656.
QC	–	MCQCTB-S-32438	Soil	12/1/10 17:06	4677	12/1/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4677.
QC	–	MCQCTB-S-32479	Soil	12/2/10 12:27	4654	12/2/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4654.
QC	–	MCQCTB-S-32491	Soil	12/2/10 13:59	4655	12/2/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4655.
QC	–	MCQCTB-W-32501	Water	12/2/10 15:00	4660	12/2/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water sample listed on COC 4660.

TABLE S2.1 (Cont.)

Location	Depth from (ft BGL)	Sample	Sample Medium	Sample Date and Time	Chain of Custody	Shipping Date	Sample Description
<i>Trip blanks (cont.)</i>							
QC	–	MCQCTB-S-32515	Soil	12/3/10 18:20	2647	12/3/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COCs 2647 and 3026.
QC	–	MCQCTB-S-32534	Soil	12/4/10 12:00	4657	12/4/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4657.
QC	–	MCQCTB-S-32536	Soil	12/4/10 13:29	4658	12/6/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4658.
QC	–	MCQCTB-S-32539	Soil	12/5/10 9:29	4659	12/6/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4659.
QC	–	MCQCTB-S-32581	Soil	12/5/10 13:29	4661	12/6/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4661.
QC	–	MCQCTB-S-32593	Soil	12/6/10 9:40	4666	12/6/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4666.
QC	–	MCQCTB-W-32594	Water	12/6/10 12:30	4667	12/6/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4667.
QC	–	MCQCTB-W-32594	Water	12/6/10 12:30	4668	12/6/10	Trip blank sent to TestAmerica for verification VOCs analysis with water samples listed on COC 4668.
QC	–	MCQCTB-W-32602	Water	12/7/10 14:05	3027	12/7/10	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 3027.
QC	–	MC-MeohBlank.13Dec10	Soil	12/13/10 0:00	11:30	12/13/11	Trip blank sent to TestAmerica for verification VOCs analysis with soil samples listed on COC 4905.
QC	–	MCQCTB-W-32618	Water	1/14/11 1 6:54	4802	1/14/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COCs 4801 and 4802.
QC	–	MCQCTB-W-32618	Water	1/14/11 1 6:54	4819	1/17/11	Trip blank sent to TestAmerica for verification VOCs analysis with water samples listed on COC 4819.
QC	–	MCQCTB-W-32622	Water	1/17/11 13:31	4817	1/17/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4817.
QC	–	MCQCTB-W-32569	Water	2/28/11 13:46	4820	2/28/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4820.
QC	–	MCQCTB-W-32627	Water	3/23/11 15:38	4837	3/23/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4837.



TABLE S2.1 (Cont.)

Location	Depth from (ft BGL)	Sample	Sample Medium	Sample Date and Time	Chain of Custody	Shipping Date	Sample Description
<i>Trip blanks (cont.)</i>							
QC	–	MCQCTB-W-32885	Water	4/5/11 19:15	4840	4/6/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4840.
QC	–	MCQCTB-W-32885	Water	4/5/11 19:15	4841	4/7/11	Trip blank sent to TestAmerica for verification VOCs analysis with water samples listed on COC 4841.
QC	–	MCQCTB-W-32909	Water	4/7/11 9:33	4842	4/7/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4842.
QC	–	MCQCTB-W-32907	Water	4/7/11 10:22	4847	4/7/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4847.
QC	–	MCQCTB-W-32908	Water	4/7/11 11:13	4845	4/7/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4845.
QC	–	MCQCTB-S-32963	Soil	5/10/11 10:31	4843	5/10/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4843.
QC	–	MCQCTB-S-32944	Soil	5/12/11 8:47	4663	5/12/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4663.
QC	–	MCQCTB-W-32629	Water	5/13/11 16:00	4851	5/13/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4851.
QC	–	MCQCTB-S-33285	Soil	5/13/11 16:42	4848	5/13/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with soil samples listed on COC 4848.
QC	–	MCQCTB-W-33289	Water	5/14/11 12:26	4849	5/14/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4849.
QC	–	MCQCTB-W-32948	Water	5/16/11 11:20	4850	5/16/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4850.
QC	–	MCQCTB-W-33303	Water	5/17/11 15:00	4852	5/17/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4852.
QC	–	MCQCTB-W-33303	Water	5/17/11 15:00	4854	5/17/11	Trip blank sent to TestAmerica for verification VOCs analysis with water samples listed on COC 4854.
QC	–	MC-MeohBlank.19May11	Soil	5/19/11 10:00	4907	5/19/11	Trip blank sent to TestAmerica for verification VOCs analysis with soil samples listed on COC 4907.
QC	–	MCQCTB-W-33311	Water	6/9/11 12:50	4803	6/9/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4803.
QC	–	MCQCTB-W-33311	Water	6/9/11 12:50	4804	6/9/11	Trip blank sent to TestAmerica for verification VOCs analysis with water samples listed on COC 4804.

TABLE S2.1 (Cont.)

Location	Depth from (ft BGL)	Sample	Sample Medium	Sample Date and Time	Chain of Custody	Shipping Date	Sample Description
<i>Trip blanks (cont.)</i>							
QC	–	MCQCTB-W-33314	Water	9/1/11 16:50	4805	9/1/11	Trip blank sent to the AGEM Laboratory for VOCs analysis with water samples listed on COC 4805.
<i>Replicate soil and groundwater samples</i>							
SB03	16	MCSB03-S-32181D	Soil	10/18/10 14:56	2257	10/18/10	Replicate of sample MCSB03-S-32181.
SB14	8	MCSB14-S-32665	Soil	10/19/10 14:09	2261	10/19/10	Replicate of sample MCSB14-S-32223.
SB26	12	MCSB26-S-32653	Soil	10/20/10 11:38	3002	10/20/10	Replicate of sample MCSB26-S-32272.
SB25	28	MCSB25-S-32342D	Soil	10/24/10 15:35	3016	10/25/10	Replicate of sample MCSB25-S-32342.
SB17	52	MCSB17-S-32361	Soil	10/25/10 10:19	2269	10/25/10	Replicate of sample MCSB17-S-32360.
SB36	32	MCSB36-S-32370D	Soil	10/25/10 16:33	3005	10/25/10	Replicate of sample MCSB36-S-32370.
SB09	24	MCSB09-S-32381D	Soil	10/26/10 9:34	3006	10/26/10	Replicate of sample MCSB09-S-32381.
SB22	48	MCSB22-S-32400D	Soil	10/26/10 14:45	3007	10/26/10	Replicate of sample MCSB22-S-32400.
SB09D	58-63	MCSB09D-W-32425	Water	11/15/10 13:05	2557	11/15/10	Replicate of sample MCSB09D-W-32424.
SB27	24	MCSB27-S-32447	Soil	12/1/10 9:41	4677	12/1/10	Replicate of sample MCSB27-S-32441.
SB40	12	MCSB40-S-32461	Soil	12/1/10 15:36	4678	12/1/10	Replicate of sample MCSB40-S-32451.
SB41	28	MCSB41-S-32474	Soil	12/2/10 11:36	4654	12/2/10	Replicate of sample MCSB41-S-32468.
SB42	16	MCSB42-S-32492	Soil	12/2/10 15:55	4655	12/2/10	Replicate of sample MCSB42-S-32481.
SB44	36	MCSB44-S-32517	Soil	12/3/10 16:15	2647	12/3/10	Replicate of sample MCSB44-S-32512.
SB08	48	MCSB08-S-32549	Soil	12/4/10 10:44	4657	12/4/10	Replicate of sample MCSB08-S-32547.
SB46	24	MCSB46-S-32538	Soil	12/4/10 13:51	4658	12/6/10	Replicate of sample MCSB46-S-32526.
SB47	20	MCSB47-S-32565	Soil	12/5/10 11:50	4659	12/6/10	Replicate of sample MCSB47-S-32555.
SB48	32	MCSB48-S-32580	Soil	12/5/10 16:46	4661	12/6/10	Replicate of sample MCSB48-S-32573.
SB16	20	MCSB16-S-32592	Soil	12/6/10 11:12	4666	12/6/10	Replicate of sample MCSB16-S-32582.
SB16D	48-58	MCSB16D-W-32607	Water	1/14/11 9:57	4801	1/14/11	Replicate of sample MCSB16D-W-32606.
SB08D	47-57	MCSB8D-W-32873	Water	4/5/11 13:15	4840	4/6/11	Replicate of sample MCSB8D-W-32872.
SB17D	51.3-61.3	MCSB17DDUP-W-32906	Water	4/6/11 13:16	4847	4/7/11	Replicate of sample MCSB17D-W-32919.
SB43M	20-30	MCSB43M-W-32896	Water	4/6/11 15:14	4842	4/7/11	Replicate of sample MCSB43M-W-32895.
SB50	28	MCSB50-S-32964	Soil	5/10/11 11:19	4843	5/10/11	Replicate of sample MCSB50-S-32956.
SB49	40	MCSB49-S-32943	Soil	5/12/11 9:29	4663	5/12/11	Replicate of sample MCSB49-S-32939.
SB54	20	MCSB54-S-33284	Soil	5/13/11 14:54	4848	5/13/11	Replicate of sample MCSB54-S-33274.
SB54D	42-52	MCSB54D-W-33288	Water	5/14/11 11:32	4849	5/14/11	Replicate of sample MCSB54D-W-33287.

TABLE S2.1 (Cont.)

Location	Depth from (ft BGL)	Sample	Sample Medium	Sample Date and Time	Chain of Custody	Shipping Date	Sample Description
<i>Soil and water samples selected by the AGEM Laboratory for duplicate organic analysis</i>							
SB11	20	MCSB11-S-32664DUP	Soil	10/19/10 10:23	2260	10/19/10	Duplicate laboratory analysis of sample MCSB11-S-32664.
SB12	12	MCSB12-S-32216DUP	Soil	10/19/10 11:51	2260	10/19/10	Duplicate laboratory analysis of sample MCSB12-S-32216.
SB18	12	MCSB18-S-32240DUP	Soil	10/19/10 15:49	2263	10/19/10	Duplicate laboratory analysis of sample MCSB18-S-32240.
SB24	20	MCSB24-W-32651DUP	Water	10/20/10 10:04	3013	10/22/10	Duplicate laboratory analysis of sample MCSB24-W-32651.
SB25	4	MCSB25-S-32266DUP	Soil	10/20/10 10:56	3002	10/20/10	Duplicate laboratory analysis of sample MCSB25-S-32266.
SB31	8	MCSB31-S-32291DUP	Soil	10/20/10 14:40	2266	10/20/10	Duplicate laboratory analysis of sample MCSB31-S-32291.
SB32	16	MCSB32-S-32297DUP	Soil	10/20/10 17:45	2267	10/21/10	Duplicate laboratory analysis of sample MCSB32-S-32297.
SB34	4	MCSB34-S-32302DUP	Soil	10/21/10 13:42	2267	10/21/10	Duplicate laboratory analysis of sample MCSB34-S-32302.
SB35	8	MCSB35-S-32307DUP	Soil	10/21/10 16:06	2268	10/22/10	Duplicate laboratory analysis of sample MCSB35-S-32307.
SB01	24	MCSB01-S-32311DUP	Soil	10/22/10 9:45	2268	10/22/10	Duplicate laboratory analysis of sample MCSB01-S-32311.
SB01	32	MCSB01-S-32313DUP	Soil	10/22/10 12:12	2268	10/22/10	Duplicate laboratory analysis of sample MCSB01-S-32313.
SB01	57.5	MCSB01-S-32320D	Soil	10/22/10 18:41	3008	10/25/10	Duplicate laboratory analysis of sample MCSB01-S-32320.
SB17	32	MCSB17-S-32353DUP	Soil	10/25/10 9:46	2269	10/25/10	Duplicate laboratory analysis of sample MCSB17-S-32353.
SB09	56	MCSB09-S-32390DUP	Soil	10/26/10 10:40	3006	10/26/10	Duplicate laboratory analysis of sample MCSB09-S-32390.
SB22	32	MCSB22-S-32396DUP	Soil	10/26/10 14:18	3007	10/26/10	Duplicate laboratory analysis of sample MCSB22-S-32396.
SB22S	18-28	MCSB22S-W-32426DUP	Water	11/15/10 13:27	2557	11/15/10	Duplicate laboratory analysis of sample MCSB22S-W-32426.
SB27S	20-30	MCSB27S-W-32428DUP	Water	11/15/10 14:38	2557	11/15/10	Duplicate laboratory analysis of sample MCSB27S-W-32428.
SB37D	35.8-45.8	MCSB37D-W-32434DUP	Water	12/1/10 9:42	4656	12/1/10	Duplicate laboratory analysis of sample MCSB37D-W-32434.

TABLE S2.1 (Cont.)

Location	Depth from (ft BGL)	Sample	Sample Medium	Sample Date and Time	Chain of Custody	Shipping Date	Sample Description
<i>Soil and water samples selected by the AGEM Laboratory for duplicate organic analysis (cont.)</i>							
SB40	8	MCSB40-S-32450DUP	Soil	12/1/10 15:31	4678	12/1/10	Duplicate laboratory analysis of sample MCSB40-S-32450.
SB41	52	MCSB41-S-32475DUP	Soil	12/2/10 12:12	4654	12/2/10	Duplicate laboratory analysis of sample MCSB41-S-32475.
SB42	8	MCSB42-S-32478DUP	Soil	12/2/10 15:49	4655	12/2/10	Duplicate laboratory analysis of sample MCSB42-S-32478.
SB42	40	MCSB42-S-32487DUP	Soil	12/2/10 16:17	4655	12/2/10	Duplicate laboratory analysis of sample MCSB42-S-32487.
SB44	4	MCSB44-S-32494DUP	Soil	12/3/10 15:36	2647	12/3/10	Duplicate laboratory analysis of sample MCSB44-S-32494.
SB08	24	MCSB08-S-32541DUP	Soil	12/4/10 10:06	4657	12/4/10	Duplicate laboratory analysis of sample MCSB08-S-32541.
SB08	32	MCSB08-S-32543DUP	Soil	12/4/10 10:14	4657	12/4/10	Duplicate laboratory analysis of sample MCSB08-S-32543.
SB46	24	MCSB46-S-32538DUP	Soil	12/4/10 13:51	4658	12/6/10	Duplicate laboratory analysis of sample MCSB46-S-32538.
SB47	28	MCSB47-S-32557DUP	Soil	12/5/10 11:59	4659	12/6/10	Duplicate laboratory analysis of sample MCSB47-S-32557.
SB48	28	MCSB48-S-32572DUP	Soil	12/5/10 16:36	4661	12/6/10	Duplicate laboratory analysis of sample MCSB48-S-32572.
SB08D	47-57	MCSB08D-W-32508DUP	Water	12/6/10 10:48	4667	12/6/10	Duplicate laboratory analysis of sample MCSB08D-W-32508.
SB47D	47-57	MCSB47D-W-32609DUP	Water	1/14/11 10:58	4801	1/14/11	Duplicate laboratory analysis of sample MCSB47D-W-32609.
SB47S	20-30	MCSB47S-W-32610DUP	Water	1/14/11 11:17	4801	1/14/11	Duplicate laboratory analysis of sample MCSB47S-W-32610.
SB45S	18-28	MCSB45S-W-32567DUP	Water	2/26/11 15:24	4820	2/28/11	Duplicate laboratory analysis of sample MCSB45S-W-32567.
SB46S	8-18	MCSB46S-W-32626DUP	Water	3/23/11 16:21	4837	3/23/11	Duplicate laboratory analysis of sample MCSB46S-W-32626.
SB41S	8-18	MCSB41S-W-32880DUP	Water	4/5/11 17:09	4840	4/6/11	Duplicate laboratory analysis of sample MCSB41S-W-32880.
SB47S	20-30	MCSB47S-W-32910DUP	Water	4/6/11 9:45	4845	4/7/11	Duplicate laboratory analysis of sample MCSB47S-W-32910.
SB46M	20-30	MCSB46M-W-32913DUP	Water	4/6/11 11:00	4847	4/7/11	Duplicate laboratory analysis of sample MCSB46M-W-32913.

TABLE S2.1 (Cont.)

Location	Depth from (ft BGL)	Sample	Sample Medium	Sample Date and Time	Chain of Custody	Shipping Date	Sample Description
<i>Soil and water samples selected by the AGEM Laboratory for duplicate organic analysis (cont.)</i>							
SB16M	20-30	MCSB16M-W-32916DUP	Water	4/6/11 12:38	4845	4/7/11	Duplicate laboratory analysis of sample MCSB16M-W-32916.
SB27S	20-30	MCSB27S-W-32892DUP	Water	4/6/11 13:58	4842	4/7/11	Duplicate laboratory analysis of sample MCSB27S-W-32892.
SB44D	50-60	MCSB44D-W-32924DUP	Water	4/6/11 14:15	4847	4/7/11	Duplicate laboratory analysis of sample MCSB44D-W-32924.
SB50	12	MCSB50-S-32952DUP	Soil	5/10/11 11:01	4843	5/10/11	Duplicate laboratory analysis of sample MCSB50-S-32952.
SB50	20	MCSB50-S-32954DUP	Soil	5/10/11 11:06	4843	5/10/11	Duplicate laboratory analysis of sample MCSB50-S-32954.
SB49	59.5	MCSB49-S-32946DUP	Soil	5/12/11 10:00	4664	5/12/11	Duplicate laboratory analysis of sample MCSB49-S-32946.
SB54	4	MCSB54-S-33270DUP	Soil	5/13/11 14:35	4848	5/13/11	Duplicate laboratory analysis of sample MCSB54-S-33270.
SB54	48	MCSB54-S-33281DUP	Soil	5/13/11 15:50	4848	5/13/11	Duplicate laboratory analysis of sample MCSB54-S-33281.
SB54D	42	MCSB54D-W-33288DUP	Water	5/14/11 11:32	4849	5/14/11	Duplicate laboratory analysis of sample MCSB54D-W-33288.
SB49S	8-18	MCSB49S-W-32968DUP	Water	5/16/11 9:30	4850	5/16/11	Duplicate laboratory analysis of sample MCSB49S-W-32968.
<i>Soil and water samples submitted for verification organic analysis by TestAmerica</i>							
SB04	4	MCSB04-S-32182	Soil	10/18/10 15:18	4901	10/27/10	Result reported in TestAmerica SDG 200-2223.
SB05	8	MCSB05-S-32187	Soil	10/18/10 15:56	4901	10/27/10	Result reported in TestAmerica SDG 200-2223.
SB07	12	MCSB07-S-32196	Soil	10/18/10 16:55	4901	10/27/10	Result reported in TestAmerica SDG 200-2223.
SB08	4	MCSB08-S-32198	Soil	10/18/10 17:17	4901	10/27/10	Result reported in TestAmerica SDG 200-2223.
SB13	16	MCSB13-S-32221	Soil	10/19/10 13:41	4901	10/27/10	Result reported in TestAmerica SDG 200-2223.
SB14	8	MCSB14-S-32223	Soil	10/19/10 14:08	4901	10/27/10	Result reported in TestAmerica SDG 200-2223.
SB18	12	MCSB18-S-32240	Soil	10/19/10 15:49	4901	10/27/10	Result reported in TestAmerica SDG 200-2223.
SB18	16	MCSB18-S-32241	Soil	10/19/10 15:51	4901	10/27/10	Result reported in TestAmerica SDG 200-2223.
SB21	16	MCSB21-S-32253	Soil	10/19/10 17:33	4902	10/27/10	Result reported in TestAmerica SDG 200-2223.
SB24	8	MCSB24-S-32263	Soil	10/20/10 9:45	4901	10/27/10	Result reported in TestAmerica SDG 200-2223.
SB28	12	MCSB28-S-32280	Soil	10/20/10 13:33	4901	10/27/10	Result reported in TestAmerica SDG 200-2223.
SB29	12	MCSB29-S-32284	Soil	10/20/10 13:49	4901	10/27/10	Result reported in TestAmerica SDG 200-2223.
SB30	12	MCSB30-S-32288	Soil	10/20/10 14:24	4902	10/27/10	Result reported in TestAmerica SDG 200-2223.



TABLE S2.1 (Cont.)

Location	Depth from (ft BGL)	Sample	Sample Medium	Sample Date and Time	Chain of Custody	Shipping Date	Sample Description
<i>Soil and water samples submitted for verification organic analysis by TestAmerica (cont.)</i>							
SB33	12	MCSB33-S-32300	Soil	10/21/10 11:10	4901	10/27/10	Result reported in TestAmerica SDG 200-2223.
PWS1	-	MCPWS1-W-32630	Water	10/22/10 8:27	3012	10/25/10	Result reported in TestAmerica SDG 200-2183.
SB01	24	MCSB01-S-32311	Soil	10/22/10 9:45	4901	10/27/10	Result reported in TestAmerica SDG 200-2223.
SB01	28	MCSB01-S-32312	Soil	10/22/10 9:50	4901	10/27/10	Result reported in TestAmerica SDG 200-2223.
Hemeyer	-	MICHEMEYER-W-32633	Water	10/22/10 12:18	3012	10/25/10	Result reported in TestAmerica SDG 200-2183.
SB01	52	MCSB01-S-32318	Soil	10/22/10 15:15	4901	10/27/10	Result reported in TestAmerica SDG 200-2223.
SB17	20	MCSB17-S-32350	Soil	10/25/10 8:59	4902	10/27/10	Result reported in TestAmerica SDG 200-2223.
SB36	16	MCSB36-S-32366	Soil	10/25/10 16:17	4902	10/27/10	Result reported in TestAmerica SDG 200-2223.
SB09	20	MCSB09-S-32380	Soil	10/26/10 9:29	4903	11/5/10	Result reported in TestAmerica SDG 200-2345.
SB09	40	MCSB09-S-32385	Soil	10/26/10 10:05	4903	11/5/10	Result reported in TestAmerica SDG 200-2345.
SB22	24	MCSB22-S-32394	Soil	10/26/10 14:10	4903	11/5/10	Result reported in TestAmerica SDG 200-2345.
SB22D	57.2-67.2	MCSB22-W-32409	Water	10/28/10 10:43	3019	10/28/10	Result reported in TestAmerica SDG 200-2345.
SB01S	20-30	MCSB01S-W-32411	Water	10/28/10 13:54	3019	10/28/10	Result reported in TestAmerica SDG 200-2345.
SB17D	51.3-61.3	MCSB17D-W-32422	Water	11/15/10 12:06	2558	11/15/10	Result reported in TestAmerica SDG 200-2520.
SB27	47	MCSB27-S-32448	Soil	12/1/10 10:20	4905	12/13/11	Result reported in TestAmerica SDG 200-2954.
SB40	12	MCSB40-S-32451	Soil	12/1/10 15:35	4905	12/13/11	Result reported in TestAmerica SDG 200-2954.
SB41	8	MCSB41-S-32463	Soil	12/2/10 11:19	4905	12/13/11	Result reported in TestAmerica SDG 200-2954.
SB42	4	MCSB42-S-32477	Soil	12/2/10 15:45	4905	12/13/11	Result reported in TestAmerica SDG 200-2954.
SB42	52	MCSB42-S-32490	Soil	12/2/10 16:40	4905	12/13/11	Result reported in TestAmerica SDG 200-2954.
SB44	56	MCSB44-S-32519	Soil	12/3/10 16:52	4905	12/13/11	Result reported in TestAmerica SDG 200-2954.
SB08	48	MCSB08-S-32549	Soil	12/4/10 10:44	4905	12/13/11	Result reported in TestAmerica SDG 200-2954.
SB46	20	MCSB46-S-32525	Soil	12/4/10 13:45	4905	12/13/11	Result reported in TestAmerica SDG 200-2954.
SB42D	47-57	MCSB42D-W-32502	Water	12/5/10 11:10	4668	12/6/10	Result reported in TestAmerica SDG 200-2822.
SB47	28	MCSB47-S-32557	Soil	12/5/10 11:59	4905	12/13/11	Result reported in TestAmerica SDG 200-2954.
SB48	20	MCSB48-S-32570	Soil	12/5/10 16:22	4905	12/13/11	Result reported in TestAmerica SDG 200-2954.
SB48D	44-54	MCSB48D-W-32509	Water	12/6/10 11:20	4668	12/6/10	Result reported in TestAmerica SDG 200-2822.
SB16	52	MCSB16-S-32590	Soil	12/6/10 12:12	4905	12/13/11	Result reported in TestAmerica SDG 200-2954.
SB47D	47-57	MCSB47D-W-32609	Water	1/14/11 10:58	4819	1/17/11	Result reported in TestAmerica SDG 200-3367.
SB01M	20-30	MCSB1S-W-32879	Water	4/5/11 16:29	4841	4/7/11	Result reported in TestAmerica SDG 200-4605.
SB41D	48-58	MCSB41D-W-32882	Water	4/5/11 18:08	4841	4/7/11	Result reported in TestAmerica SDG 200-4605.
SB46S	8-18	MCSB46S-W-32912	Water	4/6/11 10:38	4841	4/7/11	Result reported in TestAmerica SDG 200-4605.
SB38M	15-25	MCSB38M-W-32889	Water	4/6/11 11:17	4841	4/7/11	Result reported in TestAmerica SDG 200-4605.
SB27D	41-51	MCSB27D-W-32893	Water	4/6/11 14:18	4841	4/7/11	Result reported in TestAmerica SDG 200-4605.
SB50	40	MCSB50-S-32959	Soil	5/10/11 11:58	4907	5/19/11	Result reported in TestAmerica SDG 200-5266.
SB50	44	MCSB50-S-32960	Soil	5/10/11 12:07	4907	5/19/11	Result reported in TestAmerica SDG 200-5266.
SB50	48	MCSB50-S-32961	Soil	5/10/11 12:13	4907	5/19/11	Result reported in TestAmerica SDG 200-5266.

TABLE S2.1 (Cont.)

Location	Depth from (ft BGL)	Sample	Sample Medium	Sample Date and Time	Chain of Custody	Shipping Date	Sample Description
<i>Soil and water samples submitted for verification organic analysis by TestAmerica (cont.)</i>							
SB49	8	MCSB49-S-32931	Soil	5/12/11 8:57	4907	5/19/11	Result reported in TestAmerica SDG 200-5266.
SB49	40	MCSB49-S-32939	Soil	5/12/11 9:28	4907	5/19/11	Result reported in TestAmerica SDG 200-5266.
SB54	24	MCSB54-S-33275	Soil	5/13/11 14:56	4907	5/19/11	Result reported in TestAmerica SDG 200-5266.
SB01M	20-30	MCSB01M-W-33290	Water	5/17/11 10:24	4854	5/17/11	Result reported in TestAmerica SDG 200-5223.
SB54D	42-52	MCSB54D-W-33295	Water	5/17/11 12:52	4854	5/17/11	Result reported in TestAmerica SDG 200-5223.
SB54M	20-30	MCSB54M-W-33305	Water	6/9/11 9:14	4804	6/9/11	Result reported in TestAmerica SDG 200-5483.
<i>Samples rejected as non-representative of site conditions</i>							
SB41D	48-58	MCSB41D-W-32439	Water	12/5/10 10:49	4667	12/6/10	Sample frozen in shipment. Re-collected on 12/7/10 as MCSB41D-W-32595.
SB42D	47-57	MCSB42D-W-32502	Water	12/5/10 11:10	4667	12/6/10	Sample frozen in shipment. Re-collected on 12/7/10 as MCSB42D-W-32596.
SB46M	20-30	MCSB46M-W-32505	Water	12/5/10 12:45	4667	12/6/10	Sample frozen in shipment. Re-collected on 12/7/10 as MCSB46M-W-32597.
SB38D	41.2-51.2	MCSB38D-W-32506	Water	12/6/10 9:45	4667	12/6/10	Sample frozen in shipment. Re-collected on 12/7/10 as MCSB38D-W-32599.
SB45D	56-66	MCSB45D-W-32507	Water	12/6/10 10:30	4667	12/6/10	Sample frozen in shipment. Re-collected on 12/7/10 as MCSB45D-W-32598.
SB49D	49.5-59.5	MCSB49D-W-32628	Water	5/13/11 13:58	4851	5/13/11	Installed 5/12/11. First sampled the day after installation. Re-sampled May 17 as MCSB49D-W-33293.
SB01S	8-18	MCSB01S-W-32419	Water	5/13/11 14:10	4851	5/13/11	Installed 5/12/11. First sampled the day after installation. Re-sampled May 17 as MCSB01S-W-33302.
SB01D	47-57	MCSB01D-W-33286	Water	5/14/11 10:40	4849	5/14/11	Installed 5/12/11. First sample from well. Re-sampled May 17 as MCSB01D-W-33291.
SB54D	42-52	MCSB54D-W-33287	Water	5/14/11 10:54	4849	5/14/11	Installed 5/13/11. First sampled the day after installation. Re-sampled May 17 as MCSB54D-W-33295.
SB49S	8-18	MCSB49S-W-32968	Water	5/16/11 9:30	4850	5/16/11	Installed 5/12/11. First sample from well. Re-sampled May 17 as MCSB49S-W-33292.
SB50D	47-57	MCSB50D-W-32947	Water	5/16/11 9:45	4850	5/16/11	Installed 5/11/11. First sample from well. Re-sampled May 17 as MCSB50D-W-33296.

TABLE S2.1 (Cont.)

Location	Depth from (ft BGL)	Sample	Sample Medium	Sample Date and Time	Chain of Custody	Shipping Date	Sample Description
<i>Samples rejected as non-representative of site conditions (cont.)</i>							
SB51D	41-51	MCSB51D-W-32969	Water	5/16/11 10:45	4850	5/16/11	Installed 5/15/11. First sampled the day after installation. Re-sampled May 17 as MCSB51D-W-33294.

TABLE S2.2 Analytical results for quality control samples collected to monitor sample collection and handling activities during the 2010-2011 investigation at Montgomery City.

Sample	Sample Date and Time		Sample Medium	Analytical Laboratory	Analytical Method	Analysis Date and Time		Concentration				Units
								Carbon Tetrachloride	Chloroform	Detection Limit	Quantitation Limit	
<i>Field blank</i>												
MCHYD-W-32416	10/29/10	9:30	Water	AGEM	E524.2	11/1/10	15:43	ND <sup>a</sup>	1.8	0.1	1.0	µg/L
<i>Equipment rinsates</i>												
MCQCBR-W-32333	10/25/10	14:06	Water	AGEM	E524.2	10/26/10	14:13	ND	ND	0.1	1.0	µg/L
MCQCBR-W-32412	10/28/10	13:26	Water	AGEM	E524.2	10/29/10	18:09	ND	ND	0.1	1.0	µg/L
MCDECON-W-32417	10/29/10	9:25	Water	AGEM	E524.2	11/1/10	16:14	ND	ND	0.1	1.0	µg/L
MCQCBR-W-32423	11/15/10	12:22	Water	AGEM	E524.2	11/16/10	21:01	ND	0.6 J <sup>b</sup>	0.1	1.0	µg/L
MCQCBR-W-32614	1/14/11	13:15	Water	AGEM	E524.2	1/17/11	17:44	ND	ND	0.1	1.0	µg/L
MCQCBR-W-33308	6/9/11	10:22	Water	AGEM	E524.2	6/10/11	14:19	ND	ND	0.1	1.0	µg/L
<i>Trip blanks</i>												
MC-MeohBlank.19May11	5/19/10	10:00	Soil	TestAmerica	SW8260B	5/25/11	9:34	ND	ND	1.0	10	µg/kg
MCQCTB-S-32660	10/18/10	16:46	Soil	AGEM	SW3810	10/20/10	8:43	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32660	10/18/10	16:46	Soil	AGEM	SW8260B	10/21/10	18:15	ND	ND	1.0	10	µg/kg
MCQCTB-S-32661	10/19/10	9:09	Soil	AGEM	SW3810	10/21/10	20:41	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32661	10/19/10	9:09	Soil	AGEM	SW8260B	11/4/10	11:31	ND	ND	1.0	10	µg/kg
MCQCTB-S-32666	10/19/10	14:12	Soil	AGEM	SW3810	10/21/10	20:00	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32666	10/19/10	14:12	Soil	AGEM	SW8260B	11/4/10	12:31	ND	ND	1.0	10	µg/kg
MCQCTB-S-32667	10/19/10	17:00	Soil	AGEM	SW3810	10/21/10	20:21	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32667	10/19/10	17:00	Soil	AGEM	SW8260B	11/4/10	8:01	ND	ND	1.0	10	µg/kg
MCQCTB-S-32668	10/20/10	8:40	Soil	AGEM	SW3810	10/23/10	20:30	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32668	10/20/10	8:40	Soil	AGEM	SW8260B	11/3/10	19:49	ND	ND	1.0	10	µg/kg
MCQCTB-S-32269	10/20/10	8:41	Soil	AGEM	SW8260B	11/3/10	19:19	ND	ND	1.0	10	µg/kg
MCQCTB-S-32655	10/20/10	12:25	Soil	AGEM	SW3810	10/23/10	19:28	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32655	10/20/10	12:25	Soil	AGEM	SW8260B	11/3/10	20:19	ND	ND	1.0	10	µg/kg
MCQCTB-S-32657	10/20/10	14:50	Soil	AGEM	SW3810	10/23/10	19:48	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32657	10/20/10	14:50	Soil	AGEM	SW8260B	10/29/10	15:08	ND	ND	1.0	10	µg/kg
MCQCTB-S-32640	10/21/10	14:20	Soil	AGEM	SW3810	10/24/10	3:07	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32640	10/21/10	14:20	Soil	AGEM	SW8260B	10/30/10	13:34	ND	ND	1.0	10	µg/kg
MCQCTB-S-32642	10/21/10	17:05	Soil	AGEM	SW3810	10/25/10	23:39	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32642	10/21/10	17:05	Soil	AGEM	SW8260B	11/3/10	19:47	ND	ND	1.0	10	µg/kg
MCQCTB-W-32645	10/21/10	17:22	Water	AGEM	E524.2	10/23/10	18:34	ND	ND	0.1	1.0	µg/L
MCQCTB-W-32331	10/23/10	10:37	Water	AGEM	E524.2	10/26/10	14:43	ND	ND	0.1	1.0	µg/L
MCQCTB-W-32332	10/23/10	10:39	Water	AGEM	SW8260B	10/29/10	2:28	ND	ND	1.0	10	µg/L
MCQCTB-W-32332	10/23/10	10:39	Water	TestAmerica	SOM01	10/29/10	2:28	ND	ND	0.01	0.5	µg/L

TABLE S2.2 (Cont.)

Sample	Sample Date and Time	Sample Medium	Analytical Laboratory	Analytical Method	Analysis Date and Time	Concentration						
						Carbon Tetrachloride	Chloroform	Detection Limit	Quantitation Limit	Units		
<i>Trip blanks (cont.)</i>												
MCQCTB-S-32348	10/24/10	15:57	Soil	AGEM	SW8260B	11/4/10	9:02	ND	ND	1.0	10	µg/kg
MCQCTB-S-32359	10/25/10	8:57	Soil	AGEM	SW8260B	11/3/10	19:17	ND	ND	1.0	10	µg/kg
MCQCTB-S-32375	10/25/10	16:42	Soil	AGEM	SW8260B	11/4/10	8:32	ND	ND	1.0	10	µg/kg
MCQCTB-S-32388	10/26/10	9:26	Soil	AGEM	SW8260B	11/4/10	12:01	ND	ND	1.0	10	µg/kg
MCQCTB-S-32404	10/26/10	11:19	Soil	AGEM	SW8260B	11/3/10	18:48	ND	ND	1.0	10	µg/kg
MC-S-MEOH-27Oct10	10/27/10	11:30	Soil	TestAmerica	SW8260B	11/10/10	12:48	ND	ND	1.0	10	µg/kg
MCQCTB-W-32407	10/27/10	15:45	Water	AGEM	E524.2	10/28/10	15:19	ND	ND	0.1	1.0	µg/L
MCQCTB-W-32414	10/28/10	16:36	Water	AGEM	E524.2	11/1/10	17:14	ND	ND	0.1	1.0	µg/L
MCQCTB-W-32414	10/28/10	16:36	Water	TestAmerica	SOM01	11/3/10	11:50	ND	ND	0.01	0.5	µg/L
MCQCTB-W-32418	10/29/10	10:00	Water	AGEM	E524.2	11/1/10	16:44	ND	1.1	0.1	1.0	µg/L
MC-S-MEOH-3Nov10	11/5/10	11:25	Soil	TestAmerica	SW8260B	11/10/10	16:01	ND	ND	1.0	10	µg/kg
MCQCTB-W-32429	11/15/10	15:55	Water	AGEM	E524.2	11/16/10	21:31	ND	0.7 J	0.1	1.0	µg/L
MCQCTB-W-32429	11/15/10	15:55	Water	TestAmerica	SOM01	11/20/10	0:32	0.048 J	ND	0.01	0.5	µg/L
MCQCTB-W-32432	11/30/10	13:25	Water	AGEM	E524.2	12/2/10	1:13	ND	ND	0.1	1.0	µg/L
MCQCTB-S-32436	12/1/10	16:45	Soil	AGEM	SW3810	12/3/10	2:39	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32436	12/1/10	16:45	Soil	AGEM	SW8260B	12/6/10	10:59	ND	ND	1.0	10	µg/kg
MCQCTB-W-32437	12/1/10	17:00	Water	AGEM	E524.2	12/2/10	12:50	ND	ND	0.1	1.0	µg/L
MCQCTB-S-32438	12/1/10	17:06	Soil	AGEM	SW3810	12/3/10	2:19	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32438	12/1/10	17:06	Soil	AGEM	SW8260B	12/6/10	10:29	ND	ND	1.0	10	µg/kg
MCQCTB-S-32479	12/2/10	12:27	Soil	AGEM	SW3810	12/4/10	1:35	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32479	12/2/10	12:27	Soil	AGEM	SW8260B	12/9/10	3:50	ND	ND	1.0	10	µg/kg
MCQCTB-S-32491	12/2/10	13:59	Soil	AGEM	SW3810	12/4/10	1:55	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32491	12/2/10	13:59	Soil	AGEM	SW8260B	12/9/10	18:53	ND	ND	1.0	10	µg/kg
MCQCTB-W-32501	12/2/10	15:00	Water	AGEM	E524.2	12/3/10	12:38	ND	ND	0.1	1.0	µg/L
MCQCTB-S-32515	12/3/10	18:20	Soil	AGEM	SW3810	12/4/10	22:14	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32515	12/3/10	18:20	Soil	AGEM	SW8260B	12/14/10	5:49	ND	ND	1.0	10	µg/kg
MCQCTB-S-32534	12/4/10	12:00	Soil	AGEM	SW3810	12/8/10	14:56	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32534	12/4/10	12:00	Soil	AGEM	SW8260B	12/14/10	6:19	ND	2.0	1.0	10	µg/kg
MCQCTB-S-32536	12/4/10	13:29	Soil	AGEM	SW3810	12/8/10	20:49	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32536	12/4/10	13:29	Soil	AGEM	SW8260B	12/13/10	5:30	ND	ND	1.0	10	µg/kg
MCQCTB-S-32539	12/5/10	9:29	Soil	AGEM	SW3810	12/9/10	7:16	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32539	12/5/10	9:29	Soil	AGEM	SW8260B	12/14/10	4:18	ND	ND	1.0	10	µg/kg
MCQCTB-S-32581	12/5/10	13:29	Soil	AGEM	SW3810	12/8/10	20:29	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32581	12/5/10	13:29	Soil	AGEM	SW8260B	12/13/10	5:00	ND	ND	1.0	10	µg/kg
MCQCTB-S-32593	12/6/10	9:40	Soil	AGEM	SW3810	12/8/10	20:06	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32593	12/6/10	9:40	Soil	AGEM	SW8260B	12/10/10	18:09	ND	ND	1.0	10	µg/kg
MCQCTB-W-32594	12/6/10	12:30	Water	AGEM	E524.2	12/7/10	4:40	1.5	0.5 J	0.1	1.0	µg/L
MCQCTB-W-32594	12/6/10	12:30	Water	TestAmerica	SOM01	12/9/10	11:08	ND	ND	0.01	0.5	µg/L
MCQCTB-W-32602	12/7/10	14:05	Water	AGEM	E524.2	12/9/10	2:49	ND	ND	0.1	1.0	µg/L



TABLE S2.2 (Cont.)

Sample	Sample Date and Time	Sample Medium	Analytical Laboratory	Analytical Method	Analysis Date and Time	Concentration				Units		
						Carbon Tetrachloride	Chloroform	Detection Limit	Quantitation Limit			
<i>Trip blanks (cont.)</i>												
MC-MeohBlank.13Dec10	12/13/10	11:30	Soil	TestAmerica	SW8260B	12/16/10	19:12	ND	ND	1.0	10	µg/kg
MCQCTB-W-32618	1/14/11	16:54	Water	AGEM	E524.2	1/18/11	16:03	ND	ND	0.1	1.0	µg/L
MCQCTB-W-32618	1/14/11	16:54	Water	TestAmerica	SOM01	1/19/11	14:54	0.045 J	ND	0.01	0.5	µg/L
MCQCTB-W-32622	1/17/11	13:31	Water	AGEM	E524.2	1/18/11	13:04	ND	ND	0.1	1.0	µg/L
MCQCTB-W-32569	2/28/11	13:46	Water	AGEM	E524.2	3/1/11	13:04	ND	ND	0.1	1.0	µg/L
MCQCTB-W-32627	3/23/11	15:38	Water	AGEM	E524.2	3/24/11	14:15	ND	ND	0.1	1.0	µg/L
MCQCTB-W-32885	4/5/11	19:15	Water	AGEM	E524.2	4/7/11	18:40	ND	ND	0.1	1.0	µg/L
MCQCTB-W-32885	4/5/11	19:15	Water	TestAmerica	SOM01	4/12/11	13:12	0.041 J B <sup>c</sup>	ND	0.01	0.5	µg/L
MCQCTB-W-32909	4/7/11	9:33	Water	AGEM	E524.2	4/11/11	18:01	ND	0.3 J	0.1	1.0	µg/L
MCQCTB-W-32907	4/7/11	10:22	Water	AGEM	E524.2	4/11/11	11:27	ND	0.3 J	0.1	1.0	µg/L
MCQCTB-W-32908	4/7/11	11:13	Water	AGEM	E524.2	4/11/11	17:51	ND	0.2 J	0.1	1.0	µg/L
MCQCTB-S-32963	5/10/11	10:31	Soil	AGEM	SW3810	5/12/11	1:36	0.25	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32963	5/10/11	10:31	Soil	AGEM	SW8260B	5/12/11	12:48	ND	ND	1.0	10	µg/kg
MCQCTB-S-32944	5/12/11	8:47	Soil	AGEM	SW3810	5/13/11	21:23	ND	ND	0.1-0.75	–	µg/kg
MCQCTB-S-32944	5/12/11	8:47	Soil	AGEM	SW8260B	5/16/11	20:33	ND	ND	1.0	10	µg/kg
MCQCTB-W-32629	5/13/11	16:00	Water	AGEM	E524.2	5/17/11	14:08	ND	ND	0.1	1.0	µg/L
MCQCTB-S-33285	5/13/11	16:42	Soil	AGEM	SW3810	5/14/11	21:03	0.3	ND	0.1-0.75	–	µg/kg
MCQCTB-S-33285	5/13/11	16:42	Soil	AGEM	SW8260B	5/17/11	17:43	ND	ND	1.0	10	µg/kg
MCQCTB-W-33289	5/14/11	12:26	Water	AGEM	E524.2	5/16/11	12:24	ND	ND	0.1	1.0	µg/L
MCQCTB-W-32948	5/16/11	11:20	Water	AGEM	E524.2	5/17/11	12:36	ND	ND	0.1	1.0	µg/L
MCQCTB-W-33303	5/17/11	15:00	Water	AGEM	E524.2	5/18/11	18:29	ND	ND	0.1	1.0	µg/L
MCQCTB-W-33303	5/17/11	15:00	Water	TestAmerica	SOM01	5/19/11	8:20	0.027 J	ND	0.01	0.5	µg/L
MCQCTB-W-33311	6/9/11	12:50	Water	AGEM	E524.2	6/10/11	14:49	ND	ND	0.1	1.0	µg/L
MCQCTB-W-33311	6/9/11	12:50	Water	TestAmerica	SOM01	6/11/11	16:19	0.016 J B	ND	0.01	0.5	µg/L
MCQCTB-W-33314	9/1/11	16:50	Water	AGEM	E524.2	9/2/11	14:39	ND	ND	0.1	1.0	µg/L

<sup>a</sup> ND, not detected at the indicated instrument detection limit.

<sup>b</sup> Qualifier J indicates an estimated concentration below the indicated method quantitation limit.

<sup>c</sup> Qualifier B indicates that the analyte was found in the associated blank.

TABLE S2.3 Calibration and surrogate recovery during organic analyses of soil and water samples at the AGEM Laboratory.

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-10-20, analysis date October 20, 2010</i>									
20-ppb standard	100	100	100	21.09	5.3	19.69	1.6	17.92	11.0
Methanol blank	100	100	100						
MCSB01-S-32172	113	107	115						
MCSB02-S-32177	105	106	118						
MCSB02-S-32176	109	111	117						
MCSB04-S-32183	109	108	112						
MCSB03-S-32180	110	109	115						
MCSB03-S-32179	106	140 <sup>d</sup>	114	Accepted. High recovery will not prevent contaminant detection.					
MCSB03-S-32181	103	100	105						
MCSB02-S-32174	103	105	105						
MCSB03-S-32178	100	97	104						
MCSB01-S-32170	98	97	106						
MCSB04-S-32182	103	102	107						
MCSB02-S-32175	102	98	103						
Methanol blank 2	96	93	97						
MCSB01-S-32173	107	99	115						
MCSB01-S-32171	108	108	116						
MCSB03-S-32181D	104	105	113						
MCSB04-S-32184	107	104	114						
MCSB05-S-32188	103	102	109						
MCSB07-S-32197	105	103	111						
Methanol blank 3	103	100	110						
<i>SDG 10-10-21, analysis date October 21, 2010</i>									
20-ppb standard	100	100	100	20.67	3.3	21.62	7.8	22.13	10.1
Methanol blank	111	103	96						
MCSB05-S-32189	100	102	105						
MCSB05-S-32187	102	100	106						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-10-21, analysis date October 21, 2010 (cont.)</i>									
MCSB06-S-32191	101	97	100						
MCSB07-S-32195	114	112	118						
MCSB06-S-32192	93	91	96						
MCSB06-S-32190	110	107	118						
MCSB04-S-32185	94	96	98						
MCSB07-S-32194	88	88	93						
MCSB05-S-32186	79 <sup>d</sup>	79 <sup>d</sup>	85	Reanalyzed in SDG 10-10-25 with recovery limit met.					
MCSB06-S-32193	87	92	93						
MCQCTB-S-32660	85	89	92						
MCSB07-S-32196	92	92	92						
MCSB11-S-32210	80	81	82						
Methanol blank 2	81	81	80						
MCSB10-S-32208	109	101	105						
MCSB08-S-32200	102	99	104						
MCSB08-S-32199	95	97	95						
MCSB08-S-32201	92	95	97						
MCSB09-S-32203	102	108	109						
MCSB09-S-32204	92	94	95						
MCSB10-S-32209	94	97	100						
Methanol blank 3	100	95	94						
<i>SDG 10-10-22a, analysis date October 22, 2010</i>									
20-ppb standard	100	100	100	23.67	16.8	19.02	5.0	19.78	1.1
Methanol blank	100	100	100						
MCSB13-S-32219	106	108	109						
MCSB13-S-32218	102	111	105						
MCSB11-S-32212	99	104	108						
MCSB11-S-32213	99	107	100						
MCSB11-S-32662	94	99	99						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-10-22a, analysis date October 22, 2010 (cont.)</i>									
MCSB11-S-32664	104	109	105						
MCSB11-S-32664DUP	96	101	103						
MCSB19-S-32244	98	105	106						
MCSB18-S-32238	97	107	106						
MCSB18-S-32239	100	109	107						
MCSB18-S-32241	91	105	105						
MCSB19-S-32245	95	107	105						
MCSB17-S-32236	92	104	104						
MCSB17-S-32235	92	99	105						
Methanol blank 2	92	98	96						
<i>SDG 10-10-22b, analysis date October 22, 2010</i>									
20-ppb standard	100	100	100	18.75	6.5	22.12	10.1	23.11	14.4
Methanol blank	95	90	88						
MCSB09-S-32202	99	108	116						
MCSB08-S-32198	103	111	106						
MCSB09-S-32205	111	124 <sup>d</sup>	117	Accepted. High recovery will not prevent contaminant detection.					
MCSB10-S-32206	111	120	115						
MCSB10-S-32207	109	117	114						
MCSB12-S-32216	108	114	119						
MCSB12-S-32216DUP	91	93	108						
Methanol blank 2	101	87	81						
MCSB13-S-32220	105	106	106						
MCSB11-S-32211	103	109	104						
MCSB12-S-32214	105	110	112						
MCSB12-S-32217	107	110	111						
MCSB12-S-32215	104	111	109						
MCSB13-S-32221	100	107	107						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-10-23, analysis date October 23, 2010</i>									
20-ppb standard	104	108	119	24.07	18.5	19.72	1.4	19.52	2.4
Laboratory blank	100	100	100						
MCSB29-W-32649	88	92	99						
MCHEMEYER-W-32633	96	94	107						
MCKCOBB-W-32635	95	100	109						
MCSB24-W-32643	96	98	113						
MCPWS2-W-32631	92	91	100						
MCPWS1-W-32630	89	91	97						
MCTREAT-W-32634	91	94	99						
Laboratory blank 2	95	101	113						
MCPWS3-W-32632	91	94	99						
MCSB24-W-32651	95	104	113						
MCSB24-W-32651DUP	91	101	118						
MCQCTB-W-32645	89	86	93						
<i>SDG 10-10-25, analysis date October 25, 2010</i>									
20-ppb standard	100	100	100	18.85	5.9	22.83	13.2	22.17	10.3
Methanol blank	86	85	97						
MCSB32-S-32297DUP	83	84	108						
MCSB32-S-32297	98	98	113						
MCSB05-S-32186	108	92	91						
MCSB17-S-32234	98	100	101						
MCSB19-S-32243	98	114	114						
MCSB19-S-32242	70 <sup>d</sup>	78 <sup>d</sup>	81	Reanalyzed in SDG 10-10-27b with recovery limit met.					
MCSB14-S-32222	95	96	95						
Methanol blank 2	93	80	80						
MCSB14-S-32225	96	102	102						
MCSB15-S-32228	104	98	98						
MCSB15-S-32227	126 <sup>d</sup>	103	101	Reanalyzed in SDG 10-10-27b with recovery limit met.					



TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-10-25, analysis date October 25, 2010 (cont.)</i>									
MCSB15-S-32229	124 <sup>d</sup>	110	105	Reanalyzed in SDG 10-10-27b with recovery limit met.					
MCSB18-S-32240	94	112	110						
MCSB18-S-32240DUP	90	96	96						
Methanol blank 3	100	100	100						
MCSB16-S-32231	113	115	117						
MCSB16-S-32233	83	96	102						
MCSB17-S-32237	90	94	99						
MCSB16-S-32232	101	100	104						
MCSB16-S-32230	100	107	108						
MCSB14-S-32224	104	106	108						
MCSB15-S-32226	100	105	107						
Methanol blank 4	100	100	100						
<i>SDG 10-10-26, analysis date October 26, 2010</i>									
20-ppb standard	95	118	103	21.58	7.6	23.6	16.5	20.88	4.3
Laboratory blank	112	112	112						
MCSB01-W-32330	104	114	110	Outside calibration range for carbon tetrachloride and chloroform at zero dilution.					
MCSB01-W-32330	104	112	113	Analysis at dilution factor (DF) 10 for carbon tetrachloride and chloroform.					
MCSB01-W-32646	97	112	113	Outside calibration range for carbon tetrachloride at zero dilution. Analysis at DF 100 below.					
MCSB34-W-32637	96	99	109						
MCSB11-W-32638	94	101	111						
MCSB33-W-32636	95	101	101	Outside calibration range for carbon tetrachloride at zero dilution. Analysis at DF 10 below.					
MCQCBR-W-32333	93	88	92						
MCQCTB-W-32331	88	88	88						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-10-26, analysis date October 26, 2010 (cont.)</i>									
MCSB01-W-32646	81	88	85	Analysis at DF 100 for carbon tetrachloride and chloroform.					
Laboratory blank 2	87	92	93						
MCSB33-W-32636	95	90	94	Analysis at DF 10 for carbon tetrachloride and chloroform.					
Methanol blank	93	96	88						
MCSB01-S-32314	106	112	118						
MCSB01-S-32310	106	113	112						
MCSB01-S-32312	103	109	114						
MCSB01-S-32313	94	92	98						
MCSB01-S-32313DUP	103	97	101						
Methanol blank 2	91	93	86						
MCSB01-S-32311	102	105	114						
MCSB14-S-32665	96	97	93						
MCSB14-S-32223	90	94	90						
MCSB25-S-32268	90	95	91						
MCSB24-S-32650	91	94	97						
MCSB26-S-32273	91	95	89						
MCSB24-S-32265	88	92	86						
MCSB01-S-32311DUP	110	114	117						
<i>SDG 10-10-27a, analysis date October 27, 2010</i>									
20-ppb standard	100	100	100	21.26	6.1	22.65	12.4	23.21	14.9
Methanol blank	100	100	100						
MCSB25-S-32652	106	117	108						
MCSB24-S-32264	103	113	105						
MCSB26-S-32271	110	113	103						
MCSB31-S-32290	101	106	101						
MCSB24-S-32262	106	109	99						
MCSB31-S-32291	98	111	96						
MCSB31-S-32291DUP	94	98	87						
Methanol blank 2	100	100	100						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-10-27a, analysis date October 27, 2010 (cont.)</i>									
MCSB30-S-32288	94	97	92						
MCSB31-S-32293	80	86	85						
MCSB25-S-32269	95	104	98						
MCSB20-S-32248	95	100	94						
MCSB22-S-32257	92	102	95						
MCSB20-S-32247	94	97	93						
MCSB22-S-32256	96	105	94						
Methanol blank 3	97	98	87						
MCSB21-S-32251	95	102	88						
MCSB22-S-32255	108	113	102						
MCSB21-S-32250	103	108	99						
MCSB28-S-32280	98	104	92						
MCSB29-S-32285	104	115	97						
MCSB29-S-32282	102	109	94						
MCSB27-S-32276	98	109	96						
<i>SDG 10-10-27b, analysis date October 27, 2010</i>									
20-ppb standard	100	100	100	17.15	15.3	23.68	16.8	24.16	18.8
Methanol blank	84	84	92						
MCSB15-S-32227	102	109	113						
MCSB19-S-32242	98	98	105						
MCSB15-S-32229	98	97	104						
MCSB21-S-32253	104	107	117						
MCSB30-S-32289	99	105	113						
MCSB25-S-32266	99	98	109						
MCSB25-S-32266DUP	99	101	107						
Methanol blank 2	100	100	100						
MCSB26-S-32272	102	103	118						
MCSB30-S-32287	103	105	112						
MCSB24-S-32263	101	100	111						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-10-27b, analysis date October 27, 2010 (cont.)</i>									
MCSB31-S-32292	100	101	111						
MCSB26-S-32270	98	98	106						
MCSB25-S-32267	97	94	102						
Methanol blank 3	100	100	100						
MCSB27-S-32274	114	115	118						
MCSB30-S-32286	119	125 <sup>d</sup>	126 <sup>d</sup>	Reanalyzed in SDG 10-10-28 with recovery limit met.					
MCSB27-S-32275	118	115	118						
MCSB21-S-32252	124 <sup>d</sup>	121 <sup>d</sup>	125 <sup>d</sup>	Reanalyzed in SDG 10-10-28 with recovery limit met.					
MCSB28-S-32278	135 <sup>d</sup>	138 <sup>d</sup>	139 <sup>d</sup>	Reanalyzed in SDG 10-10-28 with recovery limit met.					
MCSB29-S-32283	86	81	92						
MCSB23-S-32259	106	105	117						
Methanol blank 4	100	94	96						
MCSB26-S-32653	95	98	107						
<i>SDG 10-10-28, analysis date October 28, 2010</i>									
20-ppb standard	101	102	98	22.87	13.4	22.93	13.7	22.5	11.8
Laboratory blank	109	109	111						
MCSB10-W-32405	92	94	103						
MCSB27-W-32406	93	95	110						
MCCREEK-W-32408	93	104	107						
MCQCTB-W-32407	91	91	89						
Methanol blank	100	100	100						
MCSB23-S-32260	100	100	103						
MCSB28-S-32279	102	99	99						
MCSB23-S-32261	94	97	97						
MCSB20-S-32246	94	94	102						
MCSB27-S-32277	96	101	96						
MCSB22-S-32254	95	102	100						
Methanol blank 2	96	100	97						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-10-28, analysis date October 28, 2010 (cont.)</i>									
MCSB28-S-32278	107	106	93						
MCSB21-S-32252	100	103	92						
MCSB30-S-32286	94	98	85						
MCSB22-S-32256	102	104	112						
MCSB32-S-32294	101	106	111						
MCSB33-S-32658	97	105	111						
MCSB20-S-32249	100	103	107						
MCSB23-S-32258	96	101	105						
<i>SDG 10-10-29a, analysis date October 29, 2010</i>									
20-ppb standard	101	117	106	19.69	1.6	21.97	9.4	21.22	5.9
Laboratory blank	100	100	100						
MCSB01-W-32410	99	104	102	Not analyzed at zero dilution for methylene chloride. Analysis at DF 100.					
MCSB22-W-32409	93	98	103						
MCSB01S-W-32411	96	93	99	Not analyzed at zero dilution for methylene chloride. Analysis at DF 100.					
MCSUBWAY-W-32413	91	91	93						
MCQCTB-W-32414	69 <sup>d</sup>	68 <sup>d</sup>	70 <sup>d</sup>	Reanalyzed in SDG 10-11-1a with recovery limit met.					
MCQCBR-W-32412	92	92	87						
Methanol blank	88	87	80						
MCSB32-S-32296	97	88	91						
MCSB32-S-32295	107	97	103						
MCSB34-S-32305	102	104	105						
MCQCTB-S-32640	97	100	106						
MCSB33-S-32299	92	99	107						
MCSB35-S-32307	95	92	98						
MCSB35-S-32307DUP	113	108	111						



TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-10-29b, analysis date October 29, 2010</i>									
20-ppb standard	100	100	100	19.01	5.1	20.22	1.1	19.87	0.7
Methanol blank	90	91	96						
MCSB28-S-32281	87	87	94						
MCSB29-S-32284	85	82	95						
MCQCTB-S-32657	89	101	129 <sup>d</sup>	Accepted. High recovery will not prevent contaminant detection.					
MCSB33-S-32300	92	98	110						
MCSB34-S-32303	82	83	92						
MCSB34-S-32302	90	90	99						
MCSB34-S-32302DUP	89	86	93						
Methanol blank 2	90	91	96						
MCSB34-S-32659	89	88	96						
MCSB33-S-32298	95	92	104						
MCSB33-S-32301	106	98	108						
MCSB34-S-32304	110	108	113						
MCSB35-S-32306	112	107	109						
MCSB35-S-32308	112	106	108						
<i>SDG 10-11-1a, analysis date November 1, 2010</i>									
20-ppb standard	87	97	104	19.46	2.7	21.33	6.4	20.85	4.2
Laboratory blank	100	100	100						
MCSB0157-W-32415	91	100	109	Outside calibration range for carbon tetrachloride and chloroform at zero dilution.					
MCSB0157-W-32415	86	92	105	Analysis at DF 10 for carbon tetrachloride and chloroform.					
MCHYD-W-32416	89	95	100						
MCDECON-W-32417	83	87	97						
MCQCTB-W-32418	81	83	92						
MCQCTB-W-32414	83	88	92						
Methanol blank	100	100	100						
MCSB35-S-32641	99	102	102						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-11-1a, analysis date November 1, 2010 (cont.)</i>									
MCSB01-S-32315	98	101	96						
MCSB35-S-32309	99	103	104						
MCSB01-S-32316	94	103	98						
MCSB01-S-32317	93	103	102						
MCSB25-S-32344	90	93	94						
MCSB25-S-32342	93	101	99						
<i>SDG 10-11-1b, analysis date November 1, 2010</i>									
20-ppb standard	100	100	100	17.31	14.4	21.43	6.9	20.84	4.1
Methanol blank	100	100	100						
MCSB25-S-32340	87	88	86						
MCSB01-S-32319	89	87	88						
MCSB01-S-32320	95	94	92						
MCSB25-S-32343	97	96	96						
MCSB01-S-32320D	90	94	91						
MCSB01-S-32318	88	92	88						
MCSB25-S-32341	91	90	89						
Methanol blank 2	95	91	89						
MCSB25-S-32347	84	85	84						
MCSB25-S-32346	90	88	85						
MCSB25-S-32345	89	85	87						
MCSB25-S-32349	89	86	83						
MCSB25-S-32342D	90	86	85						
Methanol blank 3	94	87	88						
<i>SDG 10-11-2, analysis date November 2, 2010</i>									
20-ppb standard	100	100	100	20.57	2.8	23.46	15.9	23.39	15.6
Methanol blank	112	111	108						
MCSB17-S-32357	105	112	109						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-11-2, analysis date November 2, 2010 (cont.)</i>									
MCSB17-S-32361	93	100	101						
MCSB17-S-32354	91	100	100						
MCSB17-S-32356	97	113	116						
MCSB17-S-32352	93	107	109						
MCSB17-S-32353	91	98	99						
MCSB17-S-32353DUP	92	102	99						
Methanol blank 2	88	89	92						
MCSB17-S-32350	87	101	106						
MCSB36-S-32369	89	102	99						
MCSB17-S-32360	89	94	99						
MCSB36-S-32373	90	101	103						
MCSB36-S-32367	85	98	100						
MCSB36-S-32372	88	91	92						
MCSB36-S-32365	88	95	99						
MCSB17-S-32362	81	87	86						
MCSB36-S-32363	90	103	100						
MCSB17-S-32351	86	94	95						
MCSB36-S-32374	85	94	95						
MCSB36-S-32371	90	96	98						
MCSB36-S-32366	86	90	92						
MCSB36-S-32364	87	97	97						
MCSB36-S-32370	87	93	97						
<i>SDG 10-11-3a, analysis date November 3, 2010</i>									
20-ppb standard	101	97	110	20	0.0	20.75	3.7	20.63	3.1
Methanol blank	100	100	100						
MCSB22-S-32397	92	99	107						
MCSB22-S-32400D	92	94	101						
MCSB09-S-32387	89	91	92						
MCSB09-S-32382	98	105	109						

TABLE S2.3 (Cont.)

Sample	Measured Concentration and RPD Value for Calibration Check Standard								
	Recovery of Surrogate Compounds <sup>a</sup> (%)			Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-11-3a, analysis date November 3, 2010 (cont.)</i>									
MCSB09-S-32380	84	86	90						
MCSB09-S-32390	83	84	89						
MCSB09-S-32390DUP	86	85	93						
Methanol blank 2	93	94	98						
MCSB09-S-32381	81	85	93						
MCSB09-S-32384	82	83	93						
MCSB09-S-32383	82	86	93						
MCSB09-S-32391	91	95	103						
MCSB09-S-32386	88	89	96						
MCSB09-S-32389	81	115	92						
MCSB09-S-32385	81	82	84						
MCSB09-S-32381D	87	85	89						
MCQCTB-S-32269	90	95	102						
MCQCTB-S-32668	86	91	96						
MCQCTB-S-32655	92	92	106						
MCQCTB-S-32666	110	121 <sup>d</sup>	129 <sup>d</sup>	Reanalyzed in SDG 10-11-4 with recovery limit met.					
MCQCTB-S-32667	99	110	118						
MCQCTB-S-32375	94	101	115						
MCQCTB-S-32348	93	105	117						
<i>SDG 10-11-3b, analysis date November 3, 2010</i>									
20-ppb standard	100	100	100	18.91	5.6	21.51	7.3	20	0.0
Methanol blank	91	87	86						
MCSB17-S-32355	92	86	89						
MCSB36-S-32368	94	87	90						
MCSB36-S-32370D	112	110	111						
MCSB22-S-32398	111	108	109						
MCSB22-S-32396	109	113	114						
MCSB22-S-32396DUP	87	86	90						

TABLE S2.3 (Cont.)

Sample	Measured Concentration and RPD Value for Calibration Check Standard								
	Recovery of Surrogate Compounds <sup>a</sup> (%)			Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-11-3b, analysis date November 3, 2010 (cont.)</i>									
Methanol blank 2	100	100	100						
MCSB22-S-32395	100	100	100						
MCSB22-S-32399	95	97	101						
MCSB22-S-32394	97	98	101						
MCSB22-S-32393	98	99	101						
MCSB22-S-32400	95	100	98						
MCSB22-S-32401	97	102	103						
MCSB22-S-32403	98	103	101						
MCSB22-S-32402	95	99	101						
MCQCTB-S-32404	82	98	103						
MCQCTB-S-32359	96	106	101						
MCQCTB-S-32642	93	102	111						
MCQCTB-S-32661	104	122 <sup>d</sup>	113						
MCQCTB-S-32388	101	116	126 <sup>d</sup>						
				Reanalyzed in SDG 10-11-4 with recovery limit met.					
				Reanalyzed in SDG 10-11-4 with recovery limit met.					
<i>SDG 10-11-4, analysis date November 4, 2010</i>									
20-ppb standard	100	100	100	20.65	3.2	21.91	9.1	22.33	11.0
Laboratory blank	100	100	100						
MCQCTB-S-32661	87	92	95						
MCQCTB-S-32388	95	106	116						
MCQCTB-S-32666	90	93	101						
<i>SDG 10-11-16, analysis date November 16, 2010</i>									
20-ppb standard	98	108	107	20.5	2.5	19.31	3.5	19.67	1.7
Laboratory blank	114	117	119						
MCSB36D-W-32420	100	103	109						
MCSB36S-W-32421	100	105	112						



TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-11-16, analysis date November 16, 2010 (cont.)</i>									
MCSB17D-W-32422	101	105	112	Outside calibration range for carbon tetrachloride and chloroform at zero dilution.					
MCSB09D-W-32424	97	111	110						
MCSB09D-W-32425	87	89	90						
MCSB22D-W-32427	92	98	96						
MCSB27S-W-32428	94	100	100						
MCSB27S-W-32428DUP	86	93	90						
MCSB22S-W-32426	88	91	93						
MCSB22S-W-32426DUP	83	90	86						
MCQCBR-W-32423	86	87	87						
MCQCTB-W-32429	86	83	81						
<i>SDG 10-11-17, analysis date November 17, 2010</i>									
20-ppb standard	101	115	102	17.08	15.7	18.27	9.0	20.7	3.4
Laboratory blank	100	100	100						
MCSB17D-W-32422	87	89	91	Analysis at DF 20 for carbon tetrachloride and chloroform.					
<i>SDG 10-12-1, analysis date December 1, 2010</i>									
20-ppb standard	92	113	100	17.77	11.8	20.43	2.1	17.49	13.4
Laboratory blank	110	115	109						
MCSB37S-W-32433	93	91	93						
MCQCTB-W-32432	90	90	91						
MCSB09S-W-32430	115	103	103						
MCSB17S-W-32431	92	80	83						
<i>SDG 10-12-2, analysis date December 2, 2010</i>									
20-ppb standard	100	100	100	19.05	4.9	19.95	0.3	18.3	8.9
Laboratory blank	100	100	100						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-12-2, analysis date December 2, 2010 (cont.)</i>									
MCSB37D-W-32434	113	103	95						
MCSB37D-W-32434DUP	107	91	92						
MCQCTB-W-32437	102	85	84						
MCSB39D-W-32435	103	88	87						
<i>SDG 10-12-3, analysis date December 3, 2010</i>									
20-ppb standard	91	106	104	18.89	5.7	18.53	7.6	17.03	16.0
Laboratory blank	92	99	100						
MCSB41M-W-32500	84	97	98	Analysis at zero dilution for other VOCs.					
MCQCTB-W-32501	84	91	96						
Laboratory blank 2	108	100	112						
MCSB41M-W-32500	108	99	113	Analysis at DF 100 for carbon tetrachloride and chloroform.					
Methanol blank	83	98	82						
MCSB40-S-32454	83	88	82						
MCSB40-S-32449	89	96	85						
MCSB40-S-32461	90	103	90						
MCSB40-S-32458	89	95	89						
MCSB40-S-32459	96	106	105						
MCSB40-S-32453	88	95	94						
MCSB40-S-32450	91	98	87						
MCSB40-S-32450DUP	89	96	87						
MCSB40-S-32460	93	98	88						
MCSB40-S-32455	95	99	87						
Methanol blank 2	97	96	95						
MCSB40-S-32451	108	106	99						
MCSB40-S-32452	109	113	105						
MCSB40-S-32457	109	119	106						
MCSB27-S-32445	109	115	106						
MCSB27-S-32442	111	120	110						
MCSB27-S-32440	107	116	100						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-12-6, analysis date December 6, 2010</i>									
20-ppb standard	100	100	100	17.37	14.1	20.23	1.1	17.39	14.0
Methanol blank	119	115	109						
MCSB27-S-32444	99	93	103						
MCSB40-S-32456	96	98	102						
MCSB27-S-32441	95	90	96						
MCSB27-S-32447	95	97	95						
MCSB27-S-32448	91	84	93						
MCSB27-S-32443	93	90	102						
MCSB27-S-32446	95	91	102						
MCSB41-S-32474	95	96	98	Outside calibration range for carbon tetrachloride. Analyzed at dilution in SDG 10-12-7.					
MCSB41-S-32462	92	89	101						
MCSB41-S-32466	93	87	91						
MCSB41-S-32469	93	93	96						
MCSB41-S-32467	89	83	90	Outside calibration range for carbon tetrachloride. Analyzed at dilution in SDG 10-12-7.					
MCSB41-S-32472	92	90	93						
Methanol blank 2	87	85	91						
MCSB41-S-32468	91	90	95						
MCSB41-S-32473	95	92	98						
MCSB41-S-32464	101	97	104						
MCSB41-S-32463	100	97	107						
MCSB41-S-32475	100	95	97						
MCSB41-S-32475DUP	94	90	97						
MCSB41-S-32470	89	85	96						
MCQCTB-S-32438	94	99	104						
MCQCTB-S-32436	94	92	100						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-12-7, analysis date December 7, 2010</i>									
20-ppb standard	100	100	100	20.24	1.2	22.74	12.8	17.43	13.7
Laboratory blank	97	90	85						
MCSB44D-W-32504	98	100	104						
MCSB43D-W-32503	103	110	115						
MCSB42D-W-32502	97	111	109						
MCSB41D-W-32439	99	111	110						
MCSB45D-W-32507	98	120	114						
MCSB46M-W-32505	88	94	93						
Laboratory blank 2	90	84	89						
MCSB48D-W-32509	95	103	101						
MCSB38D-W-32506	91	98	98						
MCSB08D-W-32508	87	95	93						
MCSB08D-W-32508DUP	91	89	94						
MCQCTB-W-32594	90	91	84						
Laboratory blank 3	93	97	95						
MCSB48D-W-32509	99	101	98						
MCSB08D-W-32508	95	90	96						
MCSB08D-W-32508DUP	95	97	97						
Methanol blank	92	96	90						
MCSB41-S-32467	103	114	110						
MCSB41-S-32474	97	100	101						
MCSB41-S-32471	95	99	86						
MCSB41-S-32465	95	106	100						
MCSB41-S-32476	96	98	95						
MCSB42-S-32492	99	107	102						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-12-8a, analysis date December 8, 2010</i>									
20-ppb standard	100	100	100	18.96	5.3	16.55	18.9	21.34	6.5
Laboratory blank	113	112	109						
MCSB41D-W-32595	90	88	91						
MCSB38D-W-32599	94	90	98						
MCSB42D-W-32596	95	101	110						
MCSB46M-W-32597	91	93	94						
MCSB46D-W-32600	94	107	108	Outside calibration range for carbon tetrachloride and chloroform. Analysis at dilution in SDG 10-12-10a.					
MCSB45D-W-32598	89	96	99						
MCSB40D-W-32601	87	88	92						
MCQCTB-W-32602	87	87	91						
Methanol blank	89	86	87						
MCQCTB-S-32479	105	110	113						
MCSB42-S-32487	117	111	105						
MCQCTB-S-32491	85	89	94						
MCSB44-S-32511	109	98	101						
MCSB44-S-32517	103	94	101						
MCSB44-S-32499	101	102	101						
MCSB44-S-32495	101	97	101						
Methanol blank 2	100	100	100						
MCSB44-S-32518	104	102	114						
MCSB44-S-32496	100	98	97						
<i>SDG 10-12-8b, analysis date December 8, 2010</i>									
20-ppb standard	100	100	100	18.64	7.0	17.19	15.1	17.7	12.2
Methanol blank	100	100	100						
MCSB42-S-32486	88	89	99						
MCSB42-S-32480	87	83	92						
MCSB42-S-32478	88	89	95						
MCSB42-S-32478DUP	98	98	106						



TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-12-8b, analysis date December 8, 2010 (cont.)</i>									
MCSB42-S-32477	94	93	105						
MCSB42-S-32481	98	98	109						
MCSB42-S-32484	92	88	99						
MCSB42-S-32489	91	92	95						
MCSB42-S-32485	93	93	97						
MCSB42-S-32482	96	96	109						
MCSB42-S-32488	97	101	110						
MCSB42-S-32483	95	93	98						
MCSB42-S-32487DUP	93	90	97						
<i>SDG 10-12-9, analysis date December 9, 2010</i>									
20-ppb standard	100	100	100	18.47	8.0	19.92	0.4	18.37	8.5
Methanol blank	100	100	100						
MCSB44-S-32513	148 <sup>d</sup>	79 <sup>d</sup>	84	Reanalyzed in SDG 10-12-14 with recovery limit met.					
MCSB44-S-32512	91	91	100						
MCSB44-S-32498	96	86	92						
MCSB44-S-32519	172 <sup>d</sup>	107	128 <sup>d</sup>	Reanalyzed in SDG 10-12-10b with recovery limit met.					
MCSB44-S-32497	97	95	103						
MCSB44-S-32510	89	85	97						
MCSB44-S-32520	96	96	102						
Methanol blank 2	95	89	81						
MCSB44-S-32516	87	83	92						
MCSB44-S-32514	88	87	98						
MCSB44-S-32494	98	97	104						
MCSB44-S-32494DUP	92	90	93						
MCQCTB-S-32515	102	136 <sup>d</sup>	127 <sup>d</sup>	Reanalyzed in SDG 10-12-14 with recovery limit met.					
MCSB16-S-32587	93	105	110						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-12-10a, analysis date December 10, 2010</i>									
20-ppb standard	97	119	101	18.94	5.4	17.26	14.7	18.93	5.5
Laboratory blank	100	100	100						
MCSB46D-W-32600	91	87	87						
Methanol blank	100	100	100						
MCSB16-S-32584	96	91	97						
MCSB16-S-32583	99	101	100						
MCSB16-S-32582	96	98	96						
MCSB16-S-32588	98	97	94						
MCSB16-S-32589	92	97	98						
MCSB16-S-32592	91	100	94						
MCSB16-S-32586	99	104	103						
Methanol blank 2	97	99	103						
MCSB16-S-32585	99	99	100						
MCSB16-S-32590	101	97	105						
MCSB48-S-32572	99	108	101						
MCSB48-S-32572DUP	98	102	99						
<i>SDG 10-12-10b, analysis date December 10, 2010</i>									
20-ppb standard	100	100	100	17.62	12.7	20.01	0.0	19.34	3.4
Methanol blank	100	100	100						
MCSB44-S-32513	149 <sup>d</sup>	87	93	Reanalyzed in SDG 10-12-14 with recovery limit met.					
MCSB44-S-32519	106	92	94						
MCQCTB-S-32515	104	137 <sup>d</sup>	123 <sup>d</sup>	Reanalyzed in SDG 10-12-14 with recovery limit met.					
MCSB08-S-32542	104	111	110						
MCSB08-S-32540	103	112	106						
MCQCTB-S-32534	108	144 <sup>d</sup>	125 <sup>d</sup>	Reanalyzed in SDG 10-12-14 with recovery limit met.					
Methanol blank 2	100	100	100						
MCSB08-S-32544	96	102	94						
MCSB08-S-32550	98	104	97						

TABLE S2.3 (Cont.)

Sample	Measured Concentration and RPD Value for Calibration Check Standard								
	Recovery of Surrogate Compounds <sup>a</sup> (%)			Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-12-10b, analysis date December 10, 2010 (cont.)</i>									
MCSB08-S-32543	97	103	94						
MCSB08-S-32543DUP	96	113	100						
MCSB08-S-32545	96	104	94						
MCSB08-S-32549	96	100	93						
MCQCTB-S-32593	100	100	97						
<i>SDG 10-12-11, analysis date December 11, 2010</i>									
20-ppb standard	100	100	100	23.01	14.0	23.09	14.3	20.54	2.7
Methanol blank	100	100	100						
MCSB48-S-32580	101	109	104						
MCSB48-S-32571	102	112	111						
MCSB48-S-32578	102	107	113						
MCSB48-S-32576	100	106	109						
MCSB48-S-32574	105	113	114						
MCSB48-S-32577	100	114	113						
MCSB48-S-32575	100	106	109						
Methanol blank 2	95	100	103						
MCSB48-S-32573	99	105	111						
MCSB48-S-32570	96	102	108						
MCSB08-S-32548	102	109	118						
MCSB08-S-32546	100	106	107						
MCSB08-S-32547	101	109	111						
MCSB08-S-32541	99	104	106						
MCSB08-S-32541DUP	98	108	106						
<i>SDG 10-12-13a, analysis date December 13, 2010</i>									
20-ppb standard	100	100	100	22.05	9.8	22.65	12.4	20.47	2.3
Methanol blank	100	100	100						
MCSB46-S-32529	105	93	95						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-12-13a, analysis date December 13, 2010 (cont.)</i>									
MCSB46-S-32535	105	100	100						
MCSB46-S-32523	104	102	94						
MCSB46-S-32524	103	91	88						
MCSB46-S-32531	100	94	98						
MCQCTB-S-32581	101	98	104						
MCQCTB-S-32536	105	102	107						
MCSB46-S-32532	102	91	93						
MCSB46-S-32526	98	95	97						
MCSB46-S-32533	98	93	100						
MCSB46-S-32525	101	95	99						
MCSB42-S-32490	99	88	91						
MCSB46-S-32538	101	91	92						
MCSB46-S-32538DUP	104	89	92						
<i>SDG 10-12-13b, analysis date December 13, 2010</i>									
20-ppb standard	100	100	100	18.73	6.6	20.94	4.6	20.18	0.9
Methanol blank	100	100	100						
MCSB46-S-32521	86	98	89						
MCSB46-S-32522	65 <sup>d</sup>	102	96	Reanalyzed in SDG 10-12-14 with recovery limit met.					
MCSB47-S-32558	96	82	91						
MCSB46-S-32527	97	85	88						
MCSB46-S-32528	108	97	107						
MCSB47-S-32559	104	85	93						
MCSB47-S-32552	82	72 <sup>d</sup>	78 <sup>d</sup>	Reanalyzed in SDG 10-12-14 with recovery limit met.					
MCSB46-S-32530	93	107	102						
MCSB47-S-32554	92	85	88						
MCSB47-S-32556	87	76 <sup>d</sup>	85	Reanalyzed in SDG 10-12-14 with recovery limit met.					
MCSB47-S-32565	99	91	97						
MCSB47-S-32555	97	87	93						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 10-12-14, analysis date December 14, 2010</i>									
20-ppb standard	100	100	100	21.92	9.2	20.39	1.9	17.32	14.4
Methanol blank	97	99	92						
MCSB47-S-32560	98	94	102						
32553	93	93	102						
MCSB47-S-32561	97	91	102						
MCSB47-S-32564	94	89	104						
MCSB16-S-32591	90	94	102						
MCSB47-S-32557	91	96	100						
MCSB47-S-32557DUP	93	94	96						
Methanol blank 2	97	96	99						
MCSB47-S-32562	90	87	97						
MCSB47-S-32551	90	83	95						
MCQCTB-S-32539	96	105	114						
Methanol blank 3	103	101	108						
MCSB44-S-32513	103	103	104						
MCQCTB-S-32515	98	108	105						
MCQCTB-S-32534	110	116	104						
32522	99	97	101						
MCSB47-S-32552	102	91	102						
MCSB47-S-32556	100	90	98						
<i>SDG 11-1-17, analysis date January 17, 2011</i>									
20-ppb standard	94	112	100	16.4	19.8	18.26	9.1	17.15	15.3
Laboratory blank	113	115	115						
MCSB22S-W-32603	93	106	98						
MCSB22M-W-32604	92	96	112						
MCSB44M-W-32605	95	103	101						
MCSB16D-W-32606	93	100	103						
MCSB16D-W-32607	90	92	98						
MCSB48D-W-32608	93	89	93						



TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 11-1-17, analysis date January 17, 2011 (cont.)</i>									
MCSB47D-W-32609	92	90	94	Outside calibration range for carbon tetrachloride. Analysis at dilution in SDG 11-1-18.					
MCSB47S-W-32610	111	96	101	Outside calibration range for carbon tetrachloride. Analysis at dilution in SDG 11-1-18.					
MCSB42S-W-32611	109	102	109	Outside calibration range for carbon tetrachloride. Analysis at dilution in SDG 11-1-18.					
MCSB40M-W-32612	85	88	91						
Laboratory blank 2	87	85	84						
MCSB40M-W-32612DUP	83	82	87						
MCSB40S-W-32613	86	87	87						
MCQCBR-W-32614	85	87	91						
MCSB38M-W-32615	87	89	95						
MCSB43M-W-32616	84	85	87						
MCSB39S-W-32617	84	88	85						
<i>SDG 11-1-18, analysis date January 18, 2011</i>									
20-ppb standard	100	100	100	17.71	12.1	17.46	13.6	18.71	6.7
Laboratory blank	114	115	116						
MCSB41S-W-32620	103	102	106						
MCSB44S-W-32619	99	98	103						
MCSB48S-W-32621	120	111	106	Outside calibration range for carbon tetrachloride. Analyzed at dilution below.					
MCQCTB-W-32622	98	96	98						
MCSB47D-W-32609	97	93	102	Analysis at DF 5 for carbon tetrachloride and chloroform.					
MCSB47D-W-32609DUP	95	90	88	Analysis at DF 5 for carbon tetrachloride and chloroform.					
Laboratory blank 2	86	85	84						
MCQCTB-W-32618	90	91	93						
MCSB48S-W-32621	83	86	85						
MCSB47S-W-32610	93	96	94	Analysis at DF 100 for carbon tetrachloride and chloroform.					

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 11-1-18, analysis date January 18, 2011 (cont.)</i>									
MCSB47S-W-32610DUP	94	91	92	Analysis at DF 100 for carbon tetrachloride and chloroform.					
Laboratory blank 3	91	88	86						
MCSB42S-W-32611	88	92	90	Analysis at DF 20 for carbon tetrachloride and chloroform.					
<i>SDG 11-3-1, analysis date March 1, 2011</i>									
20-ppb standard	100	100	100	18.96	5.3	16.55	18.9	21.34	6.5
Laboratory blank	100	100	100						
MCSB08S-W-32566	121 <sup>d</sup>	100	102	Reanalyzed in SDG 11-3-2 with recovery limit met.					
MCSB45S-W-32567	84	86	90						
MCSB45S-W-32567DUP	82	86	91						
MCSB16M-W-32568	91	88	96	Outside calibration range for carbon tetrachloride and chloroform. Analyzed at dilution in SDG 11-3-2.					
MCQCTB-W-32569	84	88	88						
<i>SDG 11-3-2, analysis date March 2, 2011</i>									
20-ppb standard	100	100	100	20.22	1.1	20.01	0.0	21.86	8.9
Laboratory blank	100	100	100						
MCSB08S-W-32566	87	88	84	Analysis at DF 20 for carbon tetrachloride and chloroform.					
MCSB08S-W-32566DUP	93	102	97	Analysis at DF 100 for carbon tetrachloride and chloroform.					
MCSB16M-W-32568	97	105	102	Analysis at DF 10 for carbon tetrachloride and chloroform.					
MCSB16M-W-32568DUP	93	104	95	Analysis at DF 20 for carbon tetrachloride and chloroform.					
<i>SDG 11-3-24, analysis date March 24, 2011</i>									
20-ppb standard	98	116	94	16.76	17.6	16.88	16.9	17.35	14.2
Laboratory blank	100	100	100						
MCSB16S-W-32623	106	101	98	Outside calibration range for carbon tetrachloride. Analyzed at dilution in SDG 11-3-29.					

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 11-3-24, analysis date March 24, 2011 (cont.)</i>									
MCSB38S-W-32624	101	88	88						
MCSB43S-W-32625	102	98	98						
MCSB46S-W-32626	102	96	94						
MCSB46S-W-32626DUP	104	93	91						
MCQCTB-W-32627	108	94	91						
<i>SDG 11-3-29, analysis date March 29, 2011</i>									
20-ppb standard	95	103	98	17.8	11.6	17.59	12.8	18.62	7.1
Laboratory blank	100	100	100						
MCSB16S-W-32623	103	112	115	Analysis at DF 2 for carbon tetrachloride and chloroform.					
<i>SDG 11-4-7a, analysis date April 7, 2011</i>									
20-ppb standard	103	109	109	20.49	2.4	20.29	1.4	20.27	1.3
Laboratory blank	100	100	100						
MCSB41S-W-32880	99	100	99						
MCSB41S-W-32880DUP	109	120	119						
MCSB41M-W-32881	107	111	118	Analysis at DF 100 for carbon tetrachloride and chloroform.					
MCSB41D-W-32882	102	108	112						
MCSB42S-W-32883	100	100	103	Analysis at DF 20 for carbon tetrachloride and chloroform.					
MCSB42D-W-32884	99	102	106						
<i>SDG 11-4-7b, analysis date April 7, 2011</i>									
20-ppb standard	106	119	107	17.59	12.8	20.26	1.3	21.57	7.6
Laboratory blank	115	116	119						
MCSB33-W-32870	108	112	113						
MCSB8S-W-32871	99	100	103						
MCSB8D-W-32872	102	103	103						
MCSB8D-W-32873	100	99	100						

TABLE S2.3 (Cont.)

Sample	Measured Concentration and RPD Value for Calibration Check Standard								
	Recovery of Surrogate Compounds <sup>a</sup> (%)			Carbon Tetrachloride				Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 11-4-7b, analysis date April 7, 2011 (cont.)</i>									
MCSB34-W-32874	98	98	103						
MCSB9S-W-32875	97	97	98						
Laboratory blank 2	98	96	96						
MCSB9D-W-32876	95	94	95						
MCSB48S-W-32877	94	90	90						
MCSB48D-W-32878	93	93	90						
MCSB15-W-32879	89	88	89						
MCQCTB-W-32885	85	82	80						
<i>SDG 11-4-8a, analysis date April 8, 2011</i>									
20-ppb standard	100	100	100	21.8	8.6	20.45	2.2	19.25	3.8
Laboratory blank	100	100	100						
MCSB46D-W-32914	101	100	108						
MCSB44S-W-32922	92	92	92						
MCSB44M-W-32923	93	87	93						
MCSB44D-W-32924	95	87	95						
MCSB44D-W-32924DUP	91	85	85						
Laboratory blank 2	96	91	87						
MCSB24-W-32925	98	98	95						
MCSB22S-W-32926	96	91	88						
MCSB22M-W-32927	97	85	93						
MCSB22D-W-32928	99	98	94						
MCSB45S-W-32929	97	92	89						
MCSB45D-W-32900	87	80	81						
MCSB17DDUP-W-32906	98	92	91						
Laboratory blank 3	105	94	90						
MCSB46M-W-32913	100	93	95						
MCSB46M-W-32913DUP	108	105	105						
MCSB16S-W-32915	113	104	104						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 11-4-8b, analysis date April 8, 2011</i>									
20-ppb standard	100	100	100	16.48	19.3	20.4	2.0	22.46	11.6
Laboratory blank	100	100	100						
MCSB37S-W-32886	113	118	117						
MCSB37D-W-32887	103	106	106						
MCSB38S-W-32888	102	105	104						
MCSB38M-W-32889	102	99	97						
MCSB38D-W-32890	100	102	101						
MCSB29-W-32891	95	100	98						
MCSB27S-W-32892	100	101	100						
Laboratory blank 2	97	99	97						
MCSB27S-W-32892DUP	96	98	94						
MCSB27D-W-32893	96	97	94						
MCSB43S-W-32894	92	94	91						
MCSB43M-W-32895	90	94	87						
MCSB43M-W-32896	90	94	87						
MCSB43D-W-32897	86	92	88						
MCSB39S-W-32898	89	93	86						
<i>SDG 11-4-11a, analysis date April 11, 2011</i>									
20-ppb standard	100	100	100	19.58	2.1	18.95	5.4	18.56	7.5
Laboratory blank	100	100	100						
MCSB39D-W-32899	104	110	111	Analysis at DF 5 for carbon tetrachloride and chloroform.					
MCQCTB-W-32907	102	105	113						
MCSB11-W-32920	113	114	120	Analysis at DF 2 for carbon tetrachloride and chloroform.					
MCSB10-W-32921	105	107	111						
MCSB36S-W-32901	107	111	117						
MCSB36D-W-32902	107	110	113						
MCSB40S-W-32903	109	108	110						
Laboratory blank 2	108	99	106						
MCSB40M-W-32904	103	102	99						



TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 11-4-11a, analysis date April 11, 2011 (cont.)</i>									
MCSB40D-W-32905	104	98	98						
MCSB47S-W-32910	105	101	96						
MCSB47S-W-32910DUP	107	103	107						
MCSB47D-W-32911	103	101	102						
MCQCTB-W-32908	84	90	85						
MCQCTB-W-32909	111	107	105						
<i>SDG 11-4-11b, analysis date April 11, 2011</i>									
20-ppb standard	102	109	112	17.72	12.1	17.96	10.7	19.35	3.3
Laboratory blank	100	100	100						
MCSB46S-W-32912	89	995	94						
MCSB16M-W-32916	91	92	94						
MCSB16M-W-32916DUP	94	96	97						
MCSB16D-W-32917	90	92	93						
MCSB17S-W-32918	92	93	95						
MCSB17D-W-32919	89	90	92						
<i>SDG 11-5-12, analysis date May 12, 2011</i>									
20-ppb standard	100	100	100	17.48	13.4	17.59	12.8	16.38	19.9
Methanol blank	100	100	100						
MCSB50-S-32951	85	89	88						
MCSB50-S-32964	89	90	92						
MCSB50-S-32959	95	100	98						
MCSB50-S-32958	110	114	109						
MCSB50-S-32965	104	113	109						
MCSB50-S-32962	102	112	114						
MCSB50-S-32953	102	106	105						
Methanol blank 2	100	100	100						
MCSB50-S-32966	93	107	104						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 11-5-12, analysis date May 12, 2011 (cont.)</i>									
MCSB50-S-32950	103	105	99						
MCSB50-S-32960	100	103	97						
MCSB50-S-32956	103	108	103						
MCSB50-S-32952	103	111	108						
MCSB50-S-32952DUP	100	108	107						
MCSB50-S-32961	109	118	112						
<i>SDG 11-5-13, analysis date May 13, 2011</i>									
20-ppb standard	100	100	100	19.94	0.3	20.69	3.4	20.23	1.1
Laboratory blank	100	100	100						
MCSB50-S-32967	104	96	108						
MCSB50-S-32955	106	105	102						
MCSB50-S-32954	118	116	114						
MCSB50-S-32954DUP	110	109	109						
MCQCTB-S-32963	111	119	118						
<i>SDG 11-5-14, analysis date May 14, 2011</i>									
20-ppb standard	91	108	82	18.85	5.9	19.96	0.2	20.83	4.1
Laboratory blank	113	112	109						
MCSB49D-W-32628	95	86	94						
MCSB01S-W-32419	92	93	101						
MCQCTB-W-32629	78 <sup>d</sup>	70 <sup>d</sup>	72 <sup>d</sup>	Outside calibration range for carbon tetrachloride and chloroform. Analyzed at dilution in SDG 11-5-16. Reanalyzed in SDG 11-5-17 with recovery limit met.					
<i>SDG 11-5-16, analysis date May 16, 2011</i>									
20-ppb standard	95	102	99	18.24	9.2	19.64	1.8	18.83	6.0
Laboratory blank	100	100	100						

TABLE S2.3 (Cont.)

Sample	Measured Concentration and RPD Value for Calibration Check Standard								
	Recovery of Surrogate Compounds <sup>a</sup> (%)			Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 11-5-16, analysis date May 16, 2011 (cont.)</i>									
MCSB01D-W-33286	104	111	116						
MCSB54D-W-33287	101	99	103						
MCSB54D-W-33288	99	100	108						
MCSB54D-W-33288DUP	101	104	115						
MCQCTB-W-33289	97	100	99						
MCSB01S-W-32419	100	100	102	Analysis at DF 5 for carbon tetrachloride and chloroform.					
Methanol blank	111	111	113						
MCSB49-S-32934	92	92	92						
MCSB49-S-32932	94	101	102						
MCSB49-S-32941	93	93	95						
MCSB49-S-32936	93	97	99						
MCSB49-S-32943	99	105	108						
MCSB49-S-32942	94	94	98						
MCSB49-S-32933	99	101	103						
Methanol blank 2	89	88	87						
MCSB49-S-32945	91	92	93						
MCSB49-S-32940	92	90	90						
MCSB49-S-32939	86	89	93						
MCSB50-S-32957	93	96	98						
MCSB49-S-32930	88	85	89						
MCSB49-S-32946	92	94	91						
MCSB49-S-32946DUP	86	92	93						
Methanol blank 3	97	93	94						
MCSB49-S-32937	92	91	93						
MCSB49-S-32938	82	92	96						
MCSB49-S-32935	91	96	102						
MCSB49-S-32931	95	99	102						
MCQCTB-S-32944	96	104	103						
MCSB54-S-33284	96	100	102						
MCSB54-S-33270	94	96	99						
MCSB54-S-33270DUP	92	95	96						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 11-5-17, analysis date May 17, 2011</i>									
20-ppb standard	87	84	87	18.23	9.3	18.61	7.2	17.61	12.7
Laboratory blank	100	100	100						
MCSB50D-W-32947	101	99	100						
MCSB51D-W-32969	108	102	116						
MCSB49S-W-32968	111	107	111						
MCSB49S-W-32968DUP	110	101	111						
MCQCTB-W-32948	108	102	99						
MCQCTB-W-32629	86	95	91						
Methanol blank	100	100	100						
MCSB54-S-33276	96	100	102						
MCSB54-S-33273	96	101	105						
MCSB54-S-33278	93	96	102						
MCSB54-S-33274	95	101	106						
MCSB54-S-33272	91	98	104						
MCSB54-S-33277	87	93	98						
MCSB54-S-33279	84	89	93						
Methanol blank 2	85	84	88						
MCSB54-S-33275	84	84	90						
MCSB54-S-33280	85	86	90						
MCSB54-S-33282	87	93	100						
MCSB54-S-33271	86	89	94						
MCSB54-S-33281	85	89	96						
MCSB54-S-33281DUP	86	86	91						
MCQCTB-S-33285	81	83	87						
<i>SDG 11-5-18, analysis date May 18, 2011</i>									
20-ppb standard	90	82	83	18.46	8.0	17.1	15.6	18.69	6.8
Laboratory blank	113	112	109						
MCSB01D-W-33291	101	100	100						
MCSB49S-W-33292	103	95	110						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 11-5-18, analysis date May 18, 2011 (cont.)</i>									
MCSB49D-W-33293	104	101	109						
MCSB51D-W-33294	99	103	104						
MCSB54D-W-33295	99	95	102						
MCSB52S-W-33297	103	102	101						
MCSB52M-W-33298	98	93	97						
MCSB52D-W-33299	101	93	97						
MCSB53D-W-33300	99	89	96						
MCSB50M-W-33301	99	88	91						
MCSB01S-W-33302	100	90	89	Outside calibration range for carbon tetrachloride. Analyzed at dilution in SDG 11-5-20.					
MCQCTB-W-33303	100	94	92						
MCSB50D-W-33296	91	81	91						
MCSB01M-W-33290	101	92	92						
MCSB01M-W-33290DUP	99	91	96						
<i>SDG 11-5-20, analysis date May 20, 2011</i>									
20-ppb standard	82	87	87	18.24	9.2	18.78	6.3	18.98	5.2
Laboratory blank	100	100	100						
MCSB01S-W-33302	99	120	120	Analysis at DF 100 for carbon tetrachloride and chloroform.					
MCSB01S-W-33302DUP	96	94	97	Analysis at DF 100 for carbon tetrachloride and chloroform.					
<i>SDG 11-6-10, analysis date June 10, 2011</i>									
20-ppb standard	95	89	102	20.27	1.3	20.87	4.3	22.23	10.6
Laboratory blank	100	100	100						
MCSB49M-W-33304	97	98	95						
MCSB54M-W-33305	105	110	117						
MCSB54S-W-33306	107	114	114						
MCSB53M-W-33307	105	109	120						
MCSB51M-W-33309	110	111	116						



TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds <sup>a</sup> (%)			Measured Concentration and RPD Value for Calibration Check Standard					
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d <sub>4</sub>	Carbon Tetrachloride		Chloroform		Methylene Chloride	
				ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>	ppb <sup>b</sup>	RPD <sup>c</sup>
<i>SDG 11-6-10, analysis date June 10, 2011 (cont.)</i>									
MCSB51S-W-33310	104	109	109						
MCSB51S-W-33310DUP	107	106	106						
MCQCBR-W-33308	100	95	104						
MCQCTB-W-33311	98	93	93						
<i>SDG 11-9-2, analysis date September 2, 2011</i>									
20-ppb standard	100	100	100	21.44	6.9	19.57	2.2	17.2	15.1
Laboratory blank	100	100	100						
MCSB50S-W-33312	81	82	92						
MCSB53S-W-33313	86	81	85						
MCQCTB-W-33314	88	89	85						

<sup>a</sup> Quality control range for recovery = 80-120%

<sup>b</sup> Concentration in parts per billion (µg/L in water or µg/kg in soil).

<sup>c</sup> Quality control range for RPD = ±20%.

<sup>d</sup> Surrogate recovery outside quality control range.

TABLE S2.4 Results from the AGEM Laboratory for secondary analyses of soil and water samples collected at Montgomery City in 2010-2011.<sup>a</sup>

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration		Sample Type	Sample Medium	Units
							Carbon Tetrachloride	Chloroform			
SB03	MCSB03-S-32181	10/18/10	14:55	16	10/20/10	17:17	8.1 J <sup>b</sup>	ND <sup>c</sup>	Primary	Soil	µg/kg
SB03	MCSB03-S-32181D	10/18/10	14:56	16	10/20/10	22:20	8.5 J	ND	Replicate	Soil	µg/kg
SB11	MCSB11-S-32664	10/19/10	10:23	20	10/22/10	19:01	35	3.2 J	Primary	Soil	µg/kg
SB11	MCSB11-S-32664DUP	10/19/10	10:23	20	10/22/10	19:31	39	3.6 J	Duplicate	Soil	µg/kg
SB12	MCSB12-S-32216	10/19/10	11:51	12	10/22/10	15:20	ND	ND	Primary	Soil	µg/kg
SB12	MCSB12-S-32216DUP	10/19/10	11:51	12	10/22/10	15:50	ND	ND	Duplicate	Soil	µg/kg
SB14	MCSB14-S-32223	10/19/10	14:08	8	10/26/10	19:45	6.1 J	16	Primary	Soil	µg/kg
SB14	MCSB14-S-32665	10/19/10	14:09	8	10/26/10	19:15	ND	ND	Replicate	Soil	µg/kg
SB18	MCSB18-S-32240	10/19/10	15:49	12	10/25/10	18:16	3.6 J	ND	Primary	Soil	µg/kg
SB18	MCSB18-S-32240DUP	10/19/10	15:49	12	10/26/10	9:13	3.8 J	ND	Duplicate	Soil	µg/kg
SB24	MCSB24-W-32651	10/20/10	10:04	20	10/23/10	17:34	ND	ND	Primary	Water	µg/L
SB24	MCSB24-W-32651DUP	10/20/10	10:04	20	10/23/10	18:04	ND	ND	Duplicate	Water	µg/L
SB25	MCSB25-S-32266	10/20/10	10:56	4	10/27/10	13:18	ND	ND	Primary	Soil	µg/kg
SB25	MCSB25-S-32266DUP	10/20/10	10:56	4	10/27/10	13:48	ND	ND	Duplicate	Soil	µg/kg
SB26	MCSB26-S-32272	10/20/10	11:37	12	10/27/10	14:48	2.9 J	ND	Primary	Soil	µg/kg
SB26	MCSB26-S-32653	10/20/10	11:38	12	10/27/10	23:17	ND	ND	Replicate	Soil	µg/kg
SB31	MCSB31-S-32291	10/20/10	14:40	8	10/27/10	13:39	ND	ND	Primary	Soil	µg/kg
SB31	MCSB31-S-32291DUP	10/20/10	14:40	8	10/27/10	14:09	ND	ND	Duplicate	Soil	µg/kg
SB32	MCSB32-S-32297	10/20/10	17:45	16	10/25/10	12:44	2,412	133	Primary	Soil	µg/kg
SB32	MCSB32-S-32297DUP	10/20/10	17:45	16	10/25/10	12:13	2,280	104	Duplicate	Soil	µg/kg
SB34	MCSB34-S-32302	10/21/10	13:42	4	10/29/10	16:37	ND	ND	Primary	Soil	µg/kg
SB34	MCSB34-S-32302DUP	10/21/10	13:42	4	10/29/10	17:06	ND	ND	Duplicate	Soil	µg/kg
SB35	MCSB35-S-32307	10/21/10	16:06	8	10/30/10	14:35	ND	ND	Primary	Soil	µg/kg
SB35	MCSB35-S-32307DUP	10/21/10	16:06	8	11/1/10	8:15	ND	ND	Duplicate	Soil	µg/kg

TABLE S2.4 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration		Sample Type	Sample Medium	Units
							Carbon Tetrachloride	Chloroform			
SB01	MCSB01-S-32311	10/22/10	9:45	24	10/26/10	18:44	1,095	55	Primary	Soil	µg/kg
SB01	MCSB01-S-32311DUP	10/22/10	9:45	24	10/26/10	22:15	1,140	61	Duplicate	Soil	µg/kg
SB01	MCSB01-S-32313	10/22/10	12:12	32	10/26/10	17:14	1,522	46	Primary	Soil	µg/kg
SB01	MCSB01-S-32313DUP	10/22/10	12:12	32	10/26/10	17:44	1,373	43	Duplicate	Soil	µg/kg
SB01	MCSB01-S-32320	10/22/10	18:41	57.5	11/1/10	15:39	56	197	Primary	Soil	µg/kg
SB01	MCSB01-S-32320D	10/22/10	18:41	57.5	11/1/10	16:39	4.1 J	92	Replicate	Soil	µg/kg
SB25	MCSB25-S-32342	10/24/10	15:34	28	11/1/10	21:16	94	2.9 J	Primary	Soil	µg/kg
SB25	MCSB25-S-32342D	10/24/10	15:35	28	11/1/10	20:37	47	4.4 J	Replicate	Soil	µg/kg
SB17	MCSB17-S-32353	10/25/10	9:46	32	11/2/10	13:36	34	2.4 J	Primary	Soil	µg/kg
SB17	MCSB17-S-32353DUP	10/25/10	9:46	32	11/2/10	14:06	40	2.4 J	Duplicate	Soil	µg/kg
SB17	MCSB17-S-32360	10/25/10	10:18	52	11/2/10	16:06	304	2.4 J	Primary	Soil	µg/kg
SB17	MCSB17-S-32361	10/25/10	10:19	52	11/2/10	11:34	325	2.7 J	Replicate	Soil	µg/kg
SB36	MCSB36-S-32370	10/25/10	16:32	32	11/2/10	22:06	ND	ND	Primary	Soil	µg/kg
SB36	MCSB36-S-32370D	10/25/10	16:33	32	11/3/10	11:51	ND	ND	Replicate	Soil	µg/kg
SB09	MCSB09-S-32381	10/26/10	9:33	24	11/3/10	15:18	66	ND	Primary	Soil	µg/kg
SB09	MCSB09-S-32381D	10/26/10	9:34	24	11/3/10	18:49	61	ND	Replicate	Soil	µg/kg
SB09	MCSB09-S-32390	10/26/10	10:40	56	11/3/10	13:48	ND	ND	Primary	Soil	µg/kg
SB09	MCSB09-S-32390DUP	10/26/10	10:40	56	11/3/10	14:18	ND	ND	Duplicate	Soil	µg/kg
SB22	MCSB22-S-32396	10/26/10	14:18	32	11/3/10	12:51	ND	ND	Primary	Soil	µg/kg
SB22	MCSB22-S-32396DUP	10/26/10	14:18	32	11/3/10	13:21	ND	ND	Duplicate	Soil	µg/kg
SB22	MCSB22-S-32400	10/26/10	14:44	48	11/3/10	16:20	ND	ND	Primary	Soil	µg/kg
SB22	MCSB22-S-32400D	10/26/10	14:45	48	11/3/10	11:48	ND	ND	Replicate	Soil	µg/kg
SB09D	MCSB09D-W-32424	11/15/10	13:04	58-63	11/16/10	17:30	8.7	0.9 J	Primary	Water	µg/L
SB09D	MCSB09D-W-32425	11/15/10	13:05	58-63	11/16/10	18:00	7.1	0.8 J	Replicate	Water	µg/L

TABLE S2.4 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration		Sample Type	Sample Medium	Units
							Carbon Tetrachloride	Chloroform			
SB22S	MCSB22S-W-32426	11/15/10	13:27	18-28	11/16/10	20:00	0.5 J	ND	Primary	Water	µg/L
SB22S	MCSB22S-W-32426DUP	11/15/10	13:27	18-28	11/16/10	20:31	0.4 J	ND	Duplicate	Water	µg/L
SB27S	MCSB27S-W-32428	11/15/10	14:38	20-30	11/16/10	19:00	82	10	Primary	Water	µg/L
SB27S	MCSB27S-W-32428DUP	11/15/10	14:38	20-30	11/16/10	19:30	89	11	Duplicate	Water	µg/L
SB27	MCSB27-S-32441	12/1/10	9:40	24	12/6/10	12:26	ND	ND	Primary	Soil	µg/kg
SB27	MCSB27-S-32447	12/1/10	9:41	24	12/6/10	12:56	ND	ND	Replicate	Soil	µg/kg
SB37D	MCSB37D-W-32434	12/1/10	9:42	35.8-45.8	12/2/10	11:50	ND	ND	Primary	Water	µg/L
SB37D	MCSB37D-W-32434DUP	12/1/10	9:42	35.8-45.8	12/2/10	12:20	ND	ND	Duplicate	Water	µg/L
SB40	MCSB40-S-32450	12/1/10	15:31	8	12/3/10	5:09	ND	ND	Primary	Soil	µg/kg
SB40	MCSB40-S-32450DUP	12/1/10	15:31	8	12/3/10	5:39	ND	ND	Duplicate	Soil	µg/kg
SB40	MCSB40-S-32451	12/1/10	15:35	12	12/3/10	7:10	ND	ND	Primary	Soil	µg/kg
SB40	MCSB40-S-32461	12/1/10	15:36	12	12/3/10	3:09	ND	ND	Replicate	Soil	µg/kg
SB41	MCSB41-S-32468	12/2/10	11:35	28	12/6/10	6:58	1,489	54	Primary	Soil	µg/kg
SB41	MCSB41-S-32474	12/2/10	11:36	28	12/7/10	6:11	1,217	50	Replicate	Soil	µg/kg
SB41	MCSB41-S-32475	12/2/10	12:12	52	12/6/10	8:58	ND	ND	Primary	Soil	µg/kg
SB41	MCSB41-S-32475DUP	12/2/10	12:12	52	12/6/10	9:29	ND	ND	Duplicate	Soil	µg/kg
SB42	MCSB42-S-32478	12/2/10	15:49	8	12/8/10	12:25	ND	ND	Primary	Soil	µg/kg
SB42	MCSB42-S-32478DUP	12/2/10	15:49	8	12/8/10	12:55	ND	ND	Duplicate	Soil	µg/kg
SB42	MCSB42-S-32481	12/2/10	15:54	16	12/8/10	13:55	72	4.7 J	Primary	Soil	µg/kg
SB42	MCSB42-S-32492	12/2/10	15:55	16	12/7/10	8:12	154	5.5 J	Replicate	Soil	µg/kg
SB42	MCSB42-S-32487	12/2/10	16:17	40	12/9/10	18:22	ND	ND	Primary	Soil	µg/kg
SB42	MCSB42-S-32487DUP	12/2/10	16:17	40	12/8/10	17:53	ND	ND	Duplicate	Soil	µg/kg
SB44	MCSB44-S-32494	12/3/10	15:36	4	12/9/10	18:09	ND	ND	Primary	Soil	µg/kg
SB44	MCSB44-S-32494DUP	12/3/10	15:36	4	12/9/10	18:39	ND	ND	Duplicate	Soil	µg/kg

TABLE S2.4 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration		Sample Type	Sample Medium	Units
							Carbon Tetrachloride	Chloroform			
SB44	MCSB44-S-32512	12/3/10	16:14	36	12/9/10	13:41	ND	ND	Primary	Soil	µg/kg
SB44	MCSB44-S-32517	12/3/10	16:15	36	12/9/10	19:53	ND	ND	Replicate	Soil	µg/kg
SB08	MCSB08-S-32541	12/4/10	10:06	24	12/11/10	5:14	162	6.8 J	Primary	Soil	µg/kg
SB08	MCSB08-S-32541DUP	12/4/10	10:06	24	12/11/10	5:44	172	7.4 J	Duplicate	Soil	µg/kg
SB08	MCSB08-S-32543	12/4/10	10:14	32	12/10/10	16:10	219	8.9 J	Primary	Soil	µg/kg
SB08	MCSB08-S-32543DUP	12/4/10	10:14	32	12/10/10	16:40	229	9.5 J	Duplicate	Soil	µg/kg
SB08	MCSB08-S-32547	12/4/10	10:43	48	12/11/10	4:44	128	4.2 J	Primary	Soil	µg/kg
SB08	MCSB08-S-32549	12/4/10	10:44	48	12/10/10	17:39	96	4.4 J	Replicate	Soil	µg/kg
SB46	MCSB46-S-32526	12/4/10	13:50	24	12/13/10	7:01	42	1.7 J	Primary	Soil	µg/kg
SB46	MCSB46-S-32538	12/4/10	13:51	24	12/13/10	9:01	40	2.0 J	Replicate	Soil	µg/kg
SB46	MCSB46-S-32538DUP	12/4/10	13:51	24	12/13/10	9:31	35	2.0 J	Duplicate	Soil	µg/kg
SB47	MCSB47-S-32555	12/5/10	11:49	20	12/13/10	22:01	402	5.6 J	Primary	Soil	µg/kg
SB47	MCSB47-S-32565	12/5/10	11:50	20	12/13/10	21:31	403	6.0 J	Replicate	Soil	µg/kg
SB47	MCSB47-S-32557	12/5/10	11:59	28	12/14/10	1:48	902	7.3 J	Primary	Soil	µg/kg
SB47	MCSB47-S-32557DUP	12/5/10	11:59	28	12/14/10	2:18	952	8.1 J	Duplicate	Soil	µg/kg
SB48	MCSB48-S-32572	12/5/10	16:36	28	12/10/10	9:57	246	7.4 J	Primary	Soil	µg/kg
SB48	MCSB48-S-32572DUP	12/5/10	16:36	28	12/10/10	10:27	259	7.8 J	Duplicate	Soil	µg/kg
SB48	MCSB48-S-32573	12/5/10	16:45	32	12/11/10	2:44	214	6.4 J	Primary	Soil	µg/kg
SB48	MCSB48-S-32580	12/5/10	16:46	32	12/11/10	10:43	219	5.9 J	Replicate	Soil	µg/kg
SB08D	MCSB08D-W-32508	12/6/10	10:48	47-57	12/7/10	10:13	1,422	42	Primary	Water	µg/L
SB08D	MCSB08D-W-32508DUP	12/6/10	10:48	47-57	12/7/10	10:43	1,340	40	Duplicate	Water	µg/L
SB16	MCSB16-S-32582	12/6/10	11:11	20	12/10/10	5:57	33	3.4 J	Primary	Soil	µg/kg
SB16	MCSB16-S-32592	12/6/10	11:12	20	12/10/10	7:27	32	3.6 J	Replicate	Soil	µg/kg
SB16D	MCSB16D-W-32606	1/14/11	9:53	48-58	1/17/11	12:46	2.5	0.5 J	Primary	Water	µg/L
SB16D	MCSB16D-W-32607	1/14/11	9:57	48-58	1/17/11	13:16	2.8	0.5 J	Replicate	Water	µg/L



TABLE S2.4 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration		Sample Type	Sample Medium	Units
							Carbon Tetrachloride	Chloroform			
SB47D	MCSB47D-W-32609	1/14/11	10:58	47-57	1/18/11	13:34	135	6.1	Primary	Water	µg/L
SB47D	MCSB47D-W-32609DUP	1/14/11	10:58	47-57	1/18/11	14:04	134	6.1	Duplicate	Water	µg/L
SB47S	MCSB47S-W-32610	1/14/11	11:17	20-30	1/18/11	17:03	2,306	103	Primary	Water	µg/L
SB47S	MCSB47S-W-32610DUP	1/14/11	11:17	20-30	1/18/11	17:33	2,253	101	Duplicate	Water	µg/L
SB45S	MCSB45S-W-32567	2/26/11	15:24	18-28	3/1/11	11:34	ND	ND	Primary	Water	µg/L
SB45S	MCSB45S-W-32567DUP	2/26/11	15:24	18-28	3/1/11	12:04	ND	ND	Duplicate	Water	µg/L
SB46S	MCSB46S-W-32626	3/23/11	16:21	8-18	3/24/11	13:14	8.9	6.0	Primary	Water	µg/L
SB46S	MCSB46S-W-32626DUP	3/23/11	16:21	8-18	3/24/11	13:44	8.9	5.9	Duplicate	Water	µg/L
SB08D	MCSB8D-W-32872	4/5/11	13:13	47-57	4/7/11	13:46	1,209	61	Primary	Water	µg/L
SB08D	MCSB8D-W-32873	4/5/11	13:15	47-57	4/7/11	14:16	1,196	61	Replicate	Water	µg/L
SB41S	MCSB41S-W-32880	4/5/11	17:09	8-18	4/7/11	11:34	57	33	Primary	Water	µg/L
SB41S	MCSB41S-W-32880DUP	4/5/11	17:09	8-18	4/7/11	12:04	55	32	Duplicate	Water	µg/L
SB47S	MCSB47S-W-32910	4/6/11	9:45	20-30	4/11/11	16:00	1,560	93	Primary	Water	µg/L
SB47S	MCSB47S-W-32910DUP	4/6/11	9:45	20-30	4/11/11	16:30	1,504	89	Duplicate	Water	µg/L
SB46M	MCSB46M-W-32913	4/6/11	11:00	20-30	4/8/11	20:50	186	15	Primary	Water	µg/L
SB46M	MCSB46M-W-32913DUP	4/6/11	11:00	20-30	4/8/11	21:20	171	13	Duplicate	Water	µg/L
SB16M	MCSB16M-W-32916	4/6/11	12:38	20-30	4/11/11	13:49	600	48	Primary	Water	µg/L
SB16M	MCSB16M-W-32916DUP	4/6/11	12:38	20-30	4/11/11	14:19	590	46	Duplicate	Water	µg/L
SB17D	MCSB17D-W-32919	4/6/11	13:15	51.3-61.3	4/11/11	15:46	1,231	47	Primary	Water	µg/L
SB17D	MCSB17DDUP-W-32906	4/6/11	13:16	51.3-61.3	4/8/11	19:49	523	73	Replicate	Water	µg/L
SB27S	MCSB27S-W-32892	4/6/11	13:58	20-30	4/8/11	14:52	21	10	Primary	Water	µg/L
SB27S	MCSB27S-W-32892DUP	4/6/11	13:58	20-30	4/8/11	15:51	20	10	Duplicate	Water	µg/L

TABLE S2.4 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration		Sample Type	Sample Medium	Units
							Carbon Tetrachloride	Chloroform			
SB44D	MCSB44D-W-32924	4/6/11	14:15	50-60	4/8/11	15:16	8.1	ND	Primary	Water	µg/L
SB44D	MCSB44D-W-32924DUP	4/6/11	14:15	50-60	4/8/11	15:46	8.2	ND	Duplicate	Water	µg/L
SB43M	MCSB43M-W-32895	4/6/11	15:12	20-30	4/8/11	17:18	ND	ND	Primary	Water	µg/L
SB43M	MCSB43M-W-32896	4/6/11	15:14	20-30	4/8/11	17:47	ND	ND	Replicate	Water	µg/L
SB50	MCSB50-S-32952	5/10/11	11:01	12	5/12/11	18:39	ND	ND	Primary	Soil	µg/kg
SB50	MCSB50-S-32952DUP	5/10/11	11:01	12	5/12/11	19:09	ND	ND	Duplicate	Soil	µg/kg
SB50	MCSB50-S-32954	5/10/11	11:06	20	5/12/11	11:47	ND	ND	Primary	Soil	µg/kg
SB50	MCSB50-S-32954DUP	5/10/11	11:06	20	5/12/11	12:18	ND	ND	Duplicate	Soil	µg/kg
SB50	MCSB50-S-32956	5/10/11	11:18	28	5/12/11	18:08	ND	1.3 J	Primary	Soil	µg/kg
SB50	MCSB50-S-32964	5/10/11	11:19	28	5/12/11	14:59	ND	ND	Replicate	Soil	µg/kg
SB49	MCSB49-S-32939	5/12/11	9:28	40	5/16/11	15:42	ND	ND	Primary	Soil	µg/kg
SB49	MCSB49-S-32943	5/12/11	9:29	40	5/16/11	12:48	ND	ND	Replicate	Soil	µg/kg
SB49	MCSB49-S-32946	5/12/11	10:00	59.5	5/16/11	17:09	ND	ND	Primary	Soil	µg/kg
SB49	MCSB49-S-32946DUP	5/12/11	10:00	59.5	5/16/11	17:39	ND	ND	Duplicate	Soil	µg/kg
SB54	MCSB54-S-33270	5/13/11	14:35	4	5/16/11	21:31	ND	ND	Primary	Soil	µg/kg
SB54	MCSB54-S-33270DUP	5/13/11	14:35	4	5/16/11	22:01	ND	ND	Duplicate	Soil	µg/kg
SB54	MCSB54-S-33274	5/13/11	14:53	20	5/17/11	12:22	ND	ND	Primary	Soil	µg/kg
SB54	MCSB54-S-33284	5/13/11	14:54	20	5/16/11	21:02	ND	ND	Replicate	Soil	µg/kg
SB54	MCSB54-S-33281	5/13/11	15:50	48	5/17/11	16:44	ND	ND	Primary	Soil	µg/kg
SB54	MCSB54-S-33281DUP	5/13/11	15:50	48	5/17/11	17:13	ND	ND	Duplicate	Soil	µg/kg
SB54D	MCSB54D-W-33287	5/14/11	10:54	42-52	5/16/11	10:50	ND	ND	Field evaluation	Water	µg/L
SB54D	MCSB54D-W-33288	5/14/11	11:32	42-52	5/16/11	11:22	ND	ND	Replicate	Water	µg/L
SB54D	MCSB54D-W-33288DUP	5/14/11	11:32	42-52	5/16/11	11:52	ND	ND	Duplicate	Water	µg/L

TABLE S2.4 (Cont.)

Location	Sample	Sample Date and Time		Depth (ft BGL)	Analysis Date and Time		Concentration		Sample Type	Sample Medium	Units
							Carbon Tetrachloride	Chloroform			
SB49S	MCSB49S-W-32968	5/16/11	9:30	8-18	5/17/11	11:34	ND	ND	Field evaluation	Water	µg/L
SB49S	MCSB49S-W-32968DUP	5/16/11	9:30	8-18	5/17/11	12:05	ND	ND	Duplicate	Water	µg/L

- <sup>a</sup> Water samples were analyzed at the AGEM Laboratory by modified EPA Method 524.2 (purge-and-trap method by gas chromatography-mass spectrometry [GC-MS]). Soil samples were analyzed at the AGEM Laboratory by modified EPA Methods 5030B and 8260B (purge-and-trap method by GC-MS).
- <sup>b</sup> Qualifier J indicates an estimated concentration below the purge-and-trap method quantitation limit of 10 µg/kg for soil samples or 1.0 µg/L for water samples.
- <sup>c</sup> ND, not detected at an instrument detection limit of 1.0 µg/kg for soil samples or 0.1 µg/L for water samples.

TABLE S2.5 Results for soil samples submitted for verification organic analysis by TestAmerica during the 2010-2011 investigation at Montgomery City.

Location	Sample Depth (ft BGL)	Sample	Sample Date and Time	Concentration (µg/kg)							Sample Delivery Group
				AGEM Laboratory			TestAmerica				
				Carbon Tetrachloride	Chloroform	Quantitation Limit	Carbon Tetrachloride	Chloroform	Quantitation Limit		
SB04	4	MCSB04-S-32182	10/18/10 15:18	ND <sup>a</sup>	ND	10	ND	ND	10	200-2223	
SB05	8	MCSB05-S-32187	10/18/10 15:56	ND	ND	10	ND	ND	10	200-2223	
SB07	12	MCSB07-S-32196	10/18/10 16:55	ND	ND	10	ND	ND	9.8	200-2223	
SB08	4	MCSB08-S-32198	10/18/10 17:17	ND	ND	10	ND	ND	8.8	200-2223	
SB13	16	MCSB13-S-32221	10/19/10 13:41	10	2.3 J <sup>b</sup>	10	14	ND	7.3	200-2223	
SB14	8	MCSB14-S-32223	10/19/10 14:08	6.1 J	16	10	ND	ND	7.4	200-2223	
SB18	12	MCSB18-S-32240	10/19/10 15:49	3.6 J	ND	10	5.8 J	ND	11	200-2223	
SB18	16	MCSB18-S-32241	10/19/10 15:51	69	3 J	10	52	3.4 J	10	200-2223	
SB21	16	MCSB21-S-32253	10/19/10 17:33	2.6 J	ND	10	ND	ND	10	200-2223	
SB24	8	MCSB24-S-32263	10/20/10 9:45	ND	ND	10	ND	ND	7.8	200-2223	
SB28	12	MCSB28-S-32280	10/20/10 13:33	ND	ND	10	ND	ND	10	200-2223	
SB29	12	MCSB29-S-32284	10/20/10 13:49	7.7 J	ND	10	8.2 J	ND	9.5	200-2223	
SB30	12	MCSB30-S-32288	10/20/10 14:24	ND	ND	10	3.1 J	ND	6.7	200-2223	
SB33	12	MCSB33-S-32300	10/21/10 11:10	43	6.9 J	10	40	ND	9.3	200-2223	
SB01	24	MCSB01-S-32311	10/22/10 9:45	1,095	55	10	1,400	56	10	200-2223	
SB01	28	MCSB01-S-32312	10/22/10 9:50	1,400	59	10	1,800	75	10	200-2223	
SB01	52	MCSB01-S-32318	10/22/10 15:15	120	8.2 J	10	150	4.6 J	10	200-2223	
SB17	20	MCSB17-S-32350	10/25/10 8:59	28	2 J	10	18	ND	11	200-2223	
SB36	16	MCSB36-S-32366	10/25/10 16:17	ND	ND	10	ND	ND	8.3	200-2223	
SB09	20	MCSB09-S-32380	10/26/10 9:29	178	2.7 J	10	140	ND	9.9	200-2345	
SB09	40	MCSB09-S-32385	10/26/10 10:05	ND	ND	10	ND	ND	11	200-2345	
SB22	24	MCSB22-S-32394	10/26/10 14:10	ND	ND	10	ND	ND	8.8	200-2345	
SB27	47	MCSB27-S-32448	12/1/10 10:20	ND	ND	10	ND	ND	8.0	200-2954	
SB40	12	MCSB40-S-32451	12/1/10 15:35	ND	ND	10	ND	ND	11	200-2954	
SB41	8	MCSB41-S-32463	12/2/10 11:19	ND	ND	10	ND	ND	12	200-2954	
SB42	4	MCSB42-S-32477	12/2/10 15:45	ND	ND	10	ND	ND	8.7	200-2954	
SB42	52	MCSB42-S-32490	12/2/10 16:40	4.5 J	ND	10	ND	ND	9.0	200-2954	
SB44	56	MCSB44-S-32519	12/3/10 16:52	ND	ND	10	ND	ND	7.6	200-2954	
SB08	48	MCSB08-S-32549	12/4/10 10:44	96	4.4 J	10	63	2.9 J	10	200-2954	
SB46	20	MCSB46-S-32525	12/4/10 13:45	93	3 J	10	58	ND	7.3	200-2954	
SB47	28	MCSB47-S-32557	12/5/10 11:59	902	7.3 J	10	620	5.5 J	10	200-2954	
SB48	20	MCSB48-S-32570	12/5/10 16:22	226	7.1 J	10	190	5.7 J	10	200-2954	
SB16	52	MCSB16-S-32590	12/6/10 12:12	ND	ND	10	ND	ND	9.0	200-2954	
SB50	40	MCSB50-S-32959	5/10/11 11:58	596	5.9 J	10	470	4.8 J	10	200-5266	
SB50	44	MCSB50-S-32960	5/10/11 12:07	282	1.7 J	10	240	4 J	10	200-5266	

TABLE S2.5 (Cont.).

Location	Sample Depth (ft BGL)	Sample	Sample Date and Time	Concentration (µg/kg)							Sample Delivery Group
				AGEM Laboratory			TestAmerica				
				Carbon Tetrachloride	Chloroform	Quantitation Limit	Carbon Tetrachloride	Chloroform	Quantitation Limit		
SB50	48	MCSB50-S-32961	5/10/11 12:13	325	1.6 J	10	320	4.1 J	10	200-5266	
SB49	8	MCSB49-S-32931	5/12/11 8:57	ND	ND	10	ND	ND	9.1	200-5266	
SB49	40	MCSB49-S-32939	5/12/11 9:28	ND	ND	10	ND	ND	7.6	200-5266	
SB54	24	MCSB54-S-33275	5/13/11 14:56	ND	ND	10	ND	ND	8.0	200-5266	

<sup>a</sup> ND, not detected at an instrument detection limit of 1.0 µg/kg.

<sup>b</sup> Qualifier J indicates an estimated concentration below the indicated method quantitation limit.



TABLE S2.6 Results for groundwater samples submitted for verification organic analysis by TestAmerica during the 2010-2011 investigation at Montgomery City.

Location	Sample Depth (ft BGL)	Sample	Sample Date and Time	Concentration (µg/L)						Sample Delivery Group
				AGEM Laboratory		TestAmerica		Carbon Tetrachloride	Chloroform	
				Carbon Tetrachloride	Chloroform	Carbon Tetrachloride	Chloroform			
PWS1	–	MCPWS1-W-32630	10/22/10 8:27	ND <sup>a</sup>	ND	ND	ND	ND	200-2183	
Hemeyer	–	MICHEMEYER-W-32633	10/22/10 12:18	ND	ND	ND	ND	ND	200-2183	
SB22D	57.2-67.2	MCSB22-W-32409	10/28/10 10:43	11	0.7 J <sup>b</sup>	9.5	0.32 J		200-2245	
SB01S	20-30	MCSB01S-W-32411	10/28/10 13:54	10,414	2,036	10,000	1,800		200-2245	
SB17D	51.3-61.3	MCSB17D-W-32422	11/15/10 12:06	1,310	35	930	27		200-2520	
SB42D	47-57	MCSB42D-W-32502	12/5/10 11:10	7.9	6.2	7.8	4.9		200-2822	
SB48D	44-54	MCSB48D-W-32509	12/6/10 11:20	586	252	490	300		200-2822	
SB47D	47-57	MCSB47D-W-32609	1/14/11 10:58	135	6.1	110	6.1		200-3367	
SB01M	20-30	MCSB1S-W-32879	4/5/11 16:29	8,001	1,397	4,300	1,800		200-4605	
SB41D	48-58	MCSB41D-W-32882	4/5/11 18:08	14	26	11	52		200-4605	
SB46S	8-18	MCSB46S-W-32912	4/6/11 10:38	7.9	8.2	7.3	8.7		200-4605	
SB38M	15-25	MCSB38M-W-32889	4/6/11 11:17	ND	ND	ND	ND		200-4605	
SB27D	41-51	MCSB27D-W-32893	4/6/11 14:18	3.1	0.7 J	2.4	0.91		200-4605	
SB01M	20-30	MCSB01M-W-33290	5/17/11 10:24	9,150	1,437	11,000	1,900		200-5223	
SB54D	42-52	MCSB54D-W-33295	5/17/11 12:52	ND	ND	ND	ND		200-5223	
SB54M	20-30	MCSB54M-W-33305	6/9/11 9:14	ND	ND	ND	ND		200-5483	

<sup>a</sup> ND, not detected at instrument detection limit of 0.1 µg/L.

<sup>b</sup> Qualifier J indicates an estimated concentration below the method quantitation limit of 1.0 µg/L for purge-and-trap analysis at the AGEM Laboratory or 0.5 µg/L for low-level CLP analysis by TestAmerica.

**Supplement 3:**

**Verification Data from TestAmerica**

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Report for Soil SDG 200-5266 .....	309 of 808
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Report for Water (VOCs) SDG 200-2245 .....	431 of 808
Report for Water (VOCs) SDG 200-2520 .....	480 of 808
Report for Water (VOCs) SDG 200-2822 .....	526 of 808
Report for Water (VOCs) SDG 200-3367 .....	576 of 808
Report for Water (VOCs) SDG 200-4605 .....	623 of 808
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Report for Water (VOCs) SDG 200-5483 .....	738 of 808
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## ANALYTICAL REPORT

Job Number: 200-2223-1

SDG Number: MONTGO (200-2223)

Job Description: Montgomery City (200-2223)

Contract Number: 8E-00302

For:

Argonne National Laboratory

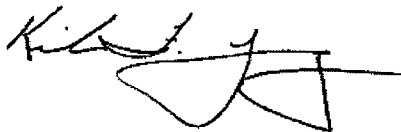
9700 South Cass Avenue

Building 203

Office B-149

Argonne, IL 60439

Attention: Mr. Clyde Dennis



Approved for release.  
Kirk F Young  
Project Manager I  
11/19/2010 3:00 PM

---

Kirk F Young

Project Manager I

kirk.young@testamericainc.com

11/19/2010

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

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## CASE NARRATIVE

**Client: Argonne National Laboratory**

**Project: Montgomery City (200-2223)**

**Report Number: 200-2223-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### Receipt

The samples were received on 10/28/2010. 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.

### SW846 Method(s) 5035/8260B Volatile Organics (Medium Level Soil)

The samples were analyzed by the referenced method(s), using a low-level calibration. In performing the analytical work, 500 microliters of the methanol extract were added to the 5 milliliter purge volume. An additional, dilution analysis was performed on samples MC-S-32312 and MC-S-32311 in order to provide quantification within the range of calibrated instrument response. Both sets of results for the analysis of samples MC-S-32312 and MC-S-32311 are included in this submittal. Each analysis associated with the samples in this sample set did exhibit an acceptable internal standard performance. The derived recovery of one or more of the surrogate controls was high in the analysis of samples MC-S-32241 and MC-S-32318. Two types of laboratory control sample analyses were performed in each analytical sequence. 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 that for naphthalene, there was an acceptable recovery of each target analyte in each laboratory control sample analysis that defined method performance. In each of those analyses the recovery of naphthalene was high (approximating 127 percent). The upper control limit that is used by the laboratory in assessing the recovery of performance of naphthalene in a laboratory control sample analysis is 125 percent. In each 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 bromomethane, chloroethane, 1,1-dichloroethene, Freon TF, acetone, methyl iodide, carbon disulfide, and isobutyl alcohol, for which the recovery was below 50 percent. Additionally, the recoveries of chloroform and carbon tetrachloride were low in the analysis of each laboratory control sample with methanol. In the laboratory control sample analysis identified as LCS 200-9200/7-A, the recovery of chloroform was 76 percent, and the recovery of carbon tetrachloride was 73 percent. In the laboratory control sample analysis identified as LCS 200-9200/8-A, the recovery of chloroform was 79 percent, and the recovery of carbon tetrachloride was 79 percent. The stated recovery values compare to lower control limits of 85 percent for chloroform, and 80 percent for carbon tetrachloride. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. Bromomethane was

identified in the analysis of sample MC-S-MEOH at a concentration equivalent to the established reporting limit of 10 ug/Kg. A relatively high concentration of bromomethane was identified in the analysis of one of the instrument blanks associated with the analytical work. The derived concentration of bromomethane in that analysis, identified as MB 200-9200/2-A, was 13.0 ug/Kg. Trace concentrations of chloromethane and methyl iodide were identified in the analysis of the second instrument blank associated with the analytical work, identified as MB 200-9200/3-A, as was a relatively high concentration of bromomethane. While the concentrations of chloromethane and methyl iodide in that analysis were below the established reporting limit of 10 ug/Kg, the derived concentration of bromomethane (17.4 ug/Kg) was above that level.

Manual integration was employed in deriving certain of the analytical results. The values that have been derived from manual integration are qualified on the quantitation reports. Extracted ion current profiles for each manual integration are included in the data package, and further documented in the Sample Preparation section of this submittal.

4901

MATRIX: <u>Spic. Methanol</u>		ARGONNE NATIONAL LABORATORY		Shipping Container No.	
RECEIVING LAB: <u>TestAmerica</u>		CHAIN OF CUSTODY RECORD*		Shipping Info:	
PROJECT/SITE: <u>Montgomery City</u>		ANALYSIS		ANL Field Contact (Name & Temporary Phone):	
SAMPLER(S) (Signature) <u>Refusion</u>		Number of containers		REMARKS	
DATE OF COLLECTION		SAMPLE ID NUMBER(S)			
10/27/10	MC-S-32312 (10A) B1	1-20ml	✓	Volume (Mort)	11.587
	MC-S-32284 (10A) B1	1-20ml	✓		10.481
	MC-S-32221 (20A) R	1-20ml	✓		13.770
	MC-S-32280 (20A) G	1-20ml	✓		9.570
	MC-S-32198 (10A) R	1-20ml	✓		11.349
	MC-S-32241 (30A) R	1-20ml	✓		12.933
	MC-S-32187 (20A) B1	1-20ml	✓		9.783
	MC-S-32182 (10A) B1	1-20ml	✓		9.524
	MC-S-32240 (10A) B	1-20ml	✓		12.735
	MC-S-3223 (19A) D	1-20ml	✓		9.266
	MC-S-32318 (10A) R	1-20ml	✓		13.482
	MC-S-32300 (20A) B1	1-20ml	✓		12.135
	MC-S-32263 (20A) B	1-20ml	✓		10.766
	MC-S-32196 (30A) B1	1-20ml	✓		12.750
					10.186
Relinquished by (Signature) <u>Jay Ahrens</u>	Date <u>10/27/10</u>	Time <u>11:30a</u>	Received by (Signature)	Date	Time
Relinquished by (Signature) <u>Mary Berryman</u>	Date <u>10/27/10</u>	Time <u>11:35a</u>	Received by (Signature) <u>Shaw Kahn</u>	Date <u>10/28/10</u>	Time <u>1020</u>
Remarks	Temp 5.8				

\*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.

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.

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

10/27/10 → MC-S-32284 = 1-20ml Mort - 10.481









## SAMPLE SUMMARY

Client: Argonne National Laboratory

Job Number: 200-2223-1  
Sdg Number: MONTGO (200-2223)

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
200-2223-1	MC-S-32312	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-2	MC-S-32284	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-3	MC-S-32221	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-4	MC-S-32280	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-5	MC-S-32198	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-6	MC-S-32241	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-7	MC-S-32187	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-8	MC-S-32182	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-9	MC-S-32311	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-10	MC-S-32240	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-11	MC-S-32223	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-12	MC-S-32318	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-13	MC-S-32300	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-14	MC-S-32263	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-15	MC-S-32196	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-16	MC-S-32288	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-17	MC-S-32253	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-18FB	MC-S-MEOH	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-19	MC-S-32350	Solid	10/27/2010 00:00	10/28/2010 10:20
200-2223-20	MC-S-32366	Solid	10/27/2010 00:00	10/28/2010 10:20

## METHOD SUMMARY

Client: Argonne National Laboratory

Job Number: 200-2223-1  
Sdg Number: MONTGO (200-2223)

<b>Description</b>	<b>Lab Location</b>	<b>Method</b>	<b>Preparation Method</b>
<b>Matrix: Solid</b>			
Volatile Organic Compounds (GC/MS) Purge and Trap	TAL BUR TAL BUR	SW846 8260B	SW846 5035

### Lab References:

TAL BUR = TestAmerica Burlington

### Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

## METHOD / ANALYST SUMMARY

Client: Argonne National Laboratory

Job Number: 200-2223-1  
Sdg Number: MONTGO (200-2223)

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 8260B	Heald, John	JRH

## Quality Control Results

Client: Argonne National Laboratory

Job Number: 200-2223-1  
Sdg Number: MONTGO (200-2223)

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Prep Batch: 200-9068</b>					
200-2223-1	MC-S-32312	T	Solid	5035	
200-2223-1DL	MC-S-32312	T	Solid	5035	
200-2223-2	MC-S-32284	T	Solid	5035	
200-2223-3	MC-S-32221	T	Solid	5035	
200-2223-4	MC-S-32280	T	Solid	5035	
200-2223-5	MC-S-32198	T	Solid	5035	
200-2223-6	MC-S-32241	T	Solid	5035	
200-2223-7	MC-S-32187	T	Solid	5035	
200-2223-8	MC-S-32182	T	Solid	5035	
200-2223-9	MC-S-32311	T	Solid	5035	
200-2223-9DL	MC-S-32311	T	Solid	5035	
200-2223-10	MC-S-32240	T	Solid	5035	
200-2223-11	MC-S-32223	T	Solid	5035	
200-2223-12	MC-S-32318	T	Solid	5035	
200-2223-13	MC-S-32300	T	Solid	5035	
200-2223-14	MC-S-32263	T	Solid	5035	
200-2223-15	MC-S-32196	T	Solid	5035	
200-2223-16	MC-S-32288	T	Solid	5035	
200-2223-17	MC-S-32253	T	Solid	5035	
200-2223-18FB	MC-S-MEOH	T	Solid	5035	
200-2223-19	MC-S-32350	T	Solid	5035	
200-2223-20	MC-S-32366	T	Solid	5035	
<b>Prep Batch: 200-9200</b>					
LCS 200-9200/7-A	Lab Control Sample	T	Solid	5035	
LCS 200-9200/8-A	Lab Control Sample	T	Solid	5035	
MB 200-9200/2-A	Method Blank	T	Solid	5035	
MB 200-9200/3-A	Method Blank	T	Solid	5035	



## Quality Control Results

Client: Argonne National Laboratory

Job Number: 200-2223-1  
Sdg Number: MONTGO (200-2223)

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Analysis Batch:200-9383</b>					
LCS 200-9383/4	Lab Control Sample	T	Solid	8260B	
LCS 200-9200/7-A	Lab Control Sample	T	Solid	8260B	200-9200
MB 200-9200/2-A	Method Blank	T	Solid	8260B	200-9200
200-2223-1	MC-S-32312	T	Solid	8260B	200-9068
200-2223-2	MC-S-32284	T	Solid	8260B	200-9068
200-2223-3	MC-S-32221	T	Solid	8260B	200-9068
200-2223-4	MC-S-32280	T	Solid	8260B	200-9068
200-2223-5	MC-S-32198	T	Solid	8260B	200-9068
200-2223-6	MC-S-32241	T	Solid	8260B	200-9068
200-2223-7	MC-S-32187	T	Solid	8260B	200-9068
200-2223-8	MC-S-32182	T	Solid	8260B	200-9068
200-2223-9	MC-S-32311	T	Solid	8260B	200-9068
200-2223-10	MC-S-32240	T	Solid	8260B	200-9068
200-2223-11	MC-S-32223	T	Solid	8260B	200-9068
200-2223-12	MC-S-32318	T	Solid	8260B	200-9068
200-2223-13	MC-S-32300	T	Solid	8260B	200-9068
<b>Analysis Batch:200-9400</b>					
LCS 200-9400/3	Lab Control Sample	T	Solid	8260B	
LCS 200-9200/8-A	Lab Control Sample	T	Solid	8260B	200-9200
MB 200-9200/3-A	Method Blank	T	Solid	8260B	200-9200
200-2223-1DL	MC-S-32312	T	Solid	8260B	200-9068
200-2223-9DL	MC-S-32311	T	Solid	8260B	200-9068
200-2223-14	MC-S-32263	T	Solid	8260B	200-9068
200-2223-15	MC-S-32196	T	Solid	8260B	200-9068
200-2223-16	MC-S-32288	T	Solid	8260B	200-9068
200-2223-17	MC-S-32253	T	Solid	8260B	200-9068
200-2223-18FB	MC-S-MEOH	T	Solid	8260B	200-9068
200-2223-19	MC-S-32350	T	Solid	8260B	200-9068
200-2223-20	MC-S-32366	T	Solid	8260B	200-9068

**Report Basis**

T = Total

## DATA REPORTING QUALIFIERS

Client: Argonne National Laboratory

Job Number: 200-2223-1  
Sdg Number: MONTGO (200-2223)

<u>Lab Section</u>	<u>Qualifier</u>	<u>Description</u>
GC/MS VOA		
	B	Compound was found in the blank and sample.
	U	Indicates the analyte was analyzed for but not detected.
	*	Recovery or RPD exceeds control limits
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
	X	Surrogate is outside control limits

# Method 8260B

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Volatile Organic Compounds (GC/MS)  
by Method 8260B

FORM II  
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 200-2223-1

SDG No.: MONTGO (200-2223)

Matrix: Solid Level: Medium

GC Column (1): DB-624 ID: 0.53 (mm)

Client Sample ID	Lab Sample ID	DCA #	TOL #	BFB #	DCZ #
MC-S-32312	200-2223-1	90	100	99	97
MC-S-32312 DL	200-2223-1 DL	89 D	97 D	102 D	98 D
MC-S-32284	200-2223-2	91	101	100	99
MC-S-32221	200-2223-3	96	108	106	104
MC-S-32280	200-2223-4	76	85	86	84
MC-S-32198	200-2223-5	99	112	111	107
MC-S-32241	200-2223-6	127	142 X	144 X	141
MC-S-32187	200-2223-7	74	83	83	81
MC-S-32182	200-2223-8	92	102	101	99
MC-S-32311	200-2223-9	77	86	88	85
MC-S-32311 DL	200-2223-9 DL	90 D	100 D	100 D	99 D
MC-S-32240	200-2223-10	99	113	113	109
MC-S-32223	200-2223-11	90	101	101	99
MC-S-32318	200-2223-12	108	124 X	124 X	117
MC-S-32300	200-2223-13	85	95	96	94
MC-S-32263	200-2223-14	91	101	100	97
MC-S-32196	200-2223-15	86	97	96	94
MC-S-32288	200-2223-16	82	91	93	89
MC-S-32253	200-2223-17	85	97	96	94
MC-S-MEOH	200-2223-18	83	95	95	92
MC-S-32350	200-2223-19	89	104	103	100
MC-S-32366	200-2223-20	93	104	104	100
	MB 200-9200/2-A	87	100	100	95
	MB 200-9200/3-A	88	101	100	99
	LCS 200-9200/7-A	98	106	103	100
	LCS 200-9200/8-A	92	100	98	96
	LCS 200-9383/4	93	103	103	104
	LCS 200-9400/3	91	101	99	98

QC LIMITS

DCA = 1,2-Dichloroethane-d4	65-155
TOL = Toluene-d8	80-115
BFB = Bromofluorobenzene	80-115
DCZ = 1,2-Dichlorobenzene-d4	45-145

# Column to be used to flag recovery values

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2223-1

SDG No.: MONTGO (200-2223)

Matrix: Solid Level: Medium

Lab File ID: lfaad05.d

Lab ID: LCS 200-9200/7-A

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dichlorodifluoromethane	250	211	84	30-180	
Chloromethane	250	252	101	55-150	
Vinyl chloride	250	247	99	65-145	
Bromomethane	250	76.7	31	65-145	*
Chloroethane	250	120	48	70-135	*
Trichlorofluoromethane	250	126	51	70-140	*
1,1-Dichloroethene	250	98.4	39	75-135	*
Freon TF	250	108	43	75-140	*
Acetone	1250	706	56	50-130	
Methyl iodide	250	43.2	17	70-150	*
Carbon disulfide	250	105	42	80-135	*
Methyl acetate	250	200	80	60-140	
Methylene Chloride	250	188	75	75-140	
trans-1,2-Dichloroethene	250	200	80	80-130	
Methyl t-butyl ether	250	188	75	85-130	*
1,1-Dichloroethane	250	182	73	85-120	*
Vinyl acetate	250	228	91	70-135	
2,2-Dichloropropane	250	191	77	85-120	*
cis-1,2-Dichloroethene	250	200	80	80-120	
2-Butanone	1250	1140	91	70-135	
Bromochloromethane	250	173	69	75-125	*
Tetrahydrofuran	3500	2980	85	75-125	
Chloroform	250	190	76	85-120	*
1,1,1-Trichloroethane	250	188	75	80-115	*
Cyclohexane	250	213	85	60-140	
1,1-Dichloropropene	250	205	82	85-120	*
Carbon tetrachloride	250	183	73	80-115	*
Isobutyl alcohol	12500	1370	11	70-135	*
Benzene	250	207	83	85-120	*
1,2-Dichloroethane	250	188	75	75-120	
Trichloroethene	250	207	83	85-120	*
Methylcyclohexane	250	220	88	60-140	
1,2-Dichloropropane	250	220	88	85-120	
Dibromomethane	250	196	78	80-120	*
1,4-Dioxane	12500	11500	92	50-160	
Bromodichloromethane	250	208	83	80-115	
2-Chloroethyl vinyl ether	250	256	103	65-145	
cis-1,3-Dichloropropene	250	211	84	85-120	*
4-Methyl-2-pentanone	1250	1180	94	65-135	
Toluene	250	218	87	75-125	
trans-1,3-Dichloropropene	250	215	86	85-120	
1,1,2-Trichloroethane	250	231	93	75-125	

# Column to be used to flag recovery and RPD values

FORM III 8260B



FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2223-1

SDG No.: MONTGO (200-2223)

Matrix: Solid Level: Medium

Lab File ID: lfaad05.d

Lab ID: LCS 200-9200/7-A

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Tetrachloroethene	250	210	84	85-120	*
1,3-Dichloropropane	250	218	87	85-120	
2-Hexanone	1250	1160	93	70-135	
Dibromochloromethane	250	221	88	80-120	
1,2-Dibromoethane	250	219	87	80-120	
Chlorobenzene	250	222	89	80-120	
1,1,1,2-Tetrachloroethane	250	221	88	80-115	
Ethylbenzene	250	225	90	80-120	
m&p-Xylene	500	460	92	80-120	
o-Xylene	250	229	92	85-120	
Styrene	250	227	91	80-125	
Bromoform	250	211	84	75-130	
Isopropylbenzene	250	232	93	85-120	
Bromobenzene	250	223	89	85-120	
1,1,2,2-Tetrachloroethane	250	230	92	75-125	
1,2,3-Trichloropropane	250	191	76	70-125	
n-Propylbenzene	250	238	95	85-120	
2-Chlorotoluene	250	234	93	85-120	
4-Chlorotoluene	250	240	96	85-120	
1,3,5-Trimethylbenzene	250	243	97	85-120	
tert-Butylbenzene	250	242	97	85-120	
1,2,4-Trimethylbenzene	250	258	103	85-120	
sec-Butylbenzene	250	257	103	85-120	
1,3-Dichlorobenzene	250	235	94	80-120	
4-Isopropyltoluene	250	250	100	85-120	
1,4-Dichlorobenzene	250	242	97	85-120	
1,2-Dichlorobenzene	250	235	94	85-120	
n-Butylbenzene	250	284	114	85-125	
1,2-Dibromo-3-Chloropropane	250	188	75	65-130	
1,2,4-Trichlorobenzene	250	263	105	80-125	
Hexachlorobutadiene	250	269	108	65-150	
Naphthalene	250	202	81	80-125	
1,2,3-Trichlorobenzene	250	243	97	70-125	

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2223-1

SDG No.: MONTGO (200-2223)

Matrix: Solid

Level: Medium

Lab File ID: lfaag04.d

Lab ID: LCS 200-9200/8-A

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dichlorodifluoromethane	250	247	99	30-180	
Chloromethane	250	267	107	55-150	
Vinyl chloride	250	257	103	65-145	
Bromomethane	250	100	40	65-145	*
Chloroethane	250	113	45	70-135	*
Trichlorofluoromethane	250	124	50	70-140	*
1,1-Dichloroethene	250	105	42	75-135	*
Freon TF	250	115	46	75-140	*
Acetone	1250	492	39	50-130	*
Methyl iodide	250	32.2	13	70-150	*
Carbon disulfide	250	118	47	80-135	*
Methyl acetate	250	210	84	60-140	
Methylene Chloride	250	190	76	75-140	
trans-1,2-Dichloroethene	250	210	84	80-130	
Methyl t-butyl ether	250	198	79	85-130	*
1,1-Dichloroethane	250	188	75	85-120	*
Vinyl acetate	250	229	92	70-135	
2,2-Dichloropropane	250	204	82	85-120	*
cis-1,2-Dichloroethene	250	211	85	80-120	
2-Butanone	1250	1000	80	70-135	
Bromochloromethane	250	181	72	75-125	*
Tetrahydrofuran	3500	2930	84	75-125	
Chloroform	250	198	79	85-120	*
1,1,1-Trichloroethane	250	197	79	80-115	*
Cyclohexane	250	226	90	60-140	
1,1-Dichloropropene	250	217	87	85-120	
Carbon tetrachloride	250	196	79	80-115	*
Isobutyl alcohol	12500	1290	10	70-135	*
Benzene	250	217	87	85-120	
1,2-Dichloroethane	250	193	77	75-120	
Trichloroethene	250	218	87	85-120	
Methylcyclohexane	250	228	91	60-140	
1,2-Dichloropropane	250	230	92	85-120	
Dibromomethane	250	199	80	80-120	
1,4-Dioxane	12500	10800	86	50-160	
Bromodichloromethane	250	219	88	80-115	
2-Chloroethyl vinyl ether	250	253	101	65-145	
cis-1,3-Dichloropropene	250	224	90	85-120	
4-Methyl-2-pentanone	1250	1050	84	65-135	
Toluene	250	229	92	75-125	
trans-1,3-Dichloropropene	250	227	91	85-120	
1,1,2-Trichloroethane	250	244	98	75-125	

# Column to be used to flag recovery and RPD values

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2223-1

SDG No.: MONTGO (200-2223)

Matrix: Solid

Level: Medium

Lab File ID: lfaag04.d

Lab ID: LCS 200-9200/8-A

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Tetrachloroethene	250	225	90	85-120	
1,3-Dichloropropane	250	234	94	85-120	
2-Hexanone	1250	1050	84	70-135	
Dibromochloromethane	250	234	94	80-120	
1,2-Dibromoethane	250	233	93	80-120	
Chlorobenzene	250	236	95	80-120	
1,1,1,2-Tetrachloroethane	250	237	95	80-115	
Ethylbenzene	250	242	97	80-120	
m&p-Xylene	500	492	98	80-120	
o-Xylene	250	243	97	85-120	
Styrene	250	241	96	80-125	
Bromoform	250	224	90	75-130	
Isopropylbenzene	250	252	101	85-120	
Bromobenzene	250	241	96	85-120	
1,1,2,2-Tetrachloroethane	250	248	99	75-125	
1,2,3-Trichloropropane	250	206	83	70-125	
n-Propylbenzene	250	255	102	85-120	
2-Chlorotoluene	250	251	101	85-120	
4-Chlorotoluene	250	260	104	85-120	
1,3,5-Trimethylbenzene	250	265	106	85-120	
tert-Butylbenzene	250	264	106	85-120	
1,2,4-Trimethylbenzene	250	280	112	85-120	
sec-Butylbenzene	250	281	112	85-120	
1,3-Dichlorobenzene	250	255	102	80-120	
4-Isopropyltoluene	250	272	109	85-120	
1,4-Dichlorobenzene	250	256	102	85-120	
1,2-Dichlorobenzene	250	255	102	85-120	
n-Butylbenzene	250	310	124	85-125	
1,2-Dibromo-3-Chloropropane	250	165	66	65-130	
1,2,4-Trichlorobenzene	250	283	113	80-125	
Hexachlorobutadiene	250	295	118	65-150	
Naphthalene	250	128	51	80-125	*
1,2,3-Trichlorobenzene	250	205	82	70-125	

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2223-1

SDG No.: MONTGO (200-2223)

Matrix: Solid Level: Medium

Lab File ID: lfaad04.d

Lab ID: LCS 200-9383/4

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dichlorodifluoromethane	25.0	19.6	78	30-180	
Chloromethane	25.0	23.4	94	55-150	
Vinyl chloride	25.0	25.0	100	65-145	
Bromomethane	25.0	22.6	90	65-145	
Chloroethane	25.0	25.3	101	70-135	
Trichlorofluoromethane	25.0	22.2	89	70-140	
1,1-Dichloroethene	25.0	21.6	86	75-135	
Freon TF	25.0	21.5	86	75-140	
Acetone	125	125	100	50-130	
Methyl iodide	25.0	23.6	95	70-150	
Carbon disulfide	25.0	20.9	83	80-135	
Methyl acetate	25.0	23.6	94	60-140	
Methylene Chloride	25.0	23.1	92	75-140	
trans-1,2-Dichloroethene	25.0	22.9	91	80-130	
Methyl t-butyl ether	25.0	22.6	90	85-130	
1,1-Dichloroethane	25.0	22.6	90	85-120	
Vinyl acetate	25.0	26.9	108	70-135	
2,2-Dichloropropane	25.0	21.8	87	85-120	
cis-1,2-Dichloroethene	25.0	23.1	92	80-120	
2-Butanone	125	131	105	70-135	
Bromochloromethane	25.0	23.4	94	75-125	
Tetrahydrofuran	350	346	99	75-125	
Chloroform	25.0	22.3	89	85-120	
1,1,1-Trichloroethane	25.0	21.2	85	80-115	
Cyclohexane	25.0	23.4	94	60-140	
1,1-Dichloropropene	25.0	22.8	91	85-120	
Carbon tetrachloride	25.0	21.6	86	80-115	
Isobutyl alcohol	1250	1440	115	70-135	
Benzene	25.0	23.5	94	85-120	
1,2-Dichloroethane	25.0	21.6	86	75-120	
Trichloroethene	25.0	23.1	93	85-120	
Methylcyclohexane	25.0	23.9	96	60-140	
1,2-Dichloropropane	25.0	24.8	99	85-120	
Dibromomethane	25.0	24.9	99	80-120	
1,4-Dioxane	1250	1380	110	50-160	
Bromodichloromethane	25.0	24.4	98	80-115	
2-Chloroethyl vinyl ether	25.0	24.6	98	65-145	
cis-1,3-Dichloropropene	25.0	24.6	98	85-120	
4-Methyl-2-pentanone	125	136	109	65-135	
Toluene	25.0	24.2	97	75-125	
trans-1,3-Dichloropropene	25.0	25.0	100	85-120	
1,1,2-Trichloroethane	25.0	26.9	108	75-125	

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Matrix: Solid Level: Medium Lab File ID: lfaad04.d  
 Lab ID: LCS 200-9383/4 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Tetrachloroethene	25.0	23.4	94	85-120	
1,3-Dichloropropane	25.0	25.2	101	85-120	
2-Hexanone	125	137	110	70-135	
Dibromochloromethane	25.0	26.1	104	80-120	
1,2-Dibromoethane	25.0	25.5	102	80-120	
Chlorobenzene	25.0	25.0	100	80-120	
1,1,1,2-Tetrachloroethane	25.0	25.5	102	80-115	
Ethylbenzene	25.0	25.0	100	80-120	
m&p-Xylene	50.0	50.8	102	80-120	
o-Xylene	25.0	25.5	102	85-120	
Styrene	25.0	25.4	102	80-125	
Bromoform	25.0	25.9	104	75-130	
Isopropylbenzene	25.0	26.0	104	85-120	
Bromobenzene	25.0	25.8	103	85-120	
1,1,2,2-Tetrachloroethane	25.0	29.8	119	75-125	
1,2,3-Trichloropropane	25.0	24.3	97	70-125	
n-Propylbenzene	25.0	25.9	104	85-120	
2-Chlorotoluene	25.0	26.4	105	85-120	
4-Chlorotoluene	25.0	26.8	107	85-120	
1,3,5-Trimethylbenzene	25.0	26.7	107	85-120	
tert-Butylbenzene	25.0	26.3	105	85-120	
1,2,4-Trimethylbenzene	25.0	27.6	110	85-120	
sec-Butylbenzene	25.0	27.3	109	85-120	
1,3-Dichlorobenzene	25.0	26.8	107	80-120	
4-Isopropyltoluene	25.0	26.0	104	85-120	
1,4-Dichlorobenzene	25.0	27.1	108	85-120	
1,2-Dichlorobenzene	25.0	27.3	109	85-120	
n-Butylbenzene	25.0	28.6	114	85-125	
1,2-Dibromo-3-Chloropropane	25.0	26.9	108	65-130	
1,2,4-Trichlorobenzene	25.0	29.0	116	80-125	
Hexachlorobutadiene	25.0	27.2	109	65-150	
Naphthalene	25.0	31.9	128	80-125	*
1,2,3-Trichlorobenzene	25.0	29.9	120	70-125	

# Column to be used to flag recovery and RPD values



FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2223-1

SDG No.: MONTGO (200-2223)

Matrix: Solid

Level: Medium

Lab File ID: lfaag03.d

Lab ID: LCS 200-9400/3

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dichlorodifluoromethane	25.0	24.2	97	30-180	
Chloromethane	25.0	26.7	107	55-150	
Vinyl chloride	25.0	26.6	106	65-145	
Bromomethane	25.0	26.5	106	65-145	
Chloroethane	25.0	27.3	109	70-135	
Trichlorofluoromethane	25.0	23.2	93	70-140	
1,1-Dichloroethene	25.0	21.3	85	75-135	
Freon TF	25.0	21.0	84	75-140	
Acetone	125	120	96	50-130	
Methyl iodide	25.0	24.3	97	70-150	
Carbon disulfide	25.0	20.6	82	80-135	
Methyl acetate	25.0	23.7	95	60-140	
Methylene Chloride	25.0	22.9	92	75-140	
trans-1,2-Dichloroethene	25.0	22.4	90	80-130	
Methyl t-butyl ether	25.0	21.9	87	85-130	
1,1-Dichloroethane	25.0	22.4	90	85-120	
Vinyl acetate	25.0	26.2	105	70-135	
2,2-Dichloropropane	25.0	21.5	86	85-120	
cis-1,2-Dichloroethene	25.0	22.6	90	80-120	
2-Butanone	125	129	103	70-135	
Bromochloromethane	25.0	22.9	92	75-125	
Tetrahydrofuran	350	338	97	75-125	
Chloroform	25.0	22.0	88	85-120	
1,1,1-Trichloroethane	25.0	20.7	83	80-115	
Cyclohexane	25.0	23.1	92	60-140	
1,1-Dichloropropene	25.0	22.3	89	85-120	
Carbon tetrachloride	25.0	20.9	84	80-115	
Isobutyl alcohol	1250	1430	114	70-135	
Benzene	25.0	23.1	93	85-120	
1,2-Dichloroethane	25.0	20.8	83	75-120	
Trichloroethene	25.0	22.8	91	85-120	
Methylcyclohexane	25.0	23.5	94	60-140	
1,2-Dichloropropane	25.0	24.4	98	85-120	
Dibromomethane	25.0	24.3	97	80-120	
1,4-Dioxane	1250	1440	115	50-160	
Bromodichloromethane	25.0	24.0	96	80-115	
2-Chloroethyl vinyl ether	25.0	25.9	104	65-145	
cis-1,3-Dichloropropene	25.0	24.4	98	85-120	
4-Methyl-2-pentanone	125	130	104	65-135	
Toluene	25.0	24.0	96	75-125	
trans-1,3-Dichloropropene	25.0	24.5	98	85-120	
1,1,2-Trichloroethane	25.0	26.3	105	75-125	

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2223-1

SDG No.: MONTGO (200-2223)

Matrix: Solid

Level: Medium

Lab File ID: lfaag03.d

Lab ID: LCS 200-9400/3

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Tetrachloroethene	25.0	23.1	92	85-120	
1,3-Dichloropropane	25.0	25.0	100	85-120	
2-Hexanone	125	134	107	70-135	
Dibromochloromethane	25.0	25.7	103	80-120	
1,2-Dibromoethane	25.0	25.3	101	80-120	
Chlorobenzene	25.0	24.7	99	80-120	
1,1,1,2-Tetrachloroethane	25.0	25.1	100	80-115	
Ethylbenzene	25.0	24.8	99	80-120	
m&p-Xylene	50.0	50.3	101	80-120	
o-Xylene	25.0	25.3	101	85-120	
Styrene	25.0	25.5	102	80-125	
Bromoform	25.0	25.1	100	75-130	
Isopropylbenzene	25.0	25.6	102	85-120	
Bromobenzene	25.0	25.2	101	85-120	
1,1,2,2-Tetrachloroethane	25.0	28.6	115	75-125	
1,2,3-Trichloropropane	25.0	23.2	93	70-125	
n-Propylbenzene	25.0	25.5	102	85-120	
2-Chlorotoluene	25.0	25.9	104	85-120	
4-Chlorotoluene	25.0	26.6	106	85-120	
1,3,5-Trimethylbenzene	25.0	26.3	105	85-120	
tert-Butylbenzene	25.0	26.0	104	85-120	
1,2,4-Trimethylbenzene	25.0	27.5	110	85-120	
sec-Butylbenzene	25.0	27.1	108	85-120	
1,3-Dichlorobenzene	25.0	26.3	105	80-120	
4-Isopropyltoluene	25.0	26.0	104	85-120	
1,4-Dichlorobenzene	25.0	26.4	105	85-120	
1,2-Dichlorobenzene	25.0	26.4	106	85-120	
n-Butylbenzene	25.0	28.6	114	85-125	
1,2-Dibromo-3-Chloropropane	25.0	26.3	105	65-130	
1,2,4-Trichlorobenzene	25.0	28.4	114	80-125	
Hexachlorobutadiene	25.0	26.9	108	65-150	
Naphthalene	25.0	31.5	126	80-125	*
1,2,3-Trichlorobenzene	25.0	29.2	117	70-125	

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV  
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Lab File ID: lfaad09.d Lab Sample ID: MB 200-9200/2-A  
 Matrix: Solid Heated Purge: (Y/N) N  
 Instrument ID: L.i Date Analyzed: 11/08/2010 14:28  
 GC Column: DB-624 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 200-9383/4	lfaad04.d	11/08/2010 11:35
	LCS 200-9200/7-A	lfaad05.d	11/08/2010 12:07
MC-S-32312	200-2223-1	lfaad10.d	11/08/2010 15:21
MC-S-32284	200-2223-2	lfaad11.d	11/08/2010 15:53
MC-S-32221	200-2223-3	lfaad12.d	11/08/2010 16:26
MC-S-32280	200-2223-4	lfaad13.d	11/08/2010 16:58
MC-S-32198	200-2223-5	lfaad14.d	11/08/2010 17:31
MC-S-32241	200-2223-6	lfaad15.d	11/08/2010 18:03
MC-S-32187	200-2223-7	lfaad16.d	11/08/2010 18:36
MC-S-32182	200-2223-8	lfaad17.d	11/08/2010 19:08
MC-S-32311	200-2223-9	lfaad18.d	11/08/2010 19:41
MC-S-32240	200-2223-10	lfaad19.d	11/08/2010 20:13
MC-S-32223	200-2223-11	lfaad20.d	11/08/2010 20:45
MC-S-32318	200-2223-12	lfaad21.d	11/08/2010 21:18
MC-S-32300	200-2223-13	lfaad22.d	11/08/2010 21:50

FORM IV  
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Lab File ID: lfaag07.d Lab Sample ID: MB 200-9200/3-A  
 Matrix: Solid Heated Purge: (Y/N) N  
 Instrument ID: L.i Date Analyzed: 11/10/2010 09:59  
 GC Column: DB-624 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 200-9400/3	lfaag03.d	11/10/2010 07:51
	LCS 200-9200/8-A	lfaag04.d	11/10/2010 08:22
MC-S-32263	200-2223-14	lfaag08.d	11/10/2010 10:40
MC-S-32196	200-2223-15	lfaag09.d	11/10/2010 11:12
MC-S-32288	200-2223-16	lfaag10.d	11/10/2010 11:44
MC-S-32253	200-2223-17	lfaag11.d	11/10/2010 12:16
MC-S-MEOH	200-2223-18	lfaag12.d	11/10/2010 12:48
MC-S-32350	200-2223-19	lfaag13.d	11/10/2010 13:20
MC-S-32366	200-2223-20	lfaag14.d	11/10/2010 13:52
MC-S-32312 DL	200-2223-1 DL	lfaag19.d	11/10/2010 16:33
MC-S-32311 DL	200-2223-9 DL	lfaag20.d	11/10/2010 17:05

FORM V  
GC/MS VOA INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Lab File ID: lfa01.d BFB Injection Date: 10/04/2010  
 Instrument ID: L.i BFB Injection Time: 14:12  
 Analysis Batch No.: 7468

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.2	
75	30.0 - 60.0 % of mass 95	42.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	57.7	
175	5.0 - 9.0 % of mass 174	4.5	(7.8)1
176	95.0 - 101.0 % of mass 174	56.7	(98.3)1
177	5.0 - 9.0 % of mass 176	3.6	(6.4)2

1-Value is % mass 174.

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 200-7468/3	lfa03.d	10/04/2010	15:04
	IC 200-7468/4	lfa04.d	10/04/2010	15:37
	IC 200-7468/5	lfa05.d	10/04/2010	16:09
	ICIS 200-7468/6	lfa06.d	10/04/2010	16:41
	IC 200-7468/7	lfa07.d	10/04/2010	17:13
	IC 200-7468/8	lfa08.d	10/04/2010	17:45

FORM V  
GC/MS VOA INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Lab File ID: lfaa01.d BFB Injection Date: 10/05/2010  
 Instrument ID: L.i BFB Injection Time: 09:14  
 Analysis Batch No.: 7497

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.8	
75	30.0 - 60.0 % of mass 95	41.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	56.9	
175	5.0 - 9.0 % of mass 174	4.3	(7.5)1
176	95.0 - 101.0 % of mass 174	55.6	(97.7)1
177	5.0 - 9.0 % of mass 176	3.5	(6.2)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICV 200-7497/3	lfaa03.d	10/05/2010	10:11



FORM V  
GC/MS VOA INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Lab File ID: lfaad01.d BFB Injection Date: 11/08/2010  
 Instrument ID: L.i BFB Injection Time: 10:08  
 Analysis Batch No.: 9383

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.1	
75	30.0 - 60.0 % of mass 95	40.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	54.2	
175	5.0 - 9.0 % of mass 174	3.8	(7.1)1
176	95.0 - 101.0 % of mass 174	52.6	(97.0)1
177	5.0 - 9.0 % of mass 176	3.6	(6.8)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 200-9383/3	lfaad03.d	11/08/2010	11:02
	LCS 200-9383/4	lfaad04.d	11/08/2010	11:35
	LCS 200-9200/7-A	lfaad05.d	11/08/2010	12:07
	MB 200-9200/2-A	lfaad09.d	11/08/2010	14:28
MC-S-32312	200-2223-1	lfaad10.d	11/08/2010	15:21
MC-S-32284	200-2223-2	lfaad11.d	11/08/2010	15:53
MC-S-32221	200-2223-3	lfaad12.d	11/08/2010	16:26
MC-S-32280	200-2223-4	lfaad13.d	11/08/2010	16:58
MC-S-32198	200-2223-5	lfaad14.d	11/08/2010	17:31
MC-S-32241	200-2223-6	lfaad15.d	11/08/2010	18:03
MC-S-32187	200-2223-7	lfaad16.d	11/08/2010	18:36
MC-S-32182	200-2223-8	lfaad17.d	11/08/2010	19:08
MC-S-32311	200-2223-9	lfaad18.d	11/08/2010	19:41
MC-S-32240	200-2223-10	lfaad19.d	11/08/2010	20:13
MC-S-32223	200-2223-11	lfaad20.d	11/08/2010	20:45
MC-S-32318	200-2223-12	lfaad21.d	11/08/2010	21:18
MC-S-32300	200-2223-13	lfaad22.d	11/08/2010	21:50

FORM V  
GC/MS VOA INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Lab File ID: lfaaf01.d BFB Injection Date: 11/10/2010  
 Instrument ID: L.i BFB Injection Time: 06:43  
 Analysis Batch No.: 9400

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.2	
75	30.0 - 60.0 % of mass 95	40.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	53.5	
175	5.0 - 9.0 % of mass 174	4.2	(7.8)1
176	95.0 - 101.0 % of mass 174	51.6	(96.4)1
177	5.0 - 9.0 % of mass 176	3.2	(6.2)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 200-9400/2	lfaag02.d	11/10/2010	06:57
	LCS 200-9400/3	lfaag03.d	11/10/2010	07:51
	LCS 200-9200/8-A	lfaag04.d	11/10/2010	08:22
	MB 200-9200/3-A	lfaag07.d	11/10/2010	09:59
MC-S-32263	200-2223-14	lfaag08.d	11/10/2010	10:40
MC-S-32196	200-2223-15	lfaag09.d	11/10/2010	11:12
MC-S-32288	200-2223-16	lfaag10.d	11/10/2010	11:44
MC-S-32253	200-2223-17	lfaag11.d	11/10/2010	12:16
MC-S-MEOH	200-2223-18	lfaag12.d	11/10/2010	12:48
MC-S-32350	200-2223-19	lfaag13.d	11/10/2010	13:20
MC-S-32366	200-2223-20	lfaag14.d	11/10/2010	13:52
MC-S-32312 DL	200-2223-1 DL	lfaag19.d	11/10/2010	16:33
MC-S-32311 DL	200-2223-9 DL	lfaag20.d	11/10/2010	17:05

FORM VIII  
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Sample No.: ICIS 200-7468/6 Date Analyzed: 10/04/2010 16:41  
 Instrument ID: L.i GC Column: DB-624 ID: 0.53 (mm)  
 Lab File ID (Standard): lfa06.d Heated Purge: (Y/N) N  
 Calibration ID: 2582

	FB		CBZ		DCB	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	3423847	9.95	2530764	15.78	1243795	20.15
UPPER LIMIT	6847694	10.45	5061528	16.28	2487590	20.65
LOWER LIMIT	1711924	9.45	1265382	15.28	621898	19.65
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 200-7497/3	3416358	9.96	2513062	15.78	1238721	20.15

FB = Fluorobenzene

CBZ = Chlorobenzene-d5

DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area

RT Limit = ± 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII  
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Sample No.: CCVIS 200-9383/3 Date Analyzed: 11/08/2010 11:02  
 Instrument ID: L.i GC Column: DB-624 ID: 0.53 (mm)  
 Lab File ID (Standard): lfaad03.d Heated Purge: (Y/N) N  
 Calibration ID: 2582

	FB		CBZ		DCB		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	3239090	9.92	2413388	15.74	1158199	20.13	
UPPER LIMIT	6478180	10.42	4826776	16.24	2316398	20.63	
LOWER LIMIT	1619545	9.42	1206694	15.24	579100	19.63	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 200-9383/4		3219056	9.92	2384749	15.75	1132443	20.13
LCS 200-9200/7-A		3526764	9.87	2581953	15.73	1257089	20.14
MB 200-9200/2-A		3192870	9.88	2363017	15.74	1103650	20.14
200-2223-1	MC-S-32312	3216496	9.88	2355622	15.74	1124462	20.13
200-2223-2	MC-S-32284	3134094	9.88	2306077	15.74	1086935	20.13
200-2223-3	MC-S-32221	3152475	9.88	2342506	15.74	1111143	20.14
200-2223-4	MC-S-32280	3334679	9.87	2481883	15.74	1170343	20.13
200-2223-5	MC-S-32198	3206880	9.87	2354261	15.73	1118146	20.13
200-2223-6	MC-S-32241	2338156	9.87	1740105	15.74	816138	20.12
200-2223-7	MC-S-32187	4187882	9.88	3127778	15.73	1472291	20.13
200-2223-8	MC-S-32182	3339443	9.88	2470956	15.74	1176451	20.13
200-2223-9	MC-S-32311	4066277	9.87	2994245	15.73	1410419	20.13
200-2223-10	MC-S-32240	3302413	9.88	2455962	15.73	1158513	20.13
200-2223-11	MC-S-32223	3069132	9.87	2271220	15.73	1066406	20.13
200-2223-12	MC-S-32318	3170175	9.87	2345757	15.73	1101704	20.13
200-2223-13	MC-S-32300	3494159	9.87	2577611	15.72	1205451	20.13

FB = Fluorobenzene

CBZ = Chlorobenzene-d5

DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area

RT Limit = ± 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII  
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Sample No.: CCVIS 200-9400/2 Date Analyzed: 11/10/2010 06:57  
 Instrument ID: L.i GC Column: DB-624 ID: 0.53 (mm)  
 Lab File ID (Standard): lfaag02.d Heated Purge: (Y/N) N  
 Calibration ID: 2582

	FB		CBZ		DCB		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	3317128	9.91	2436133	15.73	1165652	20.12	
UPPER LIMIT	6634256	10.41	4872266	16.23	2331304	20.62	
LOWER LIMIT	1658564	9.41	1218067	15.23	582826	19.62	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 200-9400/3	3372443	9.93	2465872	15.75	1184227	20.14	
LCS 200-9200/8-A	3826400	9.87	2744172	15.74	1320077	20.14	
MB 200-9200/3-A	3111856	9.87	2297191	15.75	1077762	20.14	
200-2223-14	MC-S-32263	3116559	9.88	2289606	15.75	1090351	20.14
200-2223-15	MC-S-32196	2952440	9.88	2193380	15.74	1038001	20.14
200-2223-16	MC-S-32288	3598313	9.88	2665519	15.74	1245657	20.13
200-2223-17	MC-S-32253	3016635	9.88	2220623	15.75	1043428	20.14
200-2223-18	MC-S-MEOH	2865840	9.88	2122676	15.74	986286	20.13
200-2223-19	MC-S-32350	3133301	9.88	2285918	15.74	1074752	20.13
200-2223-20	MC-S-32366	3447232	9.88	2559142	15.75	1205468	20.14
200-2223-1 DL	MC-S-32312 DL	3162363	9.90	2363634	15.75	1093961	20.13
200-2223-9 DL	MC-S-32311 DL	3103589	9.90	2288652	15.75	1078679	20.13

FB = Fluorobenzene

CBZ = Chlorobenzene-d5

DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area

RT Limit = ± 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32312 Lab Sample ID: 200-2223-1  
 Matrix: Solid Lab File ID: lfaad10.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 11.587(g) Date Analyzed: 11/08/2010 15:21  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	8.6	U	8.6	4.3
74-87-3	Chloromethane	8.6	U	8.6	3.2
75-01-4	Vinyl chloride	8.6	U	8.6	4.3
74-83-9	Bromomethane	11	* B	8.6	3.0
75-00-3	Chloroethane	8.6	U *	8.6	5.2
75-69-4	Trichlorofluoromethane	8.6	U *	8.6	4.3
75-35-4	1,1-Dichloroethene	8.6	U *	8.6	1.8
76-13-1	Freon TF	8.6	U *	8.6	2.4
67-64-1	Acetone	8.6	U	8.6	8.6
74-88-4	Methyl iodide	8.6	U *	8.6	4.3
75-15-0	Carbon disulfide	8.6	U *	8.6	1.6
79-20-9	Methyl acetate	8.6	U	8.6	4.3
75-09-2	Methylene Chloride	8.6	U	8.6	4.3
156-60-5	trans-1,2-Dichloroethene	8.6	U	8.6	4.3
1634-04-4	Methyl t-butyl ether	8.6	U *	8.6	4.3
75-34-3	1,1-Dichloroethane	8.6	U *	8.6	3.1
108-05-4	Vinyl acetate	8.6	U	8.6	4.3
594-20-7	2,2-Dichloropropane	8.6	U *	8.6	4.0
156-59-2	cis-1,2-Dichloroethene	8.6	U	8.6	1.8
78-93-3	2-Butanone	8.6	U	8.6	9.5
74-97-5	Bromochloromethane	8.6	U *	8.6	4.6
109-99-9	Tetrahydrofuran	86	U	86	43
67-66-3	Chloroform	75	*	8.6	2.8
71-55-6	1,1,1-Trichloroethane	8.6	U *	8.6	3.1
110-82-7	Cyclohexane	8.6	U	8.6	3.0
563-58-6	1,1-Dichloropropene	8.6	U *	8.6	1.9
56-23-5	Carbon tetrachloride	1800	E *	8.6	2.8
78-83-1	Isobutyl alcohol	430	U *	430	220
71-43-2	Benzene	8.6	U *	8.6	2.7
107-06-2	1,2-Dichloroethane	8.6	U	8.6	2.8
79-01-6	Trichloroethene	8.6	U *	8.6	4.3
108-87-2	Methylcyclohexane	8.6	U	8.6	4.3
78-87-5	1,2-Dichloropropane	8.6	U	8.6	3.3
74-95-3	Dibromomethane	8.6	U *	8.6	2.2
123-91-1	1,4-Dioxane	430	U	430	230
75-27-4	Bromodichloromethane	8.6	U	8.6	3.2



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington

Job No.: 200-2223-1

SDG No.: MONTGO (200-2223)

Client Sample ID: MC-S-32312

Lab Sample ID: 200-2223-1

Matrix: Solid

Lab File ID: lfaad10.d

Analysis Method: 8260B

Date Collected: 10/27/2010 00:00

Sample wt/vol: 11.587(g)

Date Analyzed: 11/08/2010 15:21

Soil Aliquot Vol: 0.5 (mL)

Dilution Factor: 1

Soil Extract Vol.: 10(mL)

GC Column: DB-624 ID: 0.53(mm)

% Moisture: \_\_\_\_\_

Level: (low/med) Medium

Analysis Batch No.: 9383

Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	8.6	U	8.6	1.1
10061-01-5	cis-1,3-Dichloropropene	8.6	U *	8.6	2.8
108-10-1	4-Methyl-2-pentanone	8.6	U	8.6	1.8
108-88-3	Toluene	8.6	U	8.6	4.3
10061-02-6	trans-1,3-Dichloropropene	8.6	U	8.6	4.3
79-00-5	1,1,2-Trichloroethane	8.6	U	8.6	3.6
127-18-4	Tetrachloroethene	8.6	U *	8.6	4.3
142-28-9	1,3-Dichloropropane	8.6	U	8.6	2.8
591-78-6	2-Hexanone	8.6	U	8.6	8.6
124-48-1	Dibromochloromethane	8.6	U	8.6	3.2
106-93-4	1,2-Dibromoethane	8.6	U	8.6	4.3
108-90-7	Chlorobenzene	8.6	U	8.6	2.0
630-20-6	1,1,1,2-Tetrachloroethane	8.6	U	8.6	3.1
100-41-4	Ethylbenzene	8.6	U	8.6	4.3
179601-23-1	m&p-Xylene	8.6	U	8.6	4.3
95-47-6	o-Xylene	8.6	U	8.6	4.3
100-42-5	Styrene	8.6	U	8.6	4.3
75-25-2	Bromoform	8.6	U	8.6	3.4
98-82-8	Isopropylbenzene	8.6	U	8.6	4.3
108-86-1	Bromobenzene	8.6	U	8.6	3.2
79-34-5	1,1,2,2-Tetrachloroethane	8.6	U	8.6	3.2
96-18-4	1,2,3-Trichloropropane	8.6	U	8.6	4.7
103-65-1	n-Propylbenzene	8.6	U	8.6	4.3
95-49-8	2-Chlorotoluene	8.6	U	8.6	2.8
106-43-4	4-Chlorotoluene	8.6	U	8.6	2.9
108-67-8	1,3,5-Trimethylbenzene	8.6	U	8.6	2.8
98-06-6	tert-Butylbenzene	8.6	U	8.6	4.3
95-63-6	1,2,4-Trimethylbenzene	8.6	U	8.6	2.9
135-98-8	sec-Butylbenzene	8.6	U	8.6	4.3
541-73-1	1,3-Dichlorobenzene	8.6	U	8.6	2.2
99-87-6	4-Isopropyltoluene	8.6	U	8.6	1.6
106-46-7	1,4-Dichlorobenzene	8.6	U	8.6	2.0
95-50-1	1,2-Dichlorobenzene	8.6	U	8.6	2.4
104-51-8	n-Butylbenzene	8.6	U	8.6	4.3
96-12-8	1,2-Dibromo-3-Chloropropane	8.6	U	8.6	4.0
120-82-1	1,2,4-Trichlorobenzene	8.6	U	8.6	1.4

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32312 Lab Sample ID: 200-2223-1  
 Matrix: Solid Lab File ID: lfaad10.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 11.587(g) Date Analyzed: 11/08/2010 15:21  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	8.6	U	8.6	4.3
91-20-3	Naphthalene	8.6	U *	8.6	4.3
87-61-6	1,2,3-Trichlorobenzene	8.6	U	8.6	2.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	90		65-155
2037-26-5	Toluene-d8	100		80-115
460-00-4	Bromofluorobenzene	99		80-115
2199-69-1	1,2-Dichlorobenzene-d4	97		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32312 DL Lab Sample ID: 200-2223-1 DL  
 Matrix: Solid Lab File ID: lfaag19.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 11.587(g) Date Analyzed: 11/10/2010 16:33  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 2.9  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	25	U	25	13
74-87-3	Chloromethane	25	U	25	9.3
75-01-4	Vinyl chloride	25	U	25	13
74-83-9	Bromomethane	16	J D * B	25	8.8
75-00-3	Chloroethane	25	U *	25	15
75-69-4	Trichlorofluoromethane	25	U *	25	13
75-35-4	1,1-Dichloroethene	25	U *	25	5.3
76-13-1	Freon TF	25	U *	25	7.0
67-64-1	Acetone	25	U *	25	25
74-88-4	Methyl iodide	25	U *	25	13
75-15-0	Carbon disulfide	25	U *	25	4.8
79-20-9	Methyl acetate	25	U	25	13
75-09-2	Methylene Chloride	25	U	25	13
156-60-5	trans-1,2-Dichloroethene	25	U	25	13
1634-04-4	Methyl t-butyl ether	25	U *	25	13
75-34-3	1,1-Dichloroethane	25	U *	25	9.0
108-05-4	Vinyl acetate	25	U	25	13
594-20-7	2,2-Dichloropropane	25	U *	25	12
156-59-2	cis-1,2-Dichloroethene	25	U	25	5.3
78-93-3	2-Butanone	25	U	25	28
74-97-5	Bromochloromethane	25	U *	25	13
109-99-9	Tetrahydrofuran	250	U	250	130
67-66-3	Chloroform	78	D *	25	8.3
71-55-6	1,1,1-Trichloroethane	25	U *	25	9.0
110-82-7	Cyclohexane	25	U	25	8.8
563-58-6	1,1-Dichloropropene	25	U	25	5.5
56-23-5	Carbon tetrachloride	1800	D *	25	8.0
78-83-1	Isobutyl alcohol	1300	U *	1300	630
71-43-2	Benzene	25	U	25	7.8
107-06-2	1,2-Dichloroethane	25	U	25	8.3
79-01-6	Trichloroethene	25	U	25	13
108-87-2	Methylcyclohexane	25	U	25	13
78-87-5	1,2-Dichloropropane	25	U	25	9.5
74-95-3	Dibromomethane	25	U	25	6.3
123-91-1	1,4-Dioxane	1300	U	1300	680

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32312 DL Lab Sample ID: 200-2223-1 DL  
 Matrix: Solid Lab File ID: lfaag19.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 11.587(g) Date Analyzed: 11/10/2010 16:33  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 2.9  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-27-4	Bromodichloromethane	25	U	25	9.3
110-75-8	2-Chloroethyl vinyl ether	25	U	25	3.3
10061-01-5	cis-1,3-Dichloropropene	25	U	25	8.0
108-10-1	4-Methyl-2-pentanone	25	U	25	5.3
108-88-3	Toluene	25	U	25	13
10061-02-6	trans-1,3-Dichloropropene	25	U	25	13
79-00-5	1,1,2-Trichloroethane	25	U	25	11
127-18-4	Tetrachloroethene	25	U	25	13
142-28-9	1,3-Dichloropropane	25	U	25	8.3
591-78-6	2-Hexanone	25	U	25	25
124-48-1	Dibromochloromethane	25	U	25	9.3
106-93-4	1,2-Dibromoethane	25	U	25	13
108-90-7	Chlorobenzene	25	U	25	5.8
630-20-6	1,1,1,2-Tetrachloroethane	25	U	25	9.0
100-41-4	Ethylbenzene	25	U	25	13
179601-23-1	m&p-Xylene	25	U	25	13
95-47-6	o-Xylene	25	U	25	13
100-42-5	Styrene	25	U	25	13
75-25-2	Bromoform	25	U	25	9.8
98-82-8	Isopropylbenzene	25	U	25	13
108-86-1	Bromobenzene	25	U	25	9.3
79-34-5	1,1,2,2-Tetrachloroethane	25	U	25	9.3
96-18-4	1,2,3-Trichloropropane	25	U	25	14
103-65-1	n-Propylbenzene	25	U	25	13
95-49-8	2-Chlorotoluene	25	U	25	8.3
106-43-4	4-Chlorotoluene	25	U	25	8.5
108-67-8	1,3,5-Trimethylbenzene	25	U	25	8.0
98-06-6	tert-Butylbenzene	25	U	25	13
95-63-6	1,2,4-Trimethylbenzene	25	U	25	8.5
135-98-8	sec-Butylbenzene	25	U	25	13
541-73-1	1,3-Dichlorobenzene	25	U	25	6.3
99-87-6	4-Isopropyltoluene	25	U	25	4.5
106-46-7	1,4-Dichlorobenzene	25	U	25	5.8
95-50-1	1,2-Dichlorobenzene	25	U	25	7.0
104-51-8	n-Butylbenzene	25	U	25	13
96-12-8	1,2-Dibromo-3-Chloropropane	25	U	25	12

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32312 DL Lab Sample ID: 200-2223-1 DL  
 Matrix: Solid Lab File ID: lfaag19.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 11.587(g) Date Analyzed: 11/10/2010 16:33  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 2.9  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
120-82-1	1,2,4-Trichlorobenzene	25	U	25	4.0
87-68-3	Hexachlorobutadiene	25	U	25	13
91-20-3	Naphthalene	25	U *	25	13
87-61-6	1,2,3-Trichlorobenzene	25	U	25	6.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	89	D	65-155
2037-26-5	Toluene-d8	97	D	80-115
460-00-4	Bromofluorobenzene	102	D	80-115
2199-69-1	1,2-Dichlorobenzene-d4	98	D	45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32284 Lab Sample ID: 200-2223-2  
 Matrix: Solid Lab File ID: lfaad11.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 10.481(g) Date Analyzed: 11/08/2010 15:53  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	9.5	U	9.5	4.8
74-87-3	Chloromethane	9.5	U	9.5	3.5
75-01-4	Vinyl chloride	9.5	U	9.5	4.8
74-83-9	Bromomethane	8.8	J * B	9.5	3.3
75-00-3	Chloroethane	9.5	U *	9.5	5.7
75-69-4	Trichlorofluoromethane	9.5	U *	9.5	4.8
75-35-4	1,1-Dichloroethene	9.5	U *	9.5	2.0
76-13-1	Freon TF	9.5	U *	9.5	2.7
67-64-1	Acetone	9.5	U	9.5	9.5
74-88-4	Methyl iodide	9.5	U *	9.5	4.8
75-15-0	Carbon disulfide	9.5	U *	9.5	1.8
79-20-9	Methyl acetate	9.5	U	9.5	4.8
75-09-2	Methylene Chloride	9.5	U	9.5	4.8
156-60-5	trans-1,2-Dichloroethene	9.5	U	9.5	4.8
1634-04-4	Methyl t-butyl ether	9.5	U *	9.5	4.8
75-34-3	1,1-Dichloroethane	9.5	U *	9.5	3.4
108-05-4	Vinyl acetate	9.5	U	9.5	4.8
594-20-7	2,2-Dichloropropane	9.5	U *	9.5	4.4
156-59-2	cis-1,2-Dichloroethene	9.5	U	9.5	2.0
78-93-3	2-Butanone	9.5	U	9.5	10
74-97-5	Bromochloromethane	9.5	U *	9.5	5.1
109-99-9	Tetrahydrofuran	95	U	95	48
67-66-3	Chloroform	9.5	U *	9.5	3.1
71-55-6	1,1,1-Trichloroethane	9.5	U *	9.5	3.4
110-82-7	Cyclohexane	9.5	U	9.5	3.3
563-58-6	1,1-Dichloropropene	9.5	U *	9.5	2.1
56-23-5	Carbon tetrachloride	8.2	J *	9.5	3.1
78-83-1	Isobutyl alcohol	480	U *	480	240
71-43-2	Benzene	9.5	U *	9.5	3.0
107-06-2	1,2-Dichloroethane	9.5	U	9.5	3.1
79-01-6	Trichloroethene	9.5	U *	9.5	4.8
108-87-2	Methylcyclohexane	9.5	U	9.5	4.8
78-87-5	1,2-Dichloropropane	9.5	U	9.5	3.6
74-95-3	Dibromomethane	9.5	U *	9.5	2.4
123-91-1	1,4-Dioxane	480	U	480	260
75-27-4	Bromodichloromethane	9.5	U	9.5	3.5



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32284 Lab Sample ID: 200-2223-2  
 Matrix: Solid Lab File ID: lfaad11.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 10.481(g) Date Analyzed: 11/08/2010 15:53  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	9.5	U	9.5	1.2
10061-01-5	cis-1,3-Dichloropropene	9.5	U *	9.5	3.1
108-10-1	4-Methyl-2-pentanone	9.5	U	9.5	2.0
108-88-3	Toluene	9.5	U	9.5	4.8
10061-02-6	trans-1,3-Dichloropropene	9.5	U	9.5	4.8
79-00-5	1,1,2-Trichloroethane	9.5	U	9.5	4.0
127-18-4	Tetrachloroethene	9.5	U *	9.5	4.8
142-28-9	1,3-Dichloropropane	9.5	U	9.5	3.1
591-78-6	2-Hexanone	9.5	U	9.5	9.5
124-48-1	Dibromochloromethane	9.5	U	9.5	3.5
106-93-4	1,2-Dibromoethane	9.5	U	9.5	4.8
108-90-7	Chlorobenzene	9.5	U	9.5	2.2
630-20-6	1,1,1,2-Tetrachloroethane	9.5	U	9.5	3.4
100-41-4	Ethylbenzene	9.5	U	9.5	4.8
179601-23-1	m&p-Xylene	9.5	U	9.5	4.8
95-47-6	o-Xylene	9.5	U	9.5	4.8
100-42-5	Styrene	9.5	U	9.5	4.8
75-25-2	Bromoform	9.5	U	9.5	3.7
98-82-8	Isopropylbenzene	9.5	U	9.5	4.8
108-86-1	Bromobenzene	9.5	U	9.5	3.5
79-34-5	1,1,2,2-Tetrachloroethane	9.5	U	9.5	3.5
96-18-4	1,2,3-Trichloropropane	9.5	U	9.5	5.2
103-65-1	n-Propylbenzene	9.5	U	9.5	4.8
95-49-8	2-Chlorotoluene	9.5	U	9.5	3.1
106-43-4	4-Chlorotoluene	9.5	U	9.5	3.2
108-67-8	1,3,5-Trimethylbenzene	9.5	U	9.5	3.1
98-06-6	tert-Butylbenzene	9.5	U	9.5	4.8
95-63-6	1,2,4-Trimethylbenzene	9.5	U	9.5	3.2
135-98-8	sec-Butylbenzene	9.5	U	9.5	4.8
541-73-1	1,3-Dichlorobenzene	9.5	U	9.5	2.4
99-87-6	4-Isopropyltoluene	9.5	U	9.5	1.7
106-46-7	1,4-Dichlorobenzene	9.5	U	9.5	2.2
95-50-1	1,2-Dichlorobenzene	9.5	U	9.5	2.7
104-51-8	n-Butylbenzene	9.5	U	9.5	4.8
96-12-8	1,2-Dibromo-3-Chloropropane	9.5	U	9.5	4.4
120-82-1	1,2,4-Trichlorobenzene	9.5	U	9.5	1.5

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32284 Lab Sample ID: 200-2223-2  
 Matrix: Solid Lab File ID: 1faad11.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 10.481(g) Date Analyzed: 11/08/2010 15:53  
 Soil Aliquot Vol.: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	9.5	U	9.5	4.8
91-20-3	Naphthalene	9.5	U *	9.5	4.8
87-61-6	1,2,3-Trichlorobenzene	9.5	U	9.5	2.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	91		65-155
2037-26-5	Toluene-d8	101		80-115
460-00-4	Bromofluorobenzene	100		80-115
2199-69-1	1,2-Dichlorobenzene-d4	99		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32221 Lab Sample ID: 200-2223-3  
 Matrix: Solid Lab File ID: lfaad12.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 13.77(g) Date Analyzed: 11/08/2010 16:26  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	7.3	U	7.3	3.6
74-87-3	Chloromethane	7.3	U	7.3	2.7
75-01-4	Vinyl chloride	7.3	U	7.3	3.6
74-83-9	Bromomethane	5.7	J * B	7.3	2.5
75-00-3	Chloroethane	7.3	U *	7.3	4.4
75-69-4	Trichlorofluoromethane	7.3	U *	7.3	3.6
75-35-4	1,1-Dichloroethene	7.3	U *	7.3	1.5
76-13-1	Freon TF	7.3	U *	7.3	2.0
67-64-1	Acetone	7.3	U	7.3	7.3
74-88-4	Methyl iodide	7.3	U *	7.3	3.6
75-15-0	Carbon disulfide	7.3	U *	7.3	1.4
79-20-9	Methyl acetate	7.3	U	7.3	3.6
75-09-2	Methylene Chloride	7.3	U	7.3	3.6
156-60-5	trans-1,2-Dichloroethene	7.3	U	7.3	3.6
1634-04-4	Methyl t-butyl ether	7.3	U *	7.3	3.6
75-34-3	1,1-Dichloroethane	7.3	U *	7.3	2.6
108-05-4	Vinyl acetate	7.3	U	7.3	3.6
594-20-7	2,2-Dichloropropane	7.3	U *	7.3	3.3
156-59-2	cis-1,2-Dichloroethene	7.3	U	7.3	1.5
78-93-3	2-Butanone	7.3	U	7.3	8.0
74-97-5	Bromochloromethane	7.3	U *	7.3	3.8
109-99-9	Tetrahydrofuran	7.3	U	7.3	36
67-66-3	Chloroform	7.3	U *	7.3	2.4
71-55-6	1,1,1-Trichloroethane	7.3	U *	7.3	2.6
110-82-7	Cyclohexane	7.3	U	7.3	2.5
563-58-6	1,1-Dichloropropene	7.3	U *	7.3	1.6
56-23-5	Carbon tetrachloride	14	*	7.3	2.3
78-83-1	Isobutyl alcohol	360	U *	360	180
71-43-2	Benzene	7.3	U *	7.3	2.3
107-06-2	1,2-Dichloroethane	7.3	U	7.3	2.4
79-01-6	Trichloroethene	7.3	U *	7.3	3.6
108-87-2	Methylcyclohexane	7.3	U	7.3	3.6
78-87-5	1,2-Dichloropropane	7.3	U	7.3	2.8
74-95-3	Dibromomethane	7.3	U *	7.3	1.8
123-91-1	1,4-Dioxane	360	U	360	200
75-27-4	Bromodichloromethane	7.3	U	7.3	2.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32221 Lab Sample ID: 200-2223-3  
 Matrix: Solid Lab File ID: lfaad12.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 13.77(g) Date Analyzed: 11/08/2010 16:26  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	7.3	U	7.3	0.94
10061-01-5	cis-1,3-Dichloropropene	7.3	U *	7.3	2.3
108-10-1	4-Methyl-2-pentanone	7.3	U	7.3	1.5
108-88-3	Toluene	7.3	U	7.3	3.6
10061-02-6	trans-1,3-Dichloropropene	7.3	U	7.3	3.6
79-00-5	1,1,2-Trichloroethane	7.3	U	7.3	3.1
127-18-4	Tetrachloroethene	7.3	U *	7.3	3.6
142-28-9	1,3-Dichloropropane	7.3	U	7.3	2.4
591-78-6	2-Hexanone	7.3	U	7.3	7.3
124-48-1	Dibromochloromethane	7.3	U	7.3	2.7
106-93-4	1,2-Dibromoethane	7.3	U	7.3	3.6
108-90-7	Chlorobenzene	7.3	U	7.3	1.7
630-20-6	1,1,1,2-Tetrachloroethane	7.3	U	7.3	2.6
100-41-4	Ethylbenzene	7.3	U	7.3	3.6
179601-23-1	m&p-Xylene	7.3	U	7.3	3.6
95-47-6	o-Xylene	7.3	U	7.3	3.6
100-42-5	Styrene	7.3	U	7.3	3.6
75-25-2	Bromoform	7.3	U	7.3	2.8
98-82-8	Isopropylbenzene	7.3	U	7.3	3.6
108-86-1	Bromobenzene	7.3	U	7.3	2.7
79-34-5	1,1,2,2-Tetrachloroethane	7.3	U	7.3	2.7
96-18-4	1,2,3-Trichloropropane	7.3	U	7.3	3.9
103-65-1	n-Propylbenzene	7.3	U	7.3	3.6
95-49-8	2-Chlorotoluene	7.3	U	7.3	2.4
106-43-4	4-Chlorotoluene	7.3	U	7.3	2.5
108-67-8	1,3,5-Trimethylbenzene	7.3	U	7.3	2.3
98-06-6	tert-Butylbenzene	7.3	U	7.3	3.6
95-63-6	1,2,4-Trimethylbenzene	7.3	U	7.3	2.5
135-98-8	sec-Butylbenzene	7.3	U	7.3	3.6
541-73-1	1,3-Dichlorobenzene	7.3	U	7.3	1.8
99-87-6	4-Isopropyltoluene	7.3	U	7.3	1.3
106-46-7	1,4-Dichlorobenzene	7.3	U	7.3	1.7
95-50-1	1,2-Dichlorobenzene	7.3	U	7.3	2.0
104-51-8	n-Butylbenzene	7.3	U	7.3	3.6
96-12-8	1,2-Dibromo-3-Chloropropane	7.3	U	7.3	3.3
120-82-1	1,2,4-Trichlorobenzene	7.3	U	7.3	1.2

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32221 Lab Sample ID: 200-2223-3  
 Matrix: Solid Lab File ID: lfaad12.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 13.77(g) Date Analyzed: 11/08/2010 16:26  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	7.3	U	7.3	3.6
91-20-3	Naphthalene	7.3	U *	7.3	3.6
87-61-6	1,2,3-Trichlorobenzene	7.3	U	7.3	1.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	96		65-155
2037-26-5	Toluene-d8	108		80-115
460-00-4	Bromofluorobenzene	106		80-115
2199-69-1	1,2-Dichlorobenzene-d4	104		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32280 Lab Sample ID: 200-2223-4  
 Matrix: Solid Lab File ID: lfaad13.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 9.57(g) Date Analyzed: 11/08/2010 16:58  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	10	U	10	5.2
74-87-3	Chloromethane	10	U	10	3.9
75-01-4	Vinyl chloride	10	U	10	5.2
74-83-9	Bromomethane	9.6	J * B	10	3.7
75-00-3	Chloroethane	10	U *	10	6.3
75-69-4	Trichlorofluoromethane	10	U *	10	5.2
75-35-4	1,1-Dichloroethene	10	U *	10	2.2
76-13-1	Freon TF	10	U *	10	2.9
67-64-1	Acetone	10	U	10	10
74-88-4	Methyl iodide	10	U *	10	5.2
75-15-0	Carbon disulfide	10	U *	10	2.0
79-20-9	Methyl acetate	10	U	10	5.2
75-09-2	Methylene Chloride	10	U	10	5.2
156-60-5	trans-1,2-Dichloroethene	10	U	10	5.2
1634-04-4	Methyl t-butyl ether	10	U *	10	5.2
75-34-3	1,1-Dichloroethane	10	U *	10	3.8
108-05-4	Vinyl acetate	10	U	10	5.2
594-20-7	2,2-Dichloropropane	10	U *	10	4.8
156-59-2	cis-1,2-Dichloroethene	10	U	10	2.2
78-93-3	2-Butanone	10	U	10	11
74-97-5	Bromochloromethane	10	U *	10	5.5
109-99-9	Tetrahydrofuran	100	U	100	52
67-66-3	Chloroform	10	U *	10	3.4
71-55-6	1,1,1-Trichloroethane	10	U *	10	3.8
110-82-7	Cyclohexane	10	U	10	3.7
563-58-6	1,1-Dichloropropene	10	U *	10	2.3
56-23-5	Carbon tetrachloride	10	U *	10	3.3
78-83-1	Isobutyl alcohol	520	U *	520	260
71-43-2	Benzene	10	U *	10	3.2
107-06-2	1,2-Dichloroethane	10	U	10	3.4
79-01-6	Trichloroethene	10	U *	10	5.2
108-87-2	Methylcyclohexane	10	U	10	5.2
78-87-5	1,2-Dichloropropane	10	U	10	4.0
74-95-3	Dibromomethane	10	U *	10	2.6
123-91-1	1,4-Dioxane	520	U	520	280
75-27-4	Bromodichloromethane	10	U	10	3.9



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32280 Lab Sample ID: 200-2223-4  
 Matrix: Solid Lab File ID: lfaad13.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 9.57(g) Date Analyzed: 11/08/2010 16:58  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	10	U	10	1.4
10061-01-5	cis-1,3-Dichloropropene	10	U *	10	3.3
108-10-1	4-Methyl-2-pentanone	10	U	10	2.2
108-88-3	Toluene	10	U	10	5.2
10061-02-6	trans-1,3-Dichloropropene	10	U	10	5.2
79-00-5	1,1,2-Trichloroethane	10	U	10	4.4
127-18-4	Tetrachloroethene	10	U *	10	5.2
142-28-9	1,3-Dichloropropane	10	U	10	3.4
591-78-6	2-Hexanone	10	U	10	10
124-48-1	Dibromochloromethane	10	U	10	3.9
106-93-4	1,2-Dibromoethane	10	U	10	5.2
108-90-7	Chlorobenzene	10	U	10	2.4
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	3.8
100-41-4	Ethylbenzene	10	U	10	5.2
179601-23-1	m&p-Xylene	10	U	10	5.2
95-47-6	o-Xylene	10	U	10	5.2
100-42-5	Styrene	10	U	10	5.2
75-25-2	Bromoform	10	U	10	4.1
98-82-8	Isopropylbenzene	10	U	10	5.2
108-86-1	Bromobenzene	10	U	10	3.9
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	3.9
96-18-4	1,2,3-Trichloropropane	10	U	10	5.6
103-65-1	n-Propylbenzene	10	U	10	5.2
95-49-8	2-Chlorotoluene	10	U	10	3.4
106-43-4	4-Chlorotoluene	10	U	10	3.6
108-67-8	1,3,5-Trimethylbenzene	10	U	10	3.3
98-06-6	tert-Butylbenzene	10	U	10	5.2
95-63-6	1,2,4-Trimethylbenzene	10	U	10	3.6
135-98-8	sec-Butylbenzene	10	U	10	5.2
541-73-1	1,3-Dichlorobenzene	10	U	10	2.6
99-87-6	4-Isopropyltoluene	10	U	10	1.9
106-46-7	1,4-Dichlorobenzene	10	U	10	2.4
95-50-1	1,2-Dichlorobenzene	10	U	10	2.9
104-51-8	n-Butylbenzene	10	U	10	5.2
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	10	4.8
120-82-1	1,2,4-Trichlorobenzene	10	U	10	1.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32280 Lab Sample ID: 200-2223-4  
 Matrix: Solid Lab File ID: lfaad13.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 9.57(g) Date Analyzed: 11/08/2010 16:58  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	10	U	10	5.2
91-20-3	Naphthalene	10	U *	10	5.2
87-61-6	1,2,3-Trichlorobenzene	10	U	10	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	76		65-155
2037-26-5	Toluene-d8	85		80-115
460-00-4	Bromofluorobenzene	86		80-115
2199-69-1	1,2-Dichlorobenzene-d4	84		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32198 Lab Sample ID: 200-2223-5  
 Matrix: Solid Lab File ID: lfaad14.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 11.349(g) Date Analyzed: 11/08/2010 17:31  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	8.8	U	8.8	4.4
74-87-3	Chloromethane	8.8	U	8.8	3.3
75-01-4	Vinyl chloride	8.8	U	8.8	4.4
74-83-9	Bromomethane	8.2	J * B	8.8	3.1
75-00-3	Chloroethane	8.8	U *	8.8	5.3
75-69-4	Trichlorofluoromethane	8.8	U *	8.8	4.4
75-35-4	1,1-Dichloroethene	8.8	U *	8.8	1.9
76-13-1	Freon TF	8.8	U *	8.8	2.5
67-64-1	Acetone	8.8	U	8.8	8.8
74-88-4	Methyl iodide	8.8	U *	8.8	4.4
75-15-0	Carbon disulfide	8.8	U *	8.8	1.7
79-20-9	Methyl acetate	8.8	U	8.8	4.4
75-09-2	Methylene Chloride	8.8	U	8.8	4.4
156-60-5	trans-1,2-Dichloroethene	8.8	U	8.8	4.4
1634-04-4	Methyl t-butyl ether	8.8	U *	8.8	4.4
75-34-3	1,1-Dichloroethane	8.8	U *	8.8	3.2
108-05-4	Vinyl acetate	8.8	U	8.8	4.4
594-20-7	2,2-Dichloropropane	8.8	U *	8.8	4.1
156-59-2	cis-1,2-Dichloroethene	8.8	U	8.8	1.9
78-93-3	2-Butanone	8.8	U	8.8	9.7
74-97-5	Bromochloromethane	8.8	U *	8.8	4.7
109-99-9	Tetrahydrofuran	88	U	88	44
67-66-3	Chloroform	8.8	U *	8.8	2.9
71-55-6	1,1,1-Trichloroethane	8.8	U *	8.8	3.2
110-82-7	Cyclohexane	8.8	U	8.8	3.1
563-58-6	1,1-Dichloropropene	8.8	U *	8.8	1.9
56-23-5	Carbon tetrachloride	8.8	U *	8.8	2.8
78-83-1	Isobutyl alcohol	440	U *	440	220
71-43-2	Benzene	8.8	U *	8.8	2.7
107-06-2	1,2-Dichloroethane	8.8	U	8.8	2.9
79-01-6	Trichloroethene	8.8	U *	8.8	4.4
108-87-2	Methylcyclohexane	8.8	U	8.8	4.4
78-87-5	1,2-Dichloropropane	8.8	U	8.8	3.3
74-95-3	Dibromomethane	8.8	U *	8.8	2.2
123-91-1	1,4-Dioxane	440	U	440	240
75-27-4	Bromodichloromethane	8.8	U	8.8	3.3

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32198 Lab Sample ID: 200-2223-5  
 Matrix: Solid Lab File ID: lfaad14.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 11.349(g) Date Analyzed: 11/08/2010 17:31  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	8.8	U	8.8	1.1
10061-01-5	cis-1,3-Dichloropropene	8.8	U *	8.8	2.8
108-10-1	4-Methyl-2-pentanone	8.8	U	8.8	1.9
108-88-3	Toluene	8.8	U	8.8	4.4
10061-02-6	trans-1,3-Dichloropropene	8.8	U	8.8	4.4
79-00-5	1,1,2-Trichloroethane	8.8	U	8.8	3.7
127-18-4	Tetrachloroethene	8.8	U *	8.8	4.4
142-28-9	1,3-Dichloropropane	8.8	U	8.8	2.9
591-78-6	2-Hexanone	8.8	U	8.8	8.8
124-48-1	Dibromochloromethane	8.8	U	8.8	3.3
106-93-4	1,2-Dibromoethane	8.8	U	8.8	4.4
108-90-7	Chlorobenzene	8.8	U	8.8	2.0
630-20-6	1,1,1,2-Tetrachloroethane	8.8	U	8.8	3.2
100-41-4	Ethylbenzene	8.8	U	8.8	4.4
179601-23-1	m&p-Xylene	8.8	U	8.8	4.4
95-47-6	o-Xylene	8.8	U	8.8	4.4
100-42-5	Styrene	8.8	U	8.8	4.4
75-25-2	Bromoform	8.8	U	8.8	3.4
98-82-8	Isopropylbenzene	8.8	U	8.8	4.4
108-86-1	Bromobenzene	8.8	U	8.8	3.3
79-34-5	1,1,1,2-Tetrachloroethane	8.8	U	8.8	3.3
96-18-4	1,2,3-Trichloropropane	8.8	U	8.8	4.8
103-65-1	n-Propylbenzene	8.8	U	8.8	4.4
95-49-8	2-Chlorotoluene	8.8	U	8.8	2.9
106-43-4	4-Chlorotoluene	8.8	U	8.8	3.0
108-67-8	1,3,5-Trimethylbenzene	8.8	U	8.8	2.8
98-06-6	tert-Butylbenzene	8.8	U	8.8	4.4
95-63-6	1,2,4-Trimethylbenzene	8.8	U	8.8	3.0
135-98-8	sec-Butylbenzene	8.8	U	8.8	4.4
541-73-1	1,3-Dichlorobenzene	8.8	U	8.8	2.2
99-87-6	4-Isopropyltoluene	8.8	U	8.8	1.6
106-46-7	1,4-Dichlorobenzene	8.8	U	8.8	2.0
95-50-1	1,2-Dichlorobenzene	8.8	U	8.8	2.5
104-51-8	n-Butylbenzene	8.8	U	8.8	4.4
96-12-8	1,2-Dibromo-3-Chloropropane	8.8	U	8.8	4.1
120-82-1	1,2,4-Trichlorobenzene	8.8	U	8.8	1.4

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32198 Lab Sample ID: 200-2223-5  
 Matrix: Solid Lab File ID: lfaad14.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 11.349(g) Date Analyzed: 11/08/2010 17:31  
 Soil Aliquot Vol.: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	8.8	U	8.8	4.4
91-20-3	Naphthalene	8.8	U *	8.8	4.4
87-61-6	1,2,3-Trichlorobenzene	8.8	U	8.8	2.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	99		65-155
2037-26-5	Toluene-d8	112		80-115
460-00-4	Bromofluorobenzene	111		80-115
2199-69-1	1,2-Dichlorobenzene-d4	107		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32241 Lab Sample ID: 200-2223-6  
 Matrix: Solid Lab File ID: lfaad15.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 12.933(g) Date Analyzed: 11/08/2010 18:03  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	7.7	U	7.7	3.9
74-87-3	Chloromethane	7.7	U	7.7	2.9
75-01-4	Vinyl chloride	7.7	U	7.7	3.9
74-83-9	Bromomethane	5.2	J * B	7.7	2.7
75-00-3	Chloroethane	7.7	U *	7.7	4.6
75-69-4	Trichlorofluoromethane	7.7	U *	7.7	3.9
75-35-4	1,1-Dichloroethene	7.7	U *	7.7	1.6
76-13-1	Freon TF	7.7	U *	7.7	2.2
67-64-1	Acetone	7.7	U	7.7	7.7
74-88-4	Methyl iodide	7.7	U *	7.7	3.9
75-15-0	Carbon disulfide	7.7	U *	7.7	1.5
79-20-9	Methyl acetate	7.7	U	7.7	3.9
75-09-2	Methylene Chloride	7.7	U	7.7	3.9
156-60-5	trans-1,2-Dichloroethene	7.7	U	7.7	3.9
1634-04-4	Methyl t-butyl ether	7.7	U *	7.7	3.9
75-34-3	1,1-Dichloroethane	7.7	U *	7.7	2.8
108-05-4	Vinyl acetate	7.7	U	7.7	3.9
594-20-7	2,2-Dichloropropane	7.7	U *	7.7	3.6
156-59-2	cis-1,2-Dichloroethene	7.7	U	7.7	1.6
78-93-3	2-Butanone	7.7	U	7.7	8.5
74-97-5	Bromochloromethane	7.7	U *	7.7	4.1
109-99-9	Tetrahydrofuran	7.7	U	7.7	39
67-66-3	Chloroform	3.4	J *	7.7	2.6
71-55-6	1,1,1-Trichloroethane	7.7	U *	7.7	2.8
110-82-7	Cyclohexane	7.7	U	7.7	2.7
563-58-6	1,1-Dichloropropene	7.7	U *	7.7	1.7
56-23-5	Carbon tetrachloride	52	*	7.7	2.5
78-83-1	Isobutyl alcohol	390	U *	390	190
71-43-2	Benzene	7.7	U *	7.7	2.4
107-06-2	1,2-Dichloroethane	7.7	U	7.7	2.6
79-01-6	Trichloroethene	7.7	U *	7.7	3.9
108-87-2	Methylcyclohexane	7.7	U	7.7	3.9
78-87-5	1,2-Dichloropropane	7.7	U	7.7	2.9
74-95-3	Dibromomethane	7.7	U *	7.7	1.9
123-91-1	1,4-Dioxane	390	U	390	210
75-27-4	Bromodichloromethane	7.7	U	7.7	2.9



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32241 Lab Sample ID: 200-2223-6  
 Matrix: Solid Lab File ID: lfaad15.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 12.933(g) Date Analyzed: 11/08/2010 18:03  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	7.7	U	7.7	1.0
10061-01-5	cis-1,3-Dichloropropene	7.7	U *	7.7	2.5
108-10-1	4-Methyl-2-pentanone	7.7	U	7.7	1.6
108-88-3	Toluene	7.7	U	7.7	3.9
10061-02-6	trans-1,3-Dichloropropene	7.7	U	7.7	3.9
79-00-5	1,1,2-Trichloroethane	7.7	U	7.7	3.2
127-18-4	Tetrachloroethene	7.7	U *	7.7	3.9
142-28-9	1,3-Dichloropropane	7.7	U	7.7	2.6
591-78-6	2-Hexanone	7.7	U	7.7	7.7
124-48-1	Dibromochloromethane	7.7	U	7.7	2.9
106-93-4	1,2-Dibromoethane	7.7	U	7.7	3.9
108-90-7	Chlorobenzene	7.7	U	7.7	1.8
630-20-6	1,1,1,2-Tetrachloroethane	7.7	U	7.7	2.8
100-41-4	Ethylbenzene	7.7	U	7.7	3.9
179601-23-1	m&p-Xylene	7.7	U	7.7	3.9
95-47-6	o-Xylene	7.7	U	7.7	3.9
100-42-5	Styrene	7.7	U	7.7	3.9
75-25-2	Bromoform	7.7	U	7.7	3.0
98-82-8	Isopropylbenzene	7.7	U	7.7	3.9
108-86-1	Bromobenzene	7.7	U	7.7	2.9
79-34-5	1,1,2,2-Tetrachloroethane	7.7	U	7.7	2.9
96-18-4	1,2,3-Trichloropropane	7.7	U	7.7	4.2
103-65-1	n-Propylbenzene	7.7	U	7.7	3.9
95-49-8	2-Chlorotoluene	7.7	U	7.7	2.6
106-43-4	4-Chlorotoluene	7.7	U	7.7	2.6
108-67-8	1,3,5-Trimethylbenzene	7.7	U	7.7	2.5
98-06-6	tert-Butylbenzene	7.7	U	7.7	3.9
95-63-6	1,2,4-Trimethylbenzene	7.7	U	7.7	2.6
135-98-8	sec-Butylbenzene	7.7	U	7.7	3.9
541-73-1	1,3-Dichlorobenzene	7.7	U	7.7	1.9
99-87-6	4-Isopropyltoluene	7.7	U	7.7	1.4
106-46-7	1,4-Dichlorobenzene	7.7	U	7.7	1.8
95-50-1	1,2-Dichlorobenzene	7.7	U	7.7	2.2
104-51-8	n-Butylbenzene	7.7	U	7.7	3.9
96-12-8	1,2-Dibromo-3-Chloropropane	7.7	U	7.7	3.6
120-82-1	1,2,4-Trichlorobenzene	7.7	U	7.7	1.2

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32241 Lab Sample ID: 200-2223-6  
 Matrix: Solid Lab File ID: lfaad15.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 12.933(g) Date Analyzed: 11/08/2010 18:03  
 Soil Aliquot Vol.: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	7.7	U	7.7	3.9
91-20-3	Naphthalene	7.7	U *	7.7	3.9
87-61-6	1,2,3-Trichlorobenzene	7.7	U	7.7	1.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	127		65-155
2037-26-5	Toluene-d8	142	X	80-115
460-00-4	Bromofluorobenzene	144	X	80-115
2199-69-1	1,2-Dichlorobenzene-d4	141		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32187 Lab Sample ID: 200-2223-7  
 Matrix: Solid Lab File ID: lfaad16.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 9.783(g) Date Analyzed: 11/08/2010 18:36  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	10	U	10	5.1
74-87-3	Chloromethane	10	U	10	3.8
75-01-4	Vinyl chloride	10	U	10	5.1
74-83-9	Bromomethane	5.3	J * B	10	3.6
75-00-3	Chloroethane	10	U *	10	6.1
75-69-4	Trichlorofluoromethane	10	U *	10	5.1
75-35-4	1,1-Dichloroethene	10	U *	10	2.1
76-13-1	Freon TF	10	U *	10	2.9
67-64-1	Acetone	10	U	10	10
74-88-4	Methyl iodide	10	U *	10	5.1
75-15-0	Carbon disulfide	10	U *	10	1.9
79-20-9	Methyl acetate	10	U	10	5.1
75-09-2	Methylene Chloride	10	U	10	5.1
156-60-5	trans-1,2-Dichloroethene	10	U	10	5.1
1634-04-4	Methyl t-butyl ether	10	U *	10	5.1
75-34-3	1,1-Dichloroethane	10	U *	10	3.7
108-05-4	Vinyl acetate	10	U	10	5.1
594-20-7	2,2-Dichloropropane	10	U *	10	4.7
156-59-2	cis-1,2-Dichloroethene	10	U	10	2.1
78-93-3	2-Butanone	10	U	10	11
74-97-5	Bromochloromethane	10	U *	10	5.4
109-99-9	Tetrahydrofuran	100	U	100	51
67-66-3	Chloroform	10	U *	10	3.4
71-55-6	1,1,1-Trichloroethane	10	U *	10	3.7
110-82-7	Cyclohexane	10	U	10	3.6
563-58-6	1,1-Dichloropropene	10	U *	10	2.2
56-23-5	Carbon tetrachloride	10	U *	10	3.3
78-83-1	Isobutyl alcohol	510	U *	510	260
71-43-2	Benzene	10	U *	10	3.2
107-06-2	1,2-Dichloroethane	10	U	10	3.4
79-01-6	Trichloroethene	10	U *	10	5.1
108-87-2	Methylcyclohexane	10	U	10	5.1
78-87-5	1,2-Dichloropropane	10	U	10	3.9
74-95-3	Dibromomethane	10	U *	10	2.6
123-91-1	1,4-Dioxane	510	U	510	280
75-27-4	Bromodichloromethane	10	U	10	3.8

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32187 Lab Sample ID: 200-2223-7  
 Matrix: Solid Lab File ID: lfaad16.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 9.783(g) Date Analyzed: 11/08/2010 18:36  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	10	U	10	1.3
10061-01-5	cis-1,3-Dichloropropene	10	U *	10	3.3
108-10-1	4-Methyl-2-pentanone	10	U	10	2.1
108-88-3	Toluene	10	U	10	5.1
10061-02-6	trans-1,3-Dichloropropene	10	U	10	5.1
79-00-5	1,1,2-Trichloroethane	10	U	10	4.3
127-18-4	Tetrachloroethene	10	U *	10	5.1
142-28-9	1,3-Dichloropropane	10	U	10	3.4
591-78-6	2-Hexanone	10	U	10	10
124-48-1	Dibromochloromethane	10	U	10	3.8
106-93-4	1,2-Dibromoethane	10	U	10	5.1
108-90-7	Chlorobenzene	10	U	10	2.4
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	3.7
100-41-4	Ethylbenzene	10	U	10	5.1
179601-23-1	m&p-Xylene	10	U	10	5.1
95-47-6	o-Xylene	10	U	10	5.1
100-42-5	Styrene	10	U	10	5.1
75-25-2	Bromoform	10	U	10	4.0
98-82-8	Isopropylbenzene	10	U	10	5.1
108-86-1	Bromobenzene	10	U	10	3.8
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	3.8
96-18-4	1,2,3-Trichloropropane	10	U	10	5.5
103-65-1	n-Propylbenzene	10	U	10	5.1
95-49-8	2-Chlorotoluene	10	U	10	3.4
106-43-4	4-Chlorotoluene	10	U	10	3.5
108-67-8	1,3,5-Trimethylbenzene	10	U	10	3.3
98-06-6	tert-Butylbenzene	10	U	10	5.1
95-63-6	1,2,4-Trimethylbenzene	10	U	10	3.5
135-98-8	sec-Butylbenzene	10	U	10	5.1
541-73-1	1,3-Dichlorobenzene	10	U	10	2.6
99-87-6	4-Isopropyltoluene	10	U	10	1.8
106-46-7	1,4-Dichlorobenzene	10	U	10	2.4
95-50-1	1,2-Dichlorobenzene	10	U	10	2.9
104-51-8	n-Butylbenzene	10	U	10	5.1
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	10	4.7
120-82-1	1,2,4-Trichlorobenzene	10	U	10	1.6

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32187 Lab Sample ID: 200-2223-7  
 Matrix: Solid Lab File ID: lfaad16.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 9.783(g) Date Analyzed: 11/08/2010 18:36  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	10	U	10	5.1
91-20-3	Naphthalene	10	U *	10	5.1
87-61-6	1,2,3-Trichlorobenzene	10	U	10	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	74		65-155
2037-26-5	Toluene-d8	83		80-115
460-00-4	Bromofluorobenzene	83		80-115
2199-69-1	1,2-Dichlorobenzene-d4	81		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Burlington</u>	Job No.: <u>200-2223-1</u>
SDG No.: <u>MONTGO (200-2223)</u>	
Client Sample ID: <u>MC-S-32182</u>	Lab Sample ID: <u>200-2223-8</u>
Matrix: <u>Solid</u>	Lab File ID: <u>lfaad17.d</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/27/2010 00:00</u>
Sample wt/vol: <u>9.524(g)</u>	Date Analyzed: <u>11/08/2010 19:08</u>
Soil Aliquot Vol: <u>0.5 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>10(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.53(mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>9383</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	10	U	10	5.2
74-87-3	Chloromethane	10	U	10	3.9
75-01-4	Vinyl chloride	10	U	10	5.2
74-83-9	Bromomethane	4.3	J * B	10	3.7
75-00-3	Chloroethane	10	U *	10	6.3
75-69-4	Trichlorofluoromethane	10	U *	10	5.2
75-35-4	1,1-Dichloroethene	10	U *	10	2.2
76-13-1	Freon TF	10	U *	10	2.9
67-64-1	Acetone	10	U	10	10
74-88-4	Methyl iodide	10	U *	10	5.2
75-15-0	Carbon disulfide	10	U *	10	2.0
79-20-9	Methyl acetate	10	U	10	5.2
75-09-2	Methylene Chloride	10	U	10	5.2
156-60-5	trans-1,2-Dichloroethene	10	U	10	5.2
1634-04-4	Methyl t-butyl ether	10	U *	10	5.2
75-34-3	1,1-Dichloroethane	10	U *	10	3.8
108-05-4	Vinyl acetate	10	U	10	5.2
594-20-7	2,2-Dichloropropane	10	U *	10	4.8
156-59-2	cis-1,2-Dichloroethene	10	U	10	2.2
78-93-3	2-Butanone	10	U	10	12
74-97-5	Bromochloromethane	10	U *	10	5.6
109-99-9	Tetrahydrofuran	100	U	100	52
67-66-3	Chloroform	10	U *	10	3.5
71-55-6	1,1,1-Trichloroethane	10	U *	10	3.8
110-82-7	Cyclohexane	10	U	10	3.7
563-58-6	1,1-Dichloropropene	10	U *	10	2.3
56-23-5	Carbon tetrachloride	10	U *	10	3.4
78-83-1	Isobutyl alcohol	520	U *	520	260
71-43-2	Benzene	10	U *	10	3.3
107-06-2	1,2-Dichloroethane	10	U	10	3.5
79-01-6	Trichloroethene	10	U *	10	5.2
108-87-2	Methylcyclohexane	10	U	10	5.2
78-87-5	1,2-Dichloropropane	10	U	10	4.0
74-95-3	Dibromomethane	10	U *	10	2.6
123-91-1	1,4-Dioxane	520	U	520	280
75-27-4	Bromodichloromethane	10	U	10	3.9



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32182 Lab Sample ID: 200-2223-8  
 Matrix: Solid Lab File ID: lfaad17.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 9.524(g) Date Analyzed: 11/08/2010 19:08  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	10	U	10	1.4
10061-01-5	cis-1,3-Dichloropropene	10	U *	10	3.4
108-10-1	4-Methyl-2-pentanone	10	U	10	2.2
108-88-3	Toluene	10	U	10	5.2
10061-02-6	trans-1,3-Dichloropropene	10	U	10	5.2
79-00-5	1,1,2-Trichloroethane	10	U	10	4.4
127-18-4	Tetrachloroethene	10	U *	10	5.2
142-28-9	1,3-Dichloropropane	10	U	10	3.5
591-78-6	2-Hexanone	10	U	10	10
124-48-1	Dibromochloromethane	10	U	10	3.9
106-93-4	1,2-Dibromoethane	10	U	10	5.2
108-90-7	Chlorobenzene	10	U	10	2.4
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	3.8
100-41-4	Ethylbenzene	10	U	10	5.2
179601-23-1	m&p-Xylene	10	U	10	5.2
95-47-6	o-Xylene	10	U	10	5.2
100-42-5	Styrene	10	U	10	5.2
75-25-2	Bromoform	10	U	10	4.1
98-82-8	Isopropylbenzene	10	U	10	5.2
108-86-1	Bromobenzene	10	U	10	3.9
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	3.9
96-18-4	1,2,3-Trichloropropane	10	U	10	5.7
103-65-1	n-Propylbenzene	10	U	10	5.2
95-49-8	2-Chlorotoluene	10	U	10	3.5
106-43-4	4-Chlorotoluene	10	U	10	3.6
108-67-8	1,3,5-Trimethylbenzene	10	U	10	3.4
98-06-6	tert-Butylbenzene	10	U	10	5.2
95-63-6	1,2,4-Trimethylbenzene	10	U	10	3.6
135-98-8	sec-Butylbenzene	10	U	10	5.2
541-73-1	1,3-Dichlorobenzene	10	U	10	2.6
99-87-6	4-Isopropyltoluene	10	U	10	1.9
106-46-7	1,4-Dichlorobenzene	10	U	10	2.4
95-50-1	1,2-Dichlorobenzene	10	U	10	2.9
104-51-8	n-Butylbenzene	10	U	10	5.2
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	10	4.8
120-82-1	1,2,4-Trichlorobenzene	10	U	10	1.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32182 Lab Sample ID: 200-2223-8  
 Matrix: Solid Lab File ID: lfaad17.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 9.524(g) Date Analyzed: 11/08/2010 19:08  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	10	U	10	5.2
91-20-3	Naphthalene	10	U *	10	5.2
87-61-6	1,2,3-Trichlorobenzene	10	U	10	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	92		65-155
2037-26-5	Toluene-d8	102		80-115
460-00-4	Bromofluorobenzene	101		80-115
2199-69-1	1,2-Dichlorobenzene-d4	99		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Burlington</u>	Job No.: <u>200-2223-1</u>
SDG No.: <u>MONTGO (200-2223)</u>	
Client Sample ID: <u>MC-S-32311</u>	Lab Sample ID: <u>200-2223-9</u>
Matrix: <u>Solid</u>	Lab File ID: <u>lfaad18.d</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/27/2010 00:00</u>
Sample wt/vol: <u>12.735(g)</u>	Date Analyzed: <u>11/08/2010 19:41</u>
Soil Aliquot Vol: <u>0.5 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>10(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.53(mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>9383</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	7.9	U	7.9	3.9
74-87-3	Chloromethane	7.9	U	7.9	2.9
75-01-4	Vinyl chloride	7.9	U	7.9	3.9
74-83-9	Bromomethane	4.5	J * B	7.9	2.7
75-00-3	Chloroethane	7.9	U *	7.9	4.7
75-69-4	Trichlorofluoromethane	7.9	U *	7.9	3.9
75-35-4	1,1-Dichloroethene	7.9	U *	7.9	1.6
76-13-1	Freon TF	7.9	U *	7.9	2.2
67-64-1	Acetone	7.9	U	7.9	7.9
74-88-4	Methyl iodide	7.9	U *	7.9	3.9
75-15-0	Carbon disulfide	7.9	U *	7.9	1.5
79-20-9	Methyl acetate	7.9	U	7.9	3.9
75-09-2	Methylene Chloride	7.9	U	7.9	3.9
156-60-5	trans-1,2-Dichloroethene	7.9	U	7.9	3.9
1634-04-4	Methyl t-butyl ether	7.9	U *	7.9	3.9
75-34-3	1,1-Dichloroethane	7.9	U *	7.9	2.8
108-05-4	Vinyl acetate	7.9	U	7.9	3.9
594-20-7	2,2-Dichloropropane	7.9	U *	7.9	3.6
156-59-2	cis-1,2-Dichloroethene	7.9	U	7.9	1.6
78-93-3	2-Butanone	7.9	U	7.9	8.6
74-97-5	Bromochloromethane	7.9	U *	7.9	4.2
109-99-9	Tetrahydrofuran	79	U	79	39
67-66-3	Chloroform	56	*	7.9	2.6
71-55-6	1,1,1-Trichloroethane	7.9	U *	7.9	2.8
110-82-7	Cyclohexane	7.9	U	7.9	2.7
563-58-6	1,1-Dichloropropene	7.9	U *	7.9	1.7
56-23-5	Carbon tetrachloride	1100	E *	7.9	2.5
78-83-1	Isobutyl alcohol	390	U *	390	200
71-43-2	Benzene	7.9	U *	7.9	2.4
107-06-2	1,2-Dichloroethane	7.9	U	7.9	2.6
79-01-6	Trichloroethene	7.9	U *	7.9	3.9
108-87-2	Methylcyclohexane	7.9	U	7.9	3.9
78-87-5	1,2-Dichloropropane	7.9	U	7.9	3.0
74-95-3	Dibromomethane	7.9	U *	7.9	2.0
123-91-1	1,4-Dioxane	390	U	390	210
75-27-4	Bromodichloromethane	7.9	U	7.9	2.9

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32311 Lab Sample ID: 200-2223-9  
 Matrix: Solid Lab File ID: lfaad18.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 12.735(g) Date Analyzed: 11/08/2010 19:41  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	7.9	U	7.9	1.0
10061-01-5	cis-1,3-Dichloropropene	7.9	U *	7.9	2.5
108-10-1	4-Methyl-2-pentanone	7.9	U	7.9	1.6
108-88-3	Toluene	7.9	U	7.9	3.9
10061-02-6	trans-1,3-Dichloropropene	7.9	U	7.9	3.9
79-00-5	1,1,2-Trichloroethane	7.9	U	7.9	3.3
127-18-4	Tetrachloroethene	7.9	U *	7.9	3.9
142-28-9	1,3-Dichloropropane	7.9	U	7.9	2.6
591-78-6	2-Hexanone	7.9	U	7.9	7.9
124-48-1	Dibromochloromethane	7.9	U	7.9	2.9
106-93-4	1,2-Dibromoethane	7.9	U	7.9	3.9
108-90-7	Chlorobenzene	7.9	U	7.9	1.8
630-20-6	1,1,1,2-Tetrachloroethane	7.9	U	7.9	2.8
100-41-4	Ethylbenzene	7.9	U	7.9	3.9
179601-23-1	m&p-Xylene	7.9	U	7.9	3.9
95-47-6	o-Xylene	7.9	U	7.9	3.9
100-42-5	Styrene	7.9	U	7.9	3.9
75-25-2	Bromoform	7.9	U	7.9	3.1
98-82-8	Isopropylbenzene	7.9	U	7.9	3.9
108-86-1	Bromobenzene	7.9	U	7.9	2.9
79-34-5	1,1,1,2-Tetrachloroethane	7.9	U	7.9	2.9
96-18-4	1,2,3-Trichloropropane	7.9	U	7.9	4.2
103-65-1	n-Propylbenzene	7.9	U	7.9	3.9
95-49-8	2-Chlorotoluene	7.9	U	7.9	2.6
106-43-4	4-Chlorotoluene	7.9	U	7.9	2.7
108-67-8	1,3,5-Trimethylbenzene	7.9	U	7.9	2.5
98-06-6	tert-Butylbenzene	7.9	U	7.9	3.9
95-63-6	1,2,4-Trimethylbenzene	7.9	U	7.9	2.7
135-98-8	sec-Butylbenzene	7.9	U	7.9	3.9
541-73-1	1,3-Dichlorobenzene	7.9	U	7.9	2.0
99-87-6	4-Isopropyltoluene	7.9	U	7.9	1.4
106-46-7	1,4-Dichlorobenzene	7.9	U	7.9	1.8
95-50-1	1,2-Dichlorobenzene	7.9	U	7.9	2.2
104-51-8	n-Butylbenzene	7.9	U	7.9	3.9
96-12-8	1,2-Dibromo-3-Chloropropane	7.9	U	7.9	3.6
120-82-1	1,2,4-Trichlorobenzene	7.9	U	7.9	1.3

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32311 Lab Sample ID: 200-2223-9  
 Matrix: Solid Lab File ID: lfaad18.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 12.735(g) Date Analyzed: 11/08/2010 19:41  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	7.9	U	7.9	3.9
91-20-3	Naphthalene	7.9	U *	7.9	3.9
87-61-6	1,2,3-Trichlorobenzene	7.9	U	7.9	2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	77		65-155
2037-26-5	Toluene-d8	86		80-115
460-00-4	Bromofluorobenzene	88		80-115
2199-69-1	1,2-Dichlorobenzene-d4	85		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32311 DL Lab Sample ID: 200-2223-9 DL  
 Matrix: Solid Lab File ID: lfaag20.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 12.735(g) Date Analyzed: 11/10/2010 17:05  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 2  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	16	U	16	7.9
74-87-3	Chloromethane	16	U	16	5.8
75-01-4	Vinyl chloride	16	U	16	7.9
74-83-9	Bromomethane	11	J D * B	16	5.5
75-00-3	Chloroethane	16	U *	16	9.4
75-69-4	Trichlorofluoromethane	16	U *	16	7.9
75-35-4	1,1-Dichloroethene	16	U *	16	3.3
76-13-1	Freon TF	16	U *	16	4.4
67-64-1	Acetone	16	U *	16	16
74-88-4	Methyl iodide	16	U *	16	7.9
75-15-0	Carbon disulfide	16	U *	16	3.0
79-20-9	Methyl acetate	16	U	16	7.9
75-09-2	Methylene Chloride	16	U	16	7.9
156-60-5	trans-1,2-Dichloroethene	16	U	16	7.9
1634-04-4	Methyl t-butyl ether	16	U *	16	7.9
75-34-3	1,1-Dichloroethane	16	U *	16	5.7
108-05-4	Vinyl acetate	16	U	16	7.9
594-20-7	2,2-Dichloropropane	16	U *	16	7.2
156-59-2	cis-1,2-Dichloroethene	16	U	16	3.3
78-93-3	2-Butanone	16	U	16	17
74-97-5	Bromochloromethane	16	U *	16	8.3
109-99-9	Tetrahydrofuran	160	U	160	79
67-66-3	Chloroform	73	D *	16	5.2
71-55-6	1,1,1-Trichloroethane	16	U *	16	5.7
110-82-7	Cyclohexane	16	U	16	5.5
563-58-6	1,1-Dichloropropene	16	U	16	3.5
56-23-5	Carbon tetrachloride	1400	D *	16	5.0
78-83-1	Isobutyl alcohol	790	U *	790	390
71-43-2	Benzene	16	U	16	4.9
107-06-2	1,2-Dichloroethane	16	U	16	5.2
79-01-6	Trichloroethene	16	U	16	7.9
108-87-2	Methylcyclohexane	16	U	16	7.9
78-87-5	1,2-Dichloropropane	16	U	16	6.0
74-95-3	Dibromomethane	16	U	16	3.9
123-91-1	1,4-Dioxane	790	U	790	420



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32311 DL Lab Sample ID: 200-2223-9 DL  
 Matrix: Solid Lab File ID: lfaag20.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 12.735(g) Date Analyzed: 11/10/2010 17:05  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 2  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-27-4	Bromodichloromethane	16	U	16	5.8
110-75-8	2-Chloroethyl vinyl ether	16	U	16	2.0
10061-01-5	cis-1,3-Dichloropropene	16	U	16	5.0
108-10-1	4-Methyl-2-pentanone	16	U	16	3.3
108-88-3	Toluene	16	U	16	7.9
10061-02-6	trans-1,3-Dichloropropene	16	U	16	7.9
79-00-5	1,1,2-Trichloroethane	16	U	16	6.6
127-18-4	Tetrachloroethene	16	U	16	7.9
142-28-9	1,3-Dichloropropane	16	U	16	5.2
591-78-6	2-Hexanone	16	U	16	16
124-48-1	Dibromochloromethane	16	U	16	5.8
106-93-4	1,2-Dibromoethane	16	U	16	7.9
108-90-7	Chlorobenzene	16	U	16	3.6
630-20-6	1,1,1,2-Tetrachloroethane	16	U	16	5.7
100-41-4	Ethylbenzene	16	U	16	7.9
179601-23-1	m&p-Xylene	16	U	16	7.9
95-47-6	o-Xylene	16	U	16	7.9
100-42-5	Styrene	16	U	16	7.9
75-25-2	Bromoform	16	U	16	6.1
98-82-8	Isopropylbenzene	16	U	16	7.9
108-86-1	Bromobenzene	16	U	16	5.8
79-34-5	1,1,2,2-Tetrachloroethane	16	U	16	5.8
96-18-4	1,2,3-Trichloropropane	16	U	16	8.5
103-65-1	n-Propylbenzene	16	U	16	7.9
95-49-8	2-Chlorotoluene	16	U	16	5.2
106-43-4	4-Chlorotoluene	16	U	16	5.3
108-67-8	1,3,5-Trimethylbenzene	16	U	16	5.0
98-06-6	tert-Butylbenzene	16	U	16	7.9
95-63-6	1,2,4-Trimethylbenzene	16	U	16	5.3
135-98-8	sec-Butylbenzene	16	U	16	7.9
541-73-1	1,3-Dichlorobenzene	16	U	16	3.9
99-87-6	4-Isopropyltoluene	16	U	16	2.8
106-46-7	1,4-Dichlorobenzene	16	U	16	3.6
95-50-1	1,2-Dichlorobenzene	16	U	16	4.4
104-51-8	n-Butylbenzene	16	U	16	7.9
96-12-8	1,2-Dibromo-3-Chloropropane	16	U	16	7.2

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32311 DL Lab Sample ID: 200-2223-9 DL  
 Matrix: Solid Lab File ID: lfaag20.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 12.735(g) Date Analyzed: 11/10/2010 17:05  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 2  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
120-82-1	1,2,4-Trichlorobenzene	16	U	16	2.5
87-68-3	Hexachlorobutadiene	16	U	16	7.9
91-20-3	Naphthalene	16	U *	16	7.9
87-61-6	1,2,3-Trichlorobenzene	16	U	16	3.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	90	D	65-155
2037-26-5	Toluene-d8	100	D	80-115
460-00-4	Bromofluorobenzene	100	D	80-115
2199-69-1	1,2-Dichlorobenzene-d4	99	D	45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Burlington</u>	Job No.: <u>200-2223-1</u>
SDG No.: <u>MONTGO (200-2223)</u>	
Client Sample ID: <u>MC-S-32240</u>	Lab Sample ID: <u>200-2223-10</u>
Matrix: <u>Solid</u>	Lab File ID: <u>lfaad19.d</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/27/2010 00:00</u>
Sample wt/vol: <u>9.266(g)</u>	Date Analyzed: <u>11/08/2010 20:13</u>
Soil Aliquot Vol: <u>0.5 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>10(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>9383</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	11	U	11	5.4
74-87-3	Chloromethane	11	U	11	4.0
75-01-4	Vinyl chloride	11	U	11	5.4
74-83-9	Bromomethane	8.4	J * B	11	3.8
75-00-3	Chloroethane	11	U *	11	6.5
75-69-4	Trichlorofluoromethane	11	U *	11	5.4
75-35-4	1,1-Dichloroethene	11	U *	11	2.3
76-13-1	Freon TF	11	U *	11	3.0
67-64-1	Acetone	11	U	11	11
74-88-4	Methyl iodide	11	U *	11	5.4
75-15-0	Carbon disulfide	11	U *	11	2.1
79-20-9	Methyl acetate	11	U	11	5.4
75-09-2	Methylene Chloride	11	U	11	5.4
156-60-5	trans-1,2-Dichloroethene	11	U	11	5.4
1634-04-4	Methyl t-butyl ether	11	U *	11	5.4
75-34-3	1,1-Dichloroethane	11	U *	11	3.9
108-05-4	Vinyl acetate	11	U	11	5.4
594-20-7	2,2-Dichloropropane	11	U *	11	5.0
156-59-2	cis-1,2-Dichloroethene	11	U	11	2.3
78-93-3	2-Butanone	11	U	11	12
74-97-5	Bromochloromethane	11	U *	11	5.7
109-99-9	Tetrahydrofuran	110	U	110	54
67-66-3	Chloroform	11	U *	11	3.6
71-55-6	1,1,1-Trichloroethane	11	U *	11	3.9
110-82-7	Cyclohexane	11	U	11	3.8
563-58-6	1,1-Dichloropropene	11	U *	11	2.4
56-23-5	Carbon tetrachloride	5.8	J *	11	3.5
78-83-1	Isobutyl alcohol	540	U *	540	270
71-43-2	Benzene	11	U *	11	3.3
107-06-2	1,2-Dichloroethane	11	U	11	3.6
79-01-6	Trichloroethene	11	U *	11	5.4
108-87-2	Methylcyclohexane	11	U	11	5.4
78-87-5	1,2-Dichloropropane	11	U	11	4.1
74-95-3	Dibromomethane	11	U *	11	2.7
123-91-1	1,4-Dioxane	540	U	540	290
75-27-4	Bromodichloromethane	11	U	11	4.0

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32240 Lab Sample ID: 200-2223-10  
 Matrix: Solid Lab File ID: lfaad19.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 9.266(g) Date Analyzed: 11/08/2010 20:13  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	11	U	11	1.4
10061-01-5	cis-1,3-Dichloropropene	11	U *	11	3.5
108-10-1	4-Methyl-2-pentanone	11	U	11	2.3
108-88-3	Toluene	11	U	11	5.4
10061-02-6	trans-1,3-Dichloropropene	11	U	11	5.4
79-00-5	1,1,2-Trichloroethane	11	U	11	4.5
127-18-4	Tetrachloroethene	11	U *	11	5.4
142-28-9	1,3-Dichloropropane	11	U	11	3.6
591-78-6	2-Hexanone	11	U	11	11
124-48-1	Dibromochloromethane	11	U	11	4.0
106-93-4	1,2-Dibromoethane	11	U	11	5.4
108-90-7	Chlorobenzene	11	U	11	2.5
630-20-6	1,1,1,2-Tetrachloroethane	11	U	11	3.9
100-41-4	Ethylbenzene	11	U	11	5.4
179601-23-1	m&p-Xylene	11	U	11	5.4
95-47-6	o-Xylene	11	U	11	5.4
100-42-5	Styrene	11	U	11	5.4
75-25-2	Bromoform	11	U	11	4.2
98-82-8	Isopropylbenzene	11	U	11	5.4
108-86-1	Bromobenzene	11	U	11	4.0
79-34-5	1,1,2,2-Tetrachloroethane	11	U	11	4.0
96-18-4	1,2,3-Trichloropropane	11	U	11	5.8
103-65-1	n-Propylbenzene	11	U	11	5.4
95-49-8	2-Chlorotoluene	11	U	11	3.6
106-43-4	4-Chlorotoluene	11	U	11	3.7
108-67-8	1,3,5-Trimethylbenzene	11	U	11	3.5
98-06-6	tert-Butylbenzene	11	U	11	5.4
95-63-6	1,2,4-Trimethylbenzene	11	U	11	3.7
135-98-8	sec-Butylbenzene	11	U	11	5.4
541-73-1	1,3-Dichlorobenzene	11	U	11	2.7
99-87-6	4-Isopropyltoluene	11	U	11	1.9
106-46-7	1,4-Dichlorobenzene	11	U	11	2.5
95-50-1	1,2-Dichlorobenzene	11	U	11	3.0
104-51-8	n-Butylbenzene	11	U	11	5.4
96-12-8	1,2-Dibromo-3-Chloropropane	11	U	11	5.0
120-82-1	1,2,4-Trichlorobenzene	11	U	11	1.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32240 Lab Sample ID: 200-2223-10  
 Matrix: Solid Lab File ID: lfaad19.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 9.266(g) Date Analyzed: 11/08/2010 20:13  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	11	U	11	5.4
91-20-3	Naphthalene	11	U *	11	5.4
87-61-6	1,2,3-Trichlorobenzene	11	U	11	2.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	99		65-155
2037-26-5	Toluene-d8	113		80-115
460-00-4	Bromofluorobenzene	113		80-115
2199-69-1	1,2-Dichlorobenzene-d4	109		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32223 Lab Sample ID: 200-2223-11  
 Matrix: Solid Lab File ID: lfaad20.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 13.482(g) Date Analyzed: 11/08/2010 20:45  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	7.4	U	7.4	3.7
74-87-3	Chloromethane	7.4	U	7.4	2.7
75-01-4	Vinyl chloride	7.4	U	7.4	3.7
74-83-9	Bromomethane	7.4	U *	7.4	2.6
75-00-3	Chloroethane	7.4	U *	7.4	4.5
75-69-4	Trichlorofluoromethane	7.4	U *	7.4	3.7
75-35-4	1,1-Dichloroethene	7.4	U *	7.4	1.6
76-13-1	Freon TF	7.4	U *	7.4	2.1
67-64-1	Acetone	7.4	U	7.4	7.4
74-88-4	Methyl iodide	7.4	U *	7.4	3.7
75-15-0	Carbon disulfide	7.4	U *	7.4	1.4
79-20-9	Methyl acetate	7.4	U	7.4	3.7
75-09-2	Methylene Chloride	7.4	U	7.4	3.7
156-60-5	trans-1,2-Dichloroethene	7.4	U	7.4	3.7
1634-04-4	Methyl t-butyl ether	7.4	U *	7.4	3.7
75-34-3	1,1-Dichloroethane	7.4	U *	7.4	2.7
108-05-4	Vinyl acetate	7.4	U	7.4	3.7
594-20-7	2,2-Dichloropropane	7.4	U *	7.4	3.4
156-59-2	cis-1,2-Dichloroethene	7.4	U	7.4	1.6
78-93-3	2-Butanone	7.4	U	7.4	8.2
74-97-5	Bromochloromethane	7.4	U *	7.4	3.9
109-99-9	Tetrahydrofuran	7.4	U	7.4	37
67-66-3	Chloroform	7.4	U *	7.4	2.4
71-55-6	1,1,1-Trichloroethane	7.4	U *	7.4	2.7
110-82-7	Cyclohexane	7.4	U	7.4	2.6
563-58-6	1,1-Dichloropropene	7.4	U *	7.4	1.6
56-23-5	Carbon tetrachloride	7.4	U *	7.4	2.4
78-83-1	Isobutyl alcohol	370	U *	370	190
71-43-2	Benzene	7.4	U *	7.4	2.3
107-06-2	1,2-Dichloroethane	7.4	U	7.4	2.4
79-01-6	Trichloroethene	7.4	U *	7.4	3.7
108-87-2	Methylcyclohexane	7.4	U	7.4	3.7
78-87-5	1,2-Dichloropropane	7.4	U	7.4	2.8
74-95-3	Dibromomethane	7.4	U *	7.4	1.9
123-91-1	1,4-Dioxane	370	U	370	200
75-27-4	Bromodichloromethane	7.4	U	7.4	2.7



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32223 Lab Sample ID: 200-2223-11  
 Matrix: Solid Lab File ID: lfaad20.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 13.482(g) Date Analyzed: 11/08/2010 20:45  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	7.4	U	7.4	0.96
10061-01-5	cis-1,3-Dichloropropene	7.4	U *	7.4	2.4
108-10-1	4-Methyl-2-pentanone	7.4	U	7.4	1.6
108-88-3	Toluene	7.4	U	7.4	3.7
10061-02-6	trans-1,3-Dichloropropene	7.4	U	7.4	3.7
79-00-5	1,1,2-Trichloroethane	7.4	U	7.4	3.1
127-18-4	Tetrachloroethene	7.4	U *	7.4	3.7
142-28-9	1,3-Dichloropropane	7.4	U	7.4	2.4
591-78-6	2-Hexanone	7.4	U	7.4	7.4
124-48-1	Dibromochloromethane	7.4	U	7.4	2.7
106-93-4	1,2-Dibromoethane	7.4	U	7.4	3.7
108-90-7	Chlorobenzene	7.4	U	7.4	1.7
630-20-6	1,1,1,2-Tetrachloroethane	7.4	U	7.4	2.7
100-41-4	Ethylbenzene	7.4	U	7.4	3.7
179601-23-1	m&p-Xylene	7.4	U	7.4	3.7
95-47-6	o-Xylene	7.4	U	7.4	3.7
100-42-5	Styrene	7.4	U	7.4	3.7
75-25-2	Bromoform	7.4	U	7.4	2.9
98-82-8	Isopropylbenzene	7.4	U	7.4	3.7
108-86-1	Bromobenzene	7.4	U	7.4	2.7
79-34-5	1,1,2,2-Tetrachloroethane	7.4	U	7.4	2.7
96-18-4	1,2,3-Trichloropropane	7.4	U	7.4	4.0
103-65-1	n-Propylbenzene	7.4	U	7.4	3.7
95-49-8	2-Chlorotoluene	7.4	U	7.4	2.4
106-43-4	4-Chlorotoluene	7.4	U	7.4	2.5
108-67-8	1,3,5-Trimethylbenzene	7.4	U	7.4	2.4
98-06-6	tert-Butylbenzene	7.4	U	7.4	3.7
95-63-6	1,2,4-Trimethylbenzene	7.4	U	7.4	2.5
135-98-8	sec-Butylbenzene	7.4	U	7.4	3.7
541-73-1	1,3-Dichlorobenzene	7.4	U	7.4	1.9
99-87-6	4-Isopropyltoluene	7.4	U	7.4	1.3
106-46-7	1,4-Dichlorobenzene	7.4	U	7.4	1.7
95-50-1	1,2-Dichlorobenzene	7.4	U	7.4	2.1
104-51-8	n-Butylbenzene	7.4	U	7.4	3.7
96-12-8	1,2-Dibromo-3-Chloropropane	7.4	U	7.4	3.4
120-82-1	1,2,4-Trichlorobenzene	7.4	U	7.4	1.2

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32223 Lab Sample ID: 200-2223-11  
 Matrix: Solid Lab File ID: lfaad20.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 13.482(g) Date Analyzed: 11/08/2010 20:45  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	7.4	U	7.4	3.7
91-20-3	Naphthalene	7.4	U *	7.4	3.7
87-61-6	1,2,3-Trichlorobenzene	7.4	U	7.4	1.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	90		65-155
2037-26-5	Toluene-d8	101		80-115
460-00-4	Bromofluorobenzene	101		80-115
2199-69-1	1,2-Dichlorobenzene-d4	99		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32318 Lab Sample ID: 200-2223-12  
 Matrix: Solid Lab File ID: lfaad21.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 12.135(g) Date Analyzed: 11/08/2010 21:18  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	8.2	U	8.2	4.1
74-87-3	Chloromethane	8.2	U	8.2	3.0
75-01-4	Vinyl chloride	8.2	U	8.2	4.1
74-83-9	Bromomethane	6.8	J * B	8.2	2.9
75-00-3	Chloroethane	8.2	U *	8.2	4.9
75-69-4	Trichlorofluoromethane	8.2	U *	8.2	4.1
75-35-4	1,1-Dichloroethene	8.2	U *	8.2	1.7
76-13-1	Freon TF	8.2	U *	8.2	2.3
67-64-1	Acetone	8.2	U	8.2	8.2
74-88-4	Methyl iodide	8.2	U *	8.2	4.1
75-15-0	Carbon disulfide	8.2	U *	8.2	1.6
79-20-9	Methyl acetate	8.2	U	8.2	4.1
75-09-2	Methylene Chloride	8.2	U	8.2	4.1
156-60-5	trans-1,2-Dichloroethene	8.2	U	8.2	4.1
1634-04-4	Methyl t-butyl ether	8.2	U *	8.2	4.1
75-34-3	1,1-Dichloroethane	8.2	U *	8.2	3.0
108-05-4	Vinyl acetate	8.2	U	8.2	4.1
594-20-7	2,2-Dichloropropane	8.2	U *	8.2	3.8
156-59-2	cis-1,2-Dichloroethene	8.2	U	8.2	1.7
78-93-3	2-Butanone	8.2	U	8.2	9.1
74-97-5	Bromochloromethane	8.2	U *	8.2	4.4
109-99-9	Tetrahydrofuran	8.2	U	8.2	4.1
67-66-3	Chloroform	4.6	J *	8.2	2.7
71-55-6	1,1,1-Trichloroethane	8.2	U *	8.2	3.0
110-82-7	Cyclohexane	8.2	U	8.2	2.9
563-58-6	1,1-Dichloropropene	8.2	U *	8.2	1.8
56-23-5	Carbon tetrachloride	150	*	8.2	2.6
78-83-1	Isobutyl alcohol	410	U *	410	210
71-43-2	Benzene	8.2	U *	8.2	2.6
107-06-2	1,2-Dichloroethane	8.2	U	8.2	2.7
79-01-6	Trichloroethene	8.2	U *	8.2	4.1
108-87-2	Methylcyclohexane	8.2	U	8.2	4.1
78-87-5	1,2-Dichloropropane	8.2	U	8.2	3.1
74-95-3	Dibromomethane	8.2	U *	8.2	2.1
123-91-1	1,4-Dioxane	410	U	410	220
75-27-4	Bromodichloromethane	8.2	U	8.2	3.0

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32318 Lab Sample ID: 200-2223-12  
 Matrix: Solid Lab File ID: lfaad21.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 12.135(g) Date Analyzed: 11/08/2010 21:18  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	8.2	U	8.2	1.1
10061-01-5	cis-1,3-Dichloropropene	8.2	U *	8.2	2.6
108-10-1	4-Methyl-2-pentanone	8.2	U	8.2	1.7
108-88-3	Toluene	8.2	U	8.2	4.1
10061-02-6	trans-1,3-Dichloropropene	8.2	U	8.2	4.1
79-00-5	1,1,2-Trichloroethane	8.2	U	8.2	3.5
127-18-4	Tetrachloroethene	8.2	U *	8.2	4.1
142-28-9	1,3-Dichloropropane	8.2	U	8.2	2.7
591-78-6	2-Hexanone	8.2	U	8.2	8.2
124-48-1	Dibromochloromethane	8.2	U	8.2	3.0
106-93-4	1,2-Dibromoethane	8.2	U	8.2	4.1
108-90-7	Chlorobenzene	8.2	U	8.2	1.9
630-20-6	1,1,1,2-Tetrachloroethane	8.2	U	8.2	3.0
100-41-4	Ethylbenzene	8.2	U	8.2	4.1
179601-23-1	m&p-Xylene	8.2	U	8.2	4.1
95-47-6	o-Xylene	8.2	U	8.2	4.1
100-42-5	Styrene	8.2	U	8.2	4.1
75-25-2	Bromoform	8.2	U	8.2	3.2
98-82-8	Isopropylbenzene	8.2	U	8.2	4.1
108-86-1	Bromobenzene	8.2	U	8.2	3.0
79-34-5	1,1,2,2-Tetrachloroethane	8.2	U	8.2	3.0
96-18-4	1,2,3-Trichloropropane	8.2	U	8.2	4.4
103-65-1	n-Propylbenzene	8.2	U	8.2	4.1
95-49-8	2-Chlorotoluene	8.2	U	8.2	2.7
106-43-4	4-Chlorotoluene	8.2	U	8.2	2.8
108-67-8	1,3,5-Trimethylbenzene	8.2	U	8.2	2.6
98-06-6	tert-Butylbenzene	8.2	U	8.2	4.1
95-63-6	1,2,4-Trimethylbenzene	8.2	U	8.2	2.8
135-98-8	sec-Butylbenzene	8.2	U	8.2	4.1
541-73-1	1,3-Dichlorobenzene	8.2	U	8.2	2.1
99-87-6	4-Isopropyltoluene	8.2	U	8.2	1.5
106-46-7	1,4-Dichlorobenzene	8.2	U	8.2	1.9
95-50-1	1,2-Dichlorobenzene	8.2	U	8.2	2.3
104-51-8	n-Butylbenzene	8.2	U	8.2	4.1
96-12-8	1,2-Dibromo-3-Chloropropane	8.2	U	8.2	3.8
120-82-1	1,2,4-Trichlorobenzene	8.2	U	8.2	1.3

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32318 Lab Sample ID: 200-2223-12  
 Matrix: Solid Lab File ID: lfaad21.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 12.135(g) Date Analyzed: 11/08/2010 21:18  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	8.2	U	8.2	4.1
91-20-3	Naphthalene	8.2	U *	8.2	4.1
87-61-6	1,2,3-Trichlorobenzene	8.2	U	8.2	2.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	108		65-155
2037-26-5	Toluene-d8	124	X	80-115
460-00-4	Bromofluorobenzene	124	X	80-115
2199-69-1	1,2-Dichlorobenzene-d4	117		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32300 Lab Sample ID: 200-2223-13  
 Matrix: Solid Lab File ID: lfaad22.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 10.766(g) Date Analyzed: 11/08/2010 21:50  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	9.3	U	9.3	4.6
74-87-3	Chloromethane	9.3	U	9.3	3.4
75-01-4	Vinyl chloride	9.3	U	9.3	4.6
74-83-9	Bromomethane	6.2	J * B	9.3	3.3
75-00-3	Chloroethane	9.3	U *	9.3	5.6
75-69-4	Trichlorofluoromethane	9.3	U *	9.3	4.6
75-35-4	1,1-Dichloroethene	9.3	U *	9.3	2.0
76-13-1	Freon TF	9.3	U *	9.3	2.6
67-64-1	Acetone	9.3	U	9.3	9.3
74-88-4	Methyl iodide	9.3	U *	9.3	4.6
75-15-0	Carbon disulfide	9.3	U *	9.3	1.8
79-20-9	Methyl acetate	9.3	U	9.3	4.6
75-09-2	Methylene Chloride	9.3	U	9.3	4.6
156-60-5	trans-1,2-Dichloroethene	9.3	U	9.3	4.6
1634-04-4	Methyl t-butyl ether	9.3	U *	9.3	4.6
75-34-3	1,1-Dichloroethane	9.3	U *	9.3	3.3
108-05-4	Vinyl acetate	9.3	U	9.3	4.6
594-20-7	2,2-Dichloropropane	9.3	U *	9.3	4.3
156-59-2	cis-1,2-Dichloroethene	9.3	U	9.3	2.0
78-93-3	2-Butanone	9.3	U	9.3	10
74-97-5	Bromochloromethane	9.3	U *	9.3	4.9
109-99-9	Tetrahydrofuran	93	U	93	46
67-66-3	Chloroform	9.3	U *	9.3	3.1
71-55-6	1,1,1-Trichloroethane	9.3	U *	9.3	3.3
110-82-7	Cyclohexane	9.3	U	9.3	3.3
563-58-6	1,1-Dichloropropene	9.3	U *	9.3	2.0
56-23-5	Carbon tetrachloride	40	*	9.3	3.0
78-83-1	Isobutyl alcohol	460	U *	460	230
71-43-2	Benzene	9.3	U *	9.3	2.9
107-06-2	1,2-Dichloroethane	3.3	J	9.3	3.1
79-01-6	Trichloroethene	9.3	U *	9.3	4.6
108-87-2	Methylcyclohexane	9.3	U	9.3	4.6
78-87-5	1,2-Dichloropropane	9.3	U	9.3	3.5
74-95-3	Dibromomethane	9.3	U *	9.3	2.3
123-91-1	1,4-Dioxane	460	U	460	250
75-27-4	Bromodichloromethane	9.3	U	9.3	3.4



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32300 Lab Sample ID: 200-2223-13  
 Matrix: Solid Lab File ID: lfaad22.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 10.766(g) Date Analyzed: 11/08/2010 21:50  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	9.3	U	9.3	1.2
10061-01-5	cis-1,3-Dichloropropene	9.3	U *	9.3	3.0
108-10-1	4-Methyl-2-pentanone	9.3	U	9.3	2.0
108-88-3	Toluene	9.3	U	9.3	4.6
10061-02-6	trans-1,3-Dichloropropene	9.3	U	9.3	4.6
79-00-5	1,1,2-Trichloroethane	9.3	U	9.3	3.9
127-18-4	Tetrachloroethene	9.3	U *	9.3	4.6
142-28-9	1,3-Dichloropropane	9.3	U	9.3	3.1
591-78-6	2-Hexanone	9.3	U	9.3	9.3
124-48-1	Dibromochloromethane	9.3	U	9.3	3.4
106-93-4	1,2-Dibromoethane	9.3	U	9.3	4.6
108-90-7	Chlorobenzene	9.3	U	9.3	2.1
630-20-6	1,1,1,2-Tetrachloroethane	9.3	U	9.3	3.3
100-41-4	Ethylbenzene	9.3	U	9.3	4.6
179601-23-1	m&p-Xylene	9.3	U	9.3	4.6
95-47-6	o-Xylene	9.3	U	9.3	4.6
100-42-5	Styrene	9.3	U	9.3	4.6
75-25-2	Bromoform	9.3	U	9.3	3.6
98-82-8	Isopropylbenzene	9.3	U	9.3	4.6
108-86-1	Bromobenzene	9.3	U	9.3	3.4
79-34-5	1,1,1,2-Tetrachloroethane	9.3	U	9.3	3.4
96-18-4	1,2,3-Trichloropropane	9.3	U	9.3	5.0
103-65-1	n-Propylbenzene	9.3	U	9.3	4.6
95-49-8	2-Chlorotoluene	9.3	U	9.3	3.1
106-43-4	4-Chlorotoluene	9.3	U	9.3	3.2
108-67-8	1,3,5-Trimethylbenzene	9.3	U	9.3	3.0
98-06-6	tert-Butylbenzene	9.3	U	9.3	4.6
95-63-6	1,2,4-Trimethylbenzene	9.3	U	9.3	3.2
135-98-8	sec-Butylbenzene	9.3	U	9.3	4.6
541-73-1	1,3-Dichlorobenzene	9.3	U	9.3	2.3
99-87-6	4-Isopropyltoluene	9.3	U	9.3	1.7
106-46-7	1,4-Dichlorobenzene	9.3	U	9.3	2.1
95-50-1	1,2-Dichlorobenzene	9.3	U	9.3	2.6
104-51-8	n-Butylbenzene	9.3	U	9.3	4.6
96-12-8	1,2-Dibromo-3-Chloropropane	9.3	U	9.3	4.3
120-82-1	1,2,4-Trichlorobenzene	9.3	U	9.3	1.5

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32300 Lab Sample ID: 200-2223-13  
 Matrix: Solid Lab File ID: lfaad22.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 10.766(g) Date Analyzed: 11/08/2010 21:50  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	9.3	U	9.3	4.6
91-20-3	Naphthalene	9.3	U *	9.3	4.6
87-61-6	1,2,3-Trichlorobenzene	9.3	U	9.3	2.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	85		65-155
2037-26-5	Toluene-d8	95		80-115
460-00-4	Bromofluorobenzene	96		80-115
2199-69-1	1,2-Dichlorobenzene-d4	94		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32263 Lab Sample ID: 200-2223-14  
 Matrix: Solid Lab File ID: lfaag08.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 12.75(g) Date Analyzed: 11/10/2010 10:40  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	7.8	U	7.8	3.9
74-87-3	Chloromethane	7.8	U	7.8	2.9
75-01-4	Vinyl chloride	7.8	U	7.8	3.9
74-83-9	Bromomethane	13	* B	7.8	2.7
75-00-3	Chloroethane	7.8	U *	7.8	4.7
75-69-4	Trichlorofluoromethane	7.8	U *	7.8	3.9
75-35-4	1,1-Dichloroethene	7.8	U *	7.8	1.6
76-13-1	Freon TF	7.8	U *	7.8	2.2
67-64-1	Acetone	7.8	U *	7.8	7.8
74-88-4	Methyl iodide	4.2	J * B	7.8	3.9
75-15-0	Carbon disulfide	7.8	U *	7.8	1.5
79-20-9	Methyl acetate	7.8	U	7.8	3.9
75-09-2	Methylene Chloride	7.8	U	7.8	3.9
156-60-5	trans-1,2-Dichloroethene	7.8	U	7.8	3.9
1634-04-4	Methyl t-butyl ether	7.8	U *	7.8	3.9
75-34-3	1,1-Dichloroethane	7.8	U *	7.8	2.8
108-05-4	Vinyl acetate	7.8	U	7.8	3.9
594-20-7	2,2-Dichloropropane	7.8	U *	7.8	3.6
156-59-2	cis-1,2-Dichloroethene	7.8	U	7.8	1.6
78-93-3	2-Butanone	7.8	U	7.8	8.6
74-97-5	Bromochloromethane	7.8	U *	7.8	4.2
109-99-9	Tetrahydrofuran	78	U	78	39
67-66-3	Chloroform	7.8	U *	7.8	2.6
71-55-6	1,1,1-Trichloroethane	7.8	U *	7.8	2.8
110-82-7	Cyclohexane	7.8	U	7.8	2.7
563-58-6	1,1-Dichloropropene	7.8	U	7.8	1.7
56-23-5	Carbon tetrachloride	7.8	U *	7.8	2.5
78-83-1	Isobutyl alcohol	390	U *	390	200
71-43-2	Benzene	7.8	U	7.8	2.4
107-06-2	1,2-Dichloroethane	7.8	U	7.8	2.6
79-01-6	Trichloroethene	7.8	U	7.8	3.9
108-87-2	Methylcyclohexane	7.8	U	7.8	3.9
78-87-5	1,2-Dichloropropane	7.8	U	7.8	3.0
74-95-3	Dibromomethane	7.8	U	7.8	2.0
123-91-1	1,4-Dioxane	390	U	390	210
75-27-4	Bromodichloromethane	7.8	U	7.8	2.9

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32263 Lab Sample ID: 200-2223-14  
 Matrix: Solid Lab File ID: lfaag08.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 12.75(g) Date Analyzed: 11/10/2010 10:40  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	7.8	U	7.8	1.0
10061-01-5	cis-1,3-Dichloropropene	7.8	U	7.8	2.5
108-10-1	4-Methyl-2-pentanone	7.8	U	7.8	1.6
108-88-3	Toluene	7.8	U	7.8	3.9
10061-02-6	trans-1,3-Dichloropropene	7.8	U	7.8	3.9
79-00-5	1,1,2-Trichloroethane	7.8	U	7.8	3.3
127-18-4	Tetrachloroethene	7.8	U	7.8	3.9
142-28-9	1,3-Dichloropropane	7.8	U	7.8	2.6
591-78-6	2-Hexanone	7.8	U	7.8	7.8
124-48-1	Dibromochloromethane	7.8	U	7.8	2.9
106-93-4	1,2-Dibromoethane	7.8	U	7.8	3.9
108-90-7	Chlorobenzene	7.8	U	7.8	1.8
630-20-6	1,1,1,2-Tetrachloroethane	7.8	U	7.8	2.8
100-41-4	Ethylbenzene	7.8	U	7.8	3.9
179601-23-1	m&p-Xylene	7.8	U	7.8	3.9
95-47-6	o-Xylene	7.8	U	7.8	3.9
100-42-5	Styrene	7.8	U	7.8	3.9
75-25-2	Bromoform	7.8	U	7.8	3.1
98-82-8	Isopropylbenzene	7.8	U	7.8	3.9
108-86-1	Bromobenzene	7.8	U	7.8	2.9
79-34-5	1,1,2,2-Tetrachloroethane	7.8	U	7.8	2.9
96-18-4	1,2,3-Trichloropropane	7.8	U	7.8	4.2
103-65-1	n-Propylbenzene	7.8	U	7.8	3.9
95-49-8	2-Chlorotoluene	7.8	U	7.8	2.6
106-43-4	4-Chlorotoluene	7.8	U	7.8	2.7
108-67-8	1,3,5-Trimethylbenzene	7.8	U	7.8	2.5
98-06-6	tert-Butylbenzene	7.8	U	7.8	3.9
95-63-6	1,2,4-Trimethylbenzene	7.8	U	7.8	2.7
135-98-8	sec-Butylbenzene	7.8	U	7.8	3.9
541-73-1	1,3-Dichlorobenzene	7.8	U	7.8	2.0
99-87-6	4-Isopropyltoluene	7.8	U	7.8	1.4
106-46-7	1,4-Dichlorobenzene	7.8	U	7.8	1.8
95-50-1	1,2-Dichlorobenzene	7.8	U	7.8	2.2
104-51-8	n-Butylbenzene	7.8	U	7.8	3.9
96-12-8	1,2-Dibromo-3-Chloropropane	7.8	U	7.8	3.6
120-82-1	1,2,4-Trichlorobenzene	1.3	J	7.8	1.3

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32263 Lab Sample ID: 200-2223-14  
 Matrix: Solid Lab File ID: lfaag08.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 12.75(g) Date Analyzed: 11/10/2010 10:40  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	7.8	U	7.8	3.9
91-20-3	Naphthalene	7.8	U *	7.8	3.9
87-61-6	1,2,3-Trichlorobenzene	7.8	U	7.8	2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	91		65-155
2037-26-5	Toluene-d8	101		80-115
460-00-4	Bromofluorobenzene	100		80-115
2199-69-1	1,2-Dichlorobenzene-d4	97		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32196 Lab Sample ID: 200-2223-15  
 Matrix: Solid Lab File ID: lfaag09.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 10.186(g) Date Analyzed: 11/10/2010 11:12  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	9.8	U	9.8	4.9
74-87-3	Chloromethane	9.8	U	9.8	3.6
75-01-4	Vinyl chloride	9.8	U	9.8	4.9
74-83-9	Bromomethane	13	* B	9.8	3.4
75-00-3	Chloroethane	9.8	U *	9.8	5.9
75-69-4	Trichlorofluoromethane	9.8	U *	9.8	4.9
75-35-4	1,1-Dichloroethene	9.8	U *	9.8	2.1
76-13-1	Freon TF	9.8	U *	9.8	2.7
67-64-1	Acetone	9.8	U *	9.8	9.8
74-88-4	Methyl iodide	9.8	U *	9.8	4.9
75-15-0	Carbon disulfide	9.8	U *	9.8	1.9
79-20-9	Methyl acetate	9.8	U	9.8	4.9
75-09-2	Methylene Chloride	9.8	U	9.8	4.9
156-60-5	trans-1,2-Dichloroethene	9.8	U	9.8	4.9
1634-04-4	Methyl t-butyl ether	9.8	U *	9.8	4.9
75-34-3	1,1-Dichloroethane	9.8	U *	9.8	3.5
108-05-4	Vinyl acetate	9.8	U	9.8	4.9
594-20-7	2,2-Dichloropropane	9.8	U *	9.8	4.5
156-59-2	cis-1,2-Dichloroethene	9.8	U	9.8	2.1
78-93-3	2-Butanone	9.8	U	9.8	11
74-97-5	Bromochloromethane	9.8	U *	9.8	5.2
109-99-9	Tetrahydrofuran	98	U	98	49
67-66-3	Chloroform	9.8	U *	9.8	3.2
71-55-6	1,1,1-Trichloroethane	9.8	U *	9.8	3.5
110-82-7	Cyclohexane	9.8	U	9.8	3.4
563-58-6	1,1-Dichloropropene	9.8	U	9.8	2.2
56-23-5	Carbon tetrachloride	9.8	U *	9.8	3.1
78-83-1	Isobutyl alcohol	490	U *	490	250
71-43-2	Benzene	9.8	U	9.8	3.0
107-06-2	1,2-Dichloroethane	9.8	U	9.8	3.2
79-01-6	Trichloroethene	9.8	U	9.8	4.9
108-87-2	Methylcyclohexane	9.8	U	9.8	4.9
78-87-5	1,2-Dichloropropane	9.8	U	9.8	3.7
74-95-3	Dibromomethane	9.8	U	9.8	2.5
123-91-1	1,4-Dioxane	490	U	490	270
75-27-4	Bromodichloromethane	9.8	U	9.8	3.6



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32196 Lab Sample ID: 200-2223-15  
 Matrix: Solid Lab File ID: lfaag09.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 10.186(g) Date Analyzed: 11/10/2010 11:12  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	9.8	U	9.8	1.3
10061-01-5	cis-1,3-Dichloropropene	9.8	U	9.8	3.1
108-10-1	4-Methyl-2-pentanone	9.8	U	9.8	2.1
108-88-3	Toluene	9.8	U	9.8	4.9
10061-02-6	trans-1,3-Dichloropropene	9.8	U	9.8	4.9
79-00-5	1,1,2-Trichloroethane	9.8	U	9.8	4.1
127-18-4	Tetrachloroethene	9.8	U	9.8	4.9
142-28-9	1,3-Dichloropropane	9.8	U	9.8	3.2
591-78-6	2-Hexanone	9.8	U	9.8	9.8
124-48-1	Dibromochloromethane	9.8	U	9.8	3.6
106-93-4	1,2-Dibromoethane	9.8	U	9.8	4.9
108-90-7	Chlorobenzene	9.8	U	9.8	2.3
630-20-6	1,1,1,2-Tetrachloroethane	9.8	U	9.8	3.5
100-41-4	Ethylbenzene	9.8	U	9.8	4.9
179601-23-1	m&p-Xylene	9.8	U	9.8	4.9
95-47-6	o-Xylene	9.8	U	9.8	4.9
100-42-5	Styrene	9.8	U	9.8	4.9
75-25-2	Bromoform	9.8	U	9.8	3.8
98-82-8	Isopropylbenzene	9.8	U	9.8	4.9
108-86-1	Bromobenzene	9.8	U	9.8	3.6
79-34-5	1,1,2,2-Tetrachloroethane	9.8	U	9.8	3.6
96-18-4	1,2,3-Trichloropropane	9.8	U	9.8	5.3
103-65-1	n-Propylbenzene	9.8	U	9.8	4.9
95-49-8	2-Chlorotoluene	9.8	U	9.8	3.2
106-43-4	4-Chlorotoluene	9.8	U	9.8	3.3
108-67-8	1,3,5-Trimethylbenzene	9.8	U	9.8	3.1
98-06-6	tert-Butylbenzene	9.8	U	9.8	4.9
95-63-6	1,2,4-Trimethylbenzene	9.8	U	9.8	3.3
135-98-8	sec-Butylbenzene	9.8	U	9.8	4.9
541-73-1	1,3-Dichlorobenzene	9.8	U	9.8	2.5
99-87-6	4-Isopropyltoluene	9.8	U	9.8	1.8
106-46-7	1,4-Dichlorobenzene	9.8	U	9.8	2.3
95-50-1	1,2-Dichlorobenzene	9.8	U	9.8	2.7
104-51-8	n-Butylbenzene	9.8	U	9.8	4.9
96-12-8	1,2-Dibromo-3-Chloropropane	9.8	U	9.8	4.5
120-82-1	1,2,4-Trichlorobenzene	9.8	U	9.8	1.6

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32196 Lab Sample ID: 200-2223-15  
 Matrix: Solid Lab File ID: lfaag09.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 10.186(g) Date Analyzed: 11/10/2010 11:12  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	9.8	U	9.8	4.9
91-20-3	Naphthalene	9.8	U *	9.8	4.9
87-61-6	1,2,3-Trichlorobenzene	9.8	U	9.8	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	86		65-155
2037-26-5	Toluene-d8	97		80-115
460-00-4	Bromofluorobenzene	96		80-115
2199-69-1	1,2-Dichlorobenzene-d4	94		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32288 Lab Sample ID: 200-2223-16  
 Matrix: Solid Lab File ID: lfaag10.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 14.945(g) Date Analyzed: 11/10/2010 11:44  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	6.7	U	6.7	3.3
74-87-3	Chloromethane	6.7	U	6.7	2.5
75-01-4	Vinyl chloride	6.7	U	6.7	3.3
74-83-9	Bromomethane	6.1	J * B	6.7	2.3
75-00-3	Chloroethane	6.7	U *	6.7	4.0
75-69-4	Trichlorofluoromethane	6.7	U *	6.7	3.3
75-35-4	1,1-Dichloroethene	6.7	U *	6.7	1.4
76-13-1	Freon TF	6.7	U *	6.7	1.9
67-64-1	Acetone	6.7	U *	6.7	6.7
74-88-4	Methyl iodide	6.7	U *	6.7	3.3
75-15-0	Carbon disulfide	6.7	U *	6.7	1.3
79-20-9	Methyl acetate	6.7	U	6.7	3.3
75-09-2	Methylene Chloride	6.7	U	6.7	3.3
156-60-5	trans-1,2-Dichloroethene	6.7	U	6.7	3.3
1634-04-4	Methyl t-butyl ether	6.7	U *	6.7	3.3
75-34-3	1,1-Dichloroethane	6.7	U *	6.7	2.4
108-05-4	Vinyl acetate	6.7	U	6.7	3.3
594-20-7	2,2-Dichloropropane	6.7	U *	6.7	3.1
156-59-2	cis-1,2-Dichloroethene	6.7	U	6.7	1.4
78-93-3	2-Butanone	6.7	U	6.7	7.4
74-97-5	Bromochloromethane	6.7	U *	6.7	3.5
109-99-9	Tetrahydrofuran	6.7	U	6.7	33
67-66-3	Chloroform	6.7	U *	6.7	2.2
71-55-6	1,1,1-Trichloroethane	6.7	U *	6.7	2.4
110-82-7	Cyclohexane	6.7	U	6.7	2.3
563-58-6	1,1-Dichloropropene	6.7	U	6.7	1.5
56-23-5	Carbon tetrachloride	3.1	J *	6.7	2.1
78-83-1	Isobutyl alcohol	330	U *	330	170
71-43-2	Benzene	6.7	U	6.7	2.1
107-06-2	1,2-Dichloroethane	6.7	U	6.7	2.2
79-01-6	Trichloroethene	6.7	U	6.7	3.3
108-87-2	Methylcyclohexane	6.7	U	6.7	3.3
78-87-5	1,2-Dichloropropane	6.7	U	6.7	2.5
74-95-3	Dibromomethane	6.7	U	6.7	1.7
123-91-1	1,4-Dioxane	330	U	330	180
75-27-4	Bromodichloromethane	6.7	U	6.7	2.5

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32288 Lab Sample ID: 200-2223-16  
 Matrix: Solid Lab File ID: lfaag10.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 14.945(g) Date Analyzed: 11/10/2010 11:44  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	6.7	U	6.7	0.87
10061-01-5	cis-1,3-Dichloropropene	6.7	U	6.7	2.1
108-10-1	4-Methyl-2-pentanone	6.7	U	6.7	1.4
108-88-3	Toluene	6.7	U	6.7	3.3
10061-02-6	trans-1,3-Dichloropropene	6.7	U	6.7	3.3
79-00-5	1,1,2-Trichloroethane	6.7	U	6.7	2.8
127-18-4	Tetrachloroethene	6.7	U	6.7	3.3
142-28-9	1,3-Dichloropropane	6.7	U	6.7	2.2
591-78-6	2-Hexanone	6.7	U	6.7	6.7
124-48-1	Dibromochloromethane	6.7	U	6.7	2.5
106-93-4	1,2-Dibromoethane	6.7	U	6.7	3.3
108-90-7	Chlorobenzene	6.7	U	6.7	1.5
630-20-6	1,1,1,2-Tetrachloroethane	6.7	U	6.7	2.4
100-41-4	Ethylbenzene	6.7	U	6.7	3.3
179601-23-1	m&p-Xylene	6.7	U	6.7	3.3
95-47-6	o-Xylene	6.7	U	6.7	3.3
100-42-5	Styrene	6.7	U	6.7	3.3
75-25-2	Bromoform	6.7	U	6.7	2.6
98-82-8	Isopropylbenzene	6.7	U	6.7	3.3
108-86-1	Bromobenzene	6.7	U	6.7	2.5
79-34-5	1,1,2,2-Tetrachloroethane	6.7	U	6.7	2.5
96-18-4	1,2,3-Trichloropropane	6.7	U	6.7	3.6
103-65-1	n-Propylbenzene	6.7	U	6.7	3.3
95-49-8	2-Chlorotoluene	6.7	U	6.7	2.2
106-43-4	4-Chlorotoluene	6.7	U	6.7	2.3
108-67-8	1,3,5-Trimethylbenzene	6.7	U	6.7	2.1
98-06-6	tert-Butylbenzene	6.7	U	6.7	3.3
95-63-6	1,2,4-Trimethylbenzene	6.7	U	6.7	2.3
135-98-8	sec-Butylbenzene	6.7	U	6.7	3.3
541-73-1	1,3-Dichlorobenzene	6.7	U	6.7	1.7
99-87-6	4-Isopropyltoluene	6.7	U	6.7	1.2
106-46-7	1,4-Dichlorobenzene	6.7	U	6.7	1.5
95-50-1	1,2-Dichlorobenzene	6.7	U	6.7	1.9
104-51-8	n-Butylbenzene	6.7	U	6.7	3.3
96-12-8	1,2-Dibromo-3-Chloropropane	6.7	U	6.7	3.1
120-82-1	1,2,4-Trichlorobenzene	6.7	U	6.7	1.1

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32288 Lab Sample ID: 200-2223-16  
 Matrix: Solid Lab File ID: lfaag10.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 14.945(g) Date Analyzed: 11/10/2010 11:44  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	6.7	U	6.7	3.3
91-20-3	Naphthalene	6.7	U *	6.7	3.3
87-61-6	1,2,3-Trichlorobenzene	6.7	U	6.7	1.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	82		65-155
2037-26-5	Toluene-d8	91		80-115
460-00-4	Bromofluorobenzene	93		80-115
2199-69-1	1,2-Dichlorobenzene-d4	89		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32253 Lab Sample ID: 200-2223-17  
 Matrix: Solid Lab File ID: lfaag11.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 9.663(g) Date Analyzed: 11/10/2010 12:16  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	10	U	10	5.2
74-87-3	Chloromethane	10	U	10	3.8
75-01-4	Vinyl chloride	10	U	10	5.2
74-83-9	Bromomethane	12	* B	10	3.6
75-00-3	Chloroethane	10	U *	10	6.2
75-69-4	Trichlorofluoromethane	10	U *	10	5.2
75-35-4	1,1-Dichloroethene	10	U *	10	2.2
76-13-1	Freon TF	10	U *	10	2.9
67-64-1	Acetone	10	U *	10	10
74-88-4	Methyl iodide	10	U *	10	5.2
75-15-0	Carbon disulfide	10	U *	10	2.0
79-20-9	Methyl acetate	10	U	10	5.2
75-09-2	Methylene Chloride	10	U	10	5.2
156-60-5	trans-1,2-Dichloroethene	10	U	10	5.2
1634-04-4	Methyl t-butyl ether	10	U *	10	5.2
75-34-3	1,1-Dichloroethane	10	U *	10	3.7
108-05-4	Vinyl acetate	10	U	10	5.2
594-20-7	2,2-Dichloropropane	10	U *	10	4.8
156-59-2	cis-1,2-Dichloroethene	10	U	10	2.2
78-93-3	2-Butanone	10	U	10	11
74-97-5	Bromochloromethane	10	U *	10	5.5
109-99-9	Tetrahydrofuran	100	U	100	52
67-66-3	Chloroform	10	U *	10	3.4
71-55-6	1,1,1-Trichloroethane	10	U *	10	3.7
110-82-7	Cyclohexane	10	U	10	3.6
563-58-6	1,1-Dichloropropene	10	U	10	2.3
56-23-5	Carbon tetrachloride	10	U *	10	3.3
78-83-1	Isobutyl alcohol	520	U *	520	260
71-43-2	Benzene	10	U	10	3.2
107-06-2	1,2-Dichloroethane	10	U	10	3.4
79-01-6	Trichloroethene	10	U	10	5.2
108-87-2	Methylcyclohexane	10	U	10	5.2
78-87-5	1,2-Dichloropropane	10	U	10	3.9
74-95-3	Dibromomethane	10	U	10	2.6
123-91-1	1,4-Dioxane	520	U	520	280
75-27-4	Bromodichloromethane	10	U	10	3.8



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32253 Lab Sample ID: 200-2223-17  
 Matrix: Solid Lab File ID: lfaag11.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 9.663(g) Date Analyzed: 11/10/2010 12:16  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	10	U	10	1.3
10061-01-5	cis-1,3-Dichloropropene	10	U	10	3.3
108-10-1	4-Methyl-2-pentanone	10	U	10	2.2
108-88-3	Toluene	10	U	10	5.2
10061-02-6	trans-1,3-Dichloropropene	10	U	10	5.2
79-00-5	1,1,2-Trichloroethane	10	U	10	4.3
127-18-4	Tetrachloroethene	10	U	10	5.2
142-28-9	1,3-Dichloropropane	10	U	10	3.4
591-78-6	2-Hexanone	10	U	10	10
124-48-1	Dibromochloromethane	10	U	10	3.8
106-93-4	1,2-Dibromoethane	10	U	10	5.2
108-90-7	Chlorobenzene	10	U	10	2.4
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	3.7
100-41-4	Ethylbenzene	10	U	10	5.2
179601-23-1	m&p-Xylene	10	U	10	5.2
95-47-6	o-Xylene	10	U	10	5.2
100-42-5	Styrene	10	U	10	5.2
75-25-2	Bromoform	10	U	10	4.0
98-82-8	Isopropylbenzene	10	U	10	5.2
108-86-1	Bromobenzene	10	U	10	3.8
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	3.8
96-18-4	1,2,3-Trichloropropane	10	U	10	5.6
103-65-1	n-Propylbenzene	10	U	10	5.2
95-49-8	2-Chlorotoluene	10	U	10	3.4
106-43-4	4-Chlorotoluene	10	U	10	3.5
108-67-8	1,3,5-Trimethylbenzene	10	U	10	3.3
98-06-6	tert-Butylbenzene	10	U	10	5.2
95-63-6	1,2,4-Trimethylbenzene	10	U	10	3.5
135-98-8	sec-Butylbenzene	10	U	10	5.2
541-73-1	1,3-Dichlorobenzene	10	U	10	2.6
99-87-6	4-Isopropyltoluene	10	U	10	1.9
106-46-7	1,4-Dichlorobenzene	10	U	10	2.4
95-50-1	1,2-Dichlorobenzene	10	U	10	2.9
104-51-8	n-Butylbenzene	10	U	10	5.2
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	10	4.8
120-82-1	1,2,4-Trichlorobenzene	10	U	10	1.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32253 Lab Sample ID: 200-2223-17  
 Matrix: Solid Lab File ID: lfaag11.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 9.663(g) Date Analyzed: 11/10/2010 12:16  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	10	U	10	5.2
91-20-3	Naphthalene	10	U *	10	5.2
87-61-6	1,2,3-Trichlorobenzene	10	U	10	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	85		65-155
2037-26-5	Toluene-d8	97		80-115
460-00-4	Bromofluorobenzene	96		80-115
2199-69-1	1,2-Dichlorobenzene-d4	94		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-MEOH Lab Sample ID: 200-2223-18  
 Matrix: Solid Lab File ID: lfaag12.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 12:48  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	10	U	10	5.0
74-87-3	Chloromethane	10	U	10	3.7
75-01-4	Vinyl chloride	10	U	10	5.0
74-83-9	Bromomethane	10	* B	10	3.5
75-00-3	Chloroethane	10	U *	10	6.0
75-69-4	Trichlorofluoromethane	10	U *	10	5.0
75-35-4	1,1-Dichloroethene	10	U *	10	2.1
76-13-1	Freon TF	10	U *	10	2.8
67-64-1	Acetone	10	U *	10	10
74-88-4	Methyl iodide	10	U *	10	5.0
75-15-0	Carbon disulfide	10	U *	10	1.9
79-20-9	Methyl acetate	10	U	10	5.0
75-09-2	Methylene Chloride	10	U	10	5.0
156-60-5	trans-1,2-Dichloroethene	10	U	10	5.0
1634-04-4	Methyl t-butyl ether	10	U *	10	5.0
75-34-3	1,1-Dichloroethane	10	U *	10	3.6
108-05-4	Vinyl acetate	10	U	10	5.0
594-20-7	2,2-Dichloropropane	10	U *	10	4.6
156-59-2	cis-1,2-Dichloroethene	10	U	10	2.1
78-93-3	2-Butanone	10	U	10	11
74-97-5	Bromochloromethane	10	U *	10	5.3
109-99-9	Tetrahydrofuran	100	U	100	50
67-66-3	Chloroform	10	U *	10	3.3
71-55-6	1,1,1-Trichloroethane	10	U *	10	3.6
110-82-7	Cyclohexane	10	U	10	3.5
563-58-6	1,1-Dichloropropene	10	U	10	2.2
56-23-5	Carbon tetrachloride	10	U *	10	3.2
78-83-1	Isobutyl alcohol	500	U *	500	250
71-43-2	Benzene	10	U	10	3.1
107-06-2	1,2-Dichloroethane	10	U	10	3.3
79-01-6	Trichloroethene	10	U	10	5.0
108-87-2	Methylcyclohexane	10	U	10	5.0
78-87-5	1,2-Dichloropropane	10	U	10	3.8
74-95-3	Dibromomethane	10	U	10	2.5
123-91-1	1,4-Dioxane	500	U	500	270
75-27-4	Bromodichloromethane	10	U	10	3.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-MEOH Lab Sample ID: 200-2223-18  
 Matrix: Solid Lab File ID: lfaagl2.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 12:48  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	10	U	10	1.3
10061-01-5	cis-1,3-Dichloropropene	10	U	10	3.2
108-10-1	4-Methyl-2-pentanone	10	U	10	2.1
108-88-3	Toluene	10	U	10	5.0
10061-02-6	trans-1,3-Dichloropropene	10	U	10	5.0
79-00-5	1,1,2-Trichloroethane	10	U	10	4.2
127-18-4	Tetrachloroethene	10	U	10	5.0
142-28-9	1,3-Dichloropropane	10	U	10	3.3
591-78-6	2-Hexanone	10	U	10	10
124-48-1	Dibromochloromethane	10	U	10	3.7
106-93-4	1,2-Dibromoethane	10	U	10	5.0
108-90-7	Chlorobenzene	10	U	10	2.3
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	3.6
100-41-4	Ethylbenzene	10	U	10	5.0
179601-23-1	m&p-Xylene	10	U	10	5.0
95-47-6	o-Xylene	10	U	10	5.0
100-42-5	Styrene	10	U	10	5.0
75-25-2	Bromoform	10	U	10	3.9
98-82-8	Isopropylbenzene	10	U	10	5.0
108-86-1	Bromobenzene	10	U	10	3.7
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	3.7
96-18-4	1,2,3-Trichloropropane	10	U	10	5.4
103-65-1	n-Propylbenzene	10	U	10	5.0
95-49-8	2-Chlorotoluene	10	U	10	3.3
106-43-4	4-Chlorotoluene	10	U	10	3.4
108-67-8	1,3,5-Trimethylbenzene	10	U	10	3.2
98-06-6	tert-Butylbenzene	10	U	10	5.0
95-63-6	1,2,4-Trimethylbenzene	10	U	10	3.4
135-98-8	sec-Butylbenzene	10	U	10	5.0
541-73-1	1,3-Dichlorobenzene	10	U	10	2.5
99-87-6	4-Isopropyltoluene	10	U	10	1.8
106-46-7	1,4-Dichlorobenzene	10	U	10	2.3
95-50-1	1,2-Dichlorobenzene	10	U	10	2.8
104-51-8	n-Butylbenzene	10	U	10	5.0
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	10	4.6
120-82-1	1,2,4-Trichlorobenzene	10	U	10	1.6

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-MEOH Lab Sample ID: 200-2223-18  
 Matrix: Solid Lab File ID: lfaag12.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 12:48  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	10	U	10	5.0
91-20-3	Naphthalene	10	U *	10	5.0
87-61-6	1,2,3-Trichlorobenzene	10	U	10	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	83		65-155
2037-26-5	Toluene-d8	95		80-115
460-00-4	Bromofluorobenzene	95		80-115
2199-69-1	1,2-Dichlorobenzene-d4	92		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32350 Lab Sample ID: 200-2223-19  
 Matrix: Solid Lab File ID: lfaag13.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 9.493(g) Date Analyzed: 11/10/2010 13:20  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	11	U	11	5.3
74-87-3	Chloromethane	11	U	11	3.9
75-01-4	Vinyl chloride	11	U	11	5.3
74-83-9	Bromomethane	10	J * B	11	3.7
75-00-3	Chloroethane	11	U *	11	6.3
75-69-4	Trichlorofluoromethane	11	U *	11	5.3
75-35-4	1,1-Dichloroethene	11	U *	11	2.2
76-13-1	Freon TF	11	U *	11	2.9
67-64-1	Acetone	11	U *	11	11
74-88-4	Methyl iodide	11	U *	11	5.3
75-15-0	Carbon disulfide	11	U *	11	2.0
79-20-9	Methyl acetate	11	U	11	5.3
75-09-2	Methylene Chloride	11	U	11	5.3
156-60-5	trans-1,2-Dichloroethene	11	U	11	5.3
1634-04-4	Methyl t-butyl ether	11	U *	11	5.3
75-34-3	1,1-Dichloroethane	11	U *	11	3.8
108-05-4	Vinyl acetate	11	U	11	5.3
594-20-7	2,2-Dichloropropane	11	U *	11	4.8
156-59-2	cis-1,2-Dichloroethene	11	U	11	2.2
78-93-3	2-Butanone	11	U	11	12
74-97-5	Bromochloromethane	11	U *	11	5.6
109-99-9	Tetrahydrofuran	110	U	110	53
67-66-3	Chloroform	11	U *	11	3.5
71-55-6	1,1,1-Trichloroethane	11	U *	11	3.8
110-82-7	Cyclohexane	11	U	11	3.7
563-58-6	1,1-Dichloropropene	11	U	11	2.3
56-23-5	Carbon tetrachloride	18	*	11	3.4
78-83-1	Isobutyl alcohol	530	U *	530	260
71-43-2	Benzene	11	U	11	3.3
107-06-2	1,2-Dichloroethane	11	U	11	3.5
79-01-6	Trichloroethene	11	U	11	5.3
108-87-2	Methylcyclohexane	11	U	11	5.3
78-87-5	1,2-Dichloropropane	11	U	11	4.0
74-95-3	Dibromomethane	11	U	11	2.6
123-91-1	1,4-Dioxane	530	U	530	280
75-27-4	Bromodichloromethane	11	U	11	3.9



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32350 Lab Sample ID: 200-2223-19  
 Matrix: Solid Lab File ID: lfaag13.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 9.493(g) Date Analyzed: 11/10/2010 13:20  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	11	U	11	1.4
10061-01-5	cis-1,3-Dichloropropene	11	U	11	3.4
108-10-1	4-Methyl-2-pentanone	11	U	11	2.2
108-88-3	Toluene	11	U	11	5.3
10061-02-6	trans-1,3-Dichloropropene	11	U	11	5.3
79-00-5	1,1,2-Trichloroethane	11	U	11	4.4
127-18-4	Tetrachloroethene	11	U	11	5.3
142-28-9	1,3-Dichloropropane	11	U	11	3.5
591-78-6	2-Hexanone	11	U	11	11
124-48-1	Dibromochloromethane	11	U	11	3.9
106-93-4	1,2-Dibromoethane	11	U	11	5.3
108-90-7	Chlorobenzene	11	U	11	2.4
630-20-6	1,1,1,2-Tetrachloroethane	11	U	11	3.8
100-41-4	Ethylbenzene	11	U	11	5.3
179601-23-1	m&p-Xylene	11	U	11	5.3
95-47-6	o-Xylene	11	U	11	5.3
100-42-5	Styrene	11	U	11	5.3
75-25-2	Bromoform	11	U	11	4.1
98-82-8	Isopropylbenzene	11	U	11	5.3
108-86-1	Bromobenzene	11	U	11	3.9
79-34-5	1,1,2,2-Tetrachloroethane	11	U	11	3.9
96-18-4	1,2,3-Trichloropropane	11	U	11	5.7
103-65-1	n-Propylbenzene	11	U	11	5.3
95-49-8	2-Chlorotoluene	11	U	11	3.5
106-43-4	4-Chlorotoluene	11	U	11	3.6
108-67-8	1,3,5-Trimethylbenzene	11	U	11	3.4
98-06-6	tert-Butylbenzene	11	U	11	5.3
95-63-6	1,2,4-Trimethylbenzene	11	U	11	3.6
135-98-8	sec-Butylbenzene	11	U	11	5.3
541-73-1	1,3-Dichlorobenzene	11	U	11	2.6
99-87-6	4-Isopropyltoluene	11	U	11	1.9
106-46-7	1,4-Dichlorobenzene	11	U	11	2.4
95-50-1	1,2-Dichlorobenzene	11	U	11	2.9
104-51-8	n-Butylbenzene	11	U	11	5.3
96-12-8	1,2-Dibromo-3-Chloropropane	11	U	11	4.8
120-82-1	1,2,4-Trichlorobenzene	11	U	11	1.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32350 Lab Sample ID: 200-2223-19  
 Matrix: Solid Lab File ID: lfaagl3.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 9.493(g) Date Analyzed: 11/10/2010 13:20  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	11	U	11	5.3
91-20-3	Naphthalene	11	U *	11	5.3
87-61-6	1,2,3-Trichlorobenzene	11	U	11	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	89		65-155
2037-26-5	Toluene-d8	104		80-115
460-00-4	Bromofluorobenzene	103		80-115
2199-69-1	1,2-Dichlorobenzene-d4	100		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32366 Lab Sample ID: 200-2223-20  
 Matrix: Solid Lab File ID: lfaag14.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 12.09(g) Date Analyzed: 11/10/2010 13:52  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	8.3	U	8.3	4.1
74-87-3	Chloromethane	8.3	U	8.3	3.1
75-01-4	Vinyl chloride	8.3	U	8.3	4.1
74-83-9	Bromomethane	7.2	J * B	8.3	2.9
75-00-3	Chloroethane	8.3	U *	8.3	5.0
75-69-4	Trichlorofluoromethane	8.3	U *	8.3	4.1
75-35-4	1,1-Dichloroethene	8.3	U *	8.3	1.7
76-13-1	Freon TF	8.3	U *	8.3	2.3
67-64-1	Acetone	8.3	U *	8.3	8.3
74-88-4	Methyl iodide	8.3	U *	8.3	4.1
75-15-0	Carbon disulfide	8.3	U *	8.3	1.6
79-20-9	Methyl acetate	8.3	U	8.3	4.1
75-09-2	Methylene Chloride	8.3	U	8.3	4.1
156-60-5	trans-1,2-Dichloroethene	8.3	U	8.3	4.1
1634-04-4	Methyl t-butyl ether	8.3	U *	8.3	4.1
75-34-3	1,1-Dichloroethane	8.3	U *	8.3	3.0
108-05-4	Vinyl acetate	8.3	U	8.3	4.1
594-20-7	2,2-Dichloropropane	8.3	U *	8.3	3.8
156-59-2	cis-1,2-Dichloroethene	8.3	U	8.3	1.7
78-93-3	2-Butanone	8.3	U	8.3	9.1
74-97-5	Bromochloromethane	8.3	U *	8.3	4.4
109-99-9	Tetrahydrofuran	83	U	83	41
67-66-3	Chloroform	8.3	U *	8.3	2.7
71-55-6	1,1,1-Trichloroethane	8.3	U *	8.3	3.0
110-82-7	Cyclohexane	8.3	U	8.3	2.9
563-58-6	1,1-Dichloropropene	8.3	U	8.3	1.8
56-23-5	Carbon tetrachloride	8.3	U *	8.3	2.6
78-83-1	Isobutyl alcohol	410	U *	410	210
71-43-2	Benzene	8.3	U	8.3	2.6
107-06-2	1,2-Dichloroethane	8.3	U	8.3	2.7
79-01-6	Trichloroethene	8.3	U	8.3	4.1
108-87-2	Methylcyclohexane	8.3	U	8.3	4.1
78-87-5	1,2-Dichloropropane	8.3	U	8.3	3.1
74-95-3	Dibromomethane	8.3	U	8.3	2.1
123-91-1	1,4-Dioxane	410	U	410	220
75-27-4	Bromodichloromethane	8.3	U	8.3	3.1

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Burlington</u>	Job No.: <u>200-2223-1</u>
SDG No.: <u>MONTGO (200-2223)</u>	
Client Sample ID: <u>MC-S-32366</u>	Lab Sample ID: <u>200-2223-20</u>
Matrix: <u>Solid</u>	Lab File ID: <u>lfaag14.d</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>10/27/2010 00:00</u>
Sample wt/vol: <u>12.09(g)</u>	Date Analyzed: <u>11/10/2010 13:52</u>
Soil Aliquot Vol: <u>0.5 (mL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>10(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.53(mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>9400</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	8.3	U	8.3	1.1
10061-01-5	cis-1,3-Dichloropropene	8.3	U	8.3	2.6
108-10-1	4-Methyl-2-pentanone	8.3	U	8.3	1.7
108-88-3	Toluene	8.3	U	8.3	4.1
10061-02-6	trans-1,3-Dichloropropene	8.3	U	8.3	4.1
79-00-5	1,1,2-Trichloroethane	8.3	U	8.3	3.5
127-18-4	Tetrachloroethene	8.3	U	8.3	4.1
142-28-9	1,3-Dichloropropane	8.3	U	8.3	2.7
591-78-6	2-Hexanone	8.3	U	8.3	8.3
124-48-1	Dibromochloromethane	8.3	U	8.3	3.1
106-93-4	1,2-Dibromoethane	8.3	U	8.3	4.1
108-90-7	Chlorobenzene	8.3	U	8.3	1.9
630-20-6	1,1,1,2-Tetrachloroethane	8.3	U	8.3	3.0
100-41-4	Ethylbenzene	8.3	U	8.3	4.1
179601-23-1	m&p-Xylene	8.3	U	8.3	4.1
95-47-6	o-Xylene	8.3	U	8.3	4.1
100-42-5	Styrene	8.3	U	8.3	4.1
75-25-2	Bromoform	8.3	U	8.3	3.2
98-82-8	Isopropylbenzene	8.3	U	8.3	4.1
108-86-1	Bromobenzene	8.3	U	8.3	3.1
79-34-5	1,1,2,2-Tetrachloroethane	8.3	U	8.3	3.1
96-18-4	1,2,3-Trichloropropane	8.3	U	8.3	4.5
103-65-1	n-Propylbenzene	8.3	U	8.3	4.1
95-49-8	2-Chlorotoluene	8.3	U	8.3	2.7
106-43-4	4-Chlorotoluene	8.3	U	8.3	2.8
108-67-8	1,3,5-Trimethylbenzene	8.3	U	8.3	2.6
98-06-6	tert-Butylbenzene	8.3	U	8.3	4.1
95-63-6	1,2,4-Trimethylbenzene	8.3	U	8.3	2.8
135-98-8	sec-Butylbenzene	8.3	U	8.3	4.1
541-73-1	1,3-Dichlorobenzene	8.3	U	8.3	2.1
99-87-6	4-Isopropyltoluene	8.3	U	8.3	1.5
106-46-7	1,4-Dichlorobenzene	8.3	U	8.3	1.9
95-50-1	1,2-Dichlorobenzene	8.3	U	8.3	2.3
104-51-8	n-Butylbenzene	8.3	U	8.3	4.1
96-12-8	1,2-Dibromo-3-Chloropropane	8.3	U	8.3	3.8
120-82-1	1,2,4-Trichlorobenzene	8.3	U	8.3	1.3

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: MC-S-32366 Lab Sample ID: 200-2223-20  
 Matrix: Solid Lab File ID: lfaag14.d  
 Analysis Method: 8260B Date Collected: 10/27/2010 00:00  
 Sample wt/vol: 12.09(g) Date Analyzed: 11/10/2010 13:52  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	8.3	U	8.3	4.1
91-20-3	Naphthalene	8.3	U *	8.3	4.1
87-61-6	1,2,3-Trichlorobenzene	8.3	U	8.3	2.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	93		65-155
2037-26-5	Toluene-d8	104		80-115
460-00-4	Bromofluorobenzene	104		80-115
2199-69-1	1,2-Dichlorobenzene-d4	100		45-145

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 200-2223-1 Analy Batch No.: 7468  
 SDG No.: MONTGO (200-2223) GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 10/04/2010 15:04 Calibration End Date: 10/04/2010 17:45 Calibration ID: 2582

Calibration Files:

LEVEL:	LAB SAMPLE ID:	EPA SAMPLE NO:	LAB FILE ID:
Level 1	IC 200-7468/3	IC	1fa03.d
Level 2	IC 200-7468/4	IC	1fa04.d
Level 3	IC 200-7468/5	IC	1fa05.d
Level 4	ICIS 200-7468/6	ICIS	1fa06.d
Level 5	IC 200-7468/7	IC	1fa07.d
Level 6	IC 200-7468/8	IC	1fa08.d

ANALYTE	RRF						CURVE TYPE	COEFFICIENT			# MIN RRF	%RSD #	MAX %RSD	R <sup>2</sup> OR COD	#	MIN R <sup>2</sup> OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6		B	M1	M2						
Freon 123a	0	0	0	0	0	0	Ave						15.0			
Dichlorodifluoromethane	0.4757	0.4671	0.4435	0.4696	0.4637	0.4590	Ave	0.4631			2.4		15.0			
Chloromethane	0.2472	0.2292	0.2170	0.2143	0.2390	0.2475	Ave	0.2324		0.1000	6.3		15.0			
Vinyl chloride	0.2922	0.2881	0.2790	0.2921	0.2911	0.2887	Ave	0.2885			1.7		15.0			
Bromomethane	0.1947	0.1545	0.1670	0.1639	0.1674	0.1591	Ave	0.1678			8.4		15.0			
Chloroethane	0.2163	0.1791	0.1681	0.1697	0.1673	0.1454	Ave	0.1743			13.4		15.0			
Trichlorofluoromethane	0.5514	0.5317	0.5118	0.5427	0.5352	0.5312	Ave	0.5340			2.5		15.0			
Acrolein	0.0285	0.0276	0.0260	0.0276	0.0272	0.0270	Ave	0.0273			3.0		15.0			
1,1-Dichloroethene	0.3268	0.2843	0.2794	0.2835	0.2842	0.2874	Ave	0.2909			6.1		15.0			
Freon TF	0.6274	0.6113	0.5869	0.6036	0.6017	0.5996	Ave	0.6051			2.2		15.0			
Acetone	0.0472	0.0377	0.0389	0.0385	0.0386	0.0402	Ave	0.0402			8.8		15.0			
Methyl iodide	0.2397	0.2259	0.2717	0.3189	0.3465	0.3453	Ave	0.2913			18.2 *		15.0			
Carbon disulfide	0.9222	0.8034	0.7881	0.7920	0.8023	0.7985	Ave	0.8178			6.3		15.0			
Allyl chloride	0.4596	0.4162	0.4165	0.4223	0.4271	0.4195	Ave	0.4269			3.9		15.0			
Methyl acetate	0.0434	0.0360	0.0345	0.0377	0.0378	0.0397	Ave	0.0382			8.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.



FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 200-2223-1 Analy Batch No.: 7468  
 SDG No.: MONTGO (200-2223) GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 10/04/2010 15:04 Calibration End Date: 10/04/2010 17:45 Calibration ID: 2582

ANALYTE	RRF						CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	B		M1	M2									
Methylene Chloride	0.3289 0.2723	0.2786	0.2705	0.2739	0.2736			0.2830						8.0	15.0			
tert-Butyl alcohol	0.0171 0.0163	0.0181	0.0175	0.0162	0.0155			0.0168						5.6	15.0			
Acrylonitrile	0.0639 0.0571	0.0477	0.0488	0.0545	0.0534			0.0542						10.9	15.0			
trans-1,2-Dichloroethene	0.3510 0.3130	0.3113	0.3042	0.3067	0.3135			0.3166						5.4	15.0			
Methyl t-butyl ether	0.6282 0.5864	0.5804	0.5708	0.5882	0.5759			0.5883						3.5	15.0			
1,1-Dichloroethane	0.6087 0.5773	0.5659	0.5571	0.5618	0.5654			0.5727			0.1000			3.3	15.0			
Vinyl acetate	0.5701 0.4452	0.5198	0.5094	0.5206	0.4797			0.5075						8.3	15.0			
Chloroprene	0.5010 0.4418	0.4242	0.4346	0.4398	0.4388			0.4467						6.1	15.0			
2,2-Dichloropropane	0.5064 0.4194	0.4470	0.4353	0.4295	0.4293			0.4445						7.1	15.0			
cis-1,2-Dichloroethene	0.3645 0.3271	0.3288	0.3221	0.3273	0.3295			0.3332						4.7	15.0			
2-Butanone	0.0231 0.0213	0.0212	0.0213	0.0216	0.0204			0.0215						4.1	15.0			
Propionitrile	0.0233 0.0210	0.0212	0.0207	0.0205	0.0200			0.0211						5.4	15.0			
Methacrylonitrile	0.0985 0.0742	0.0638	0.0718	0.0741	0.0729			0.0759						15.5 *	15.0			
Bromochloromethane	0.1892 0.1697	0.1754	0.1734	0.1775	0.1780			0.1772						3.7	15.0			
Tetrahydrofuran	0.0690 0.0636	0.0626	0.0626	0.0628	0.0608			0.0636						4.4	15.0			
Chloroform	0.6309 0.5835	0.5885	0.5710	0.5822	0.5823			0.5897						3.6	15.0			
1,1,1-Trichloroethane	0.5229 0.4739	0.4813	0.4705	0.4728	0.4736			0.4825						4.2	15.0			
Cyclohexane	0.5138 0.4815	0.4780	0.4652	0.4775	0.4795			0.4826						3.4	15.0			
1,1-Dichloropropene	0.5259 0.4778	0.4697	0.4636	0.4728	0.4734			0.4805						4.7	15.0			
Carbon tetrachloride	0.4288 0.4361	0.4316	0.4260	0.4328	0.4363			0.4319						0.9	15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington      Job No.: 200-2223-1      Analy Batch No.: 7468  
 SDG No.: MONTGO (200-2223)      GC Column: DB-624      ID: 0.53(mm)      Heated Purge: (Y/N) N  
 Instrument ID: L.i      Calibration Start Date: 10/04/2010 15:04      Calibration End Date: 10/04/2010 17:45      Calibration ID: 2582

ANALYTE	RRF						CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	R^2 OR COD	MAX %RSD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	B		M1	M2									
Isobutyl alcohol	0.0098	0.0090	0.0091	0.0086	0.0083	Ave		0.0090				5.6		15.0				
Benzene	0.0089	0.8540	0.8525	0.8679	0.8774	Ave		0.8792				4.0		15.0				
1,2-Dichloroethane	0.8761	0.2785	0.2711	0.2759	0.2749	Ave		0.2806				4.1		15.0				
Trichloroethene	0.2800	0.4169	0.3797	0.3856	0.3955	Ave		0.3924				3.6		15.0				
Methylcyclohexane	0.3963	0.5426	0.4820	0.4927	0.4935	Ave		0.4962				4.9		15.0				
1,2-Dichloropropane	0.4935	0.3624	0.3521	0.3462	0.3540	Ave		0.3536				1.5		15.0				
Dibromomethane	0.3543	0.3230	0.2925	0.2975	0.2935	Ave		0.2981				4.3		15.0				
Methyl methacrylate	0.2963	0.3089	0.2608	0.2638	0.2568	Ave		0.2690				7.3		15.0				
1,4-Dioxane	0.2651	0.0020	0.0023	0.0021	0.0020	Ave		0.0021				5.5		15.0				
Bromodichloromethane	0.0022	0.5782	0.5398	0.5504	0.5598	Ave		0.5546				2.8		15.0				
2-Chloroethyl vinyl ether	0.5627	0.2092	0.2015	0.2082	0.2045	Ave		0.2044				2.5		15.0				
cis-1,3-Dichloropropene	0.2076	0.5532	0.5024	0.5110	0.5117	Ave		0.5159				3.7		15.0				
4-Methyl-2-pentanone	0.5166	0.2712	0.2579	0.2643	0.2601	Ave		0.2661				2.3		15.0				
Toluene	0.2729	0.8724	0.8107	0.7905	0.8264	Ave		0.8241				3.3		15.0				
trans-1,3-Dichloropropene	0.8273	0.6365	0.5663	0.5419	0.5764	Ave		0.5784				5.5		15.0				
Ethyl methacrylate	0.5818	0.4452	0.3936	0.3994	0.4101	Ave		0.4102				4.5		15.0				
1,1,2-Trichloroethane	0.4103	0.3714	0.3513	0.3486	0.3569	Ave		0.3582				2.3		15.0				
Tetrachloroethene	0.3609	0.5114	0.4896	0.4782	0.4953	Ave		0.4930				2.2		15.0				
1,3-Dichloropropane	0.4917	0.7133	0.6527	0.6513	0.6628	Ave		0.6630				3.9		15.0				
2-Hexanone	0.6603	0.2545	0.2398	0.2444	0.2400	Ave		0.2449				2.6		15.0				
	0.2504																	

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 200-2223-1 Analyt Batch No.: 7468  
 SDG No.: MONTGO (200-2223) GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 10/04/2010 15:04 Calibration End Date: 10/04/2010 17:45 Calibration ID: 2582

ANALYTE	RRF						CURVE TYPE	COEFFICIENT			# MIN RRF	%RSD #	MAX %RSD	R <sup>2</sup> OR COD	#	MIN R <sup>2</sup> OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	B		M1	M2							
Dibromochloromethane	0.6703 0.6395	0.5977	0.5932	0.6295	0.6298	Ave		0.6267				15.0				
1,2-Dibromoethane	0.6432 0.6126	0.5935	0.5878	0.6050	0.6024	Ave		0.6074				15.0				
Chlorobenzene	1.0515 1.0090	0.9903	0.9678	0.9922	1.0064	Ave		1.0029		0.3000		15.0				
1,1,1,2-Tetrachloroethane	0.4830 0.4768	0.4722	0.4616	0.4732	0.4766	Ave		0.4739				15.0				
Ethylbenzene	1.6826 1.6946	1.6367	1.6012	1.6573	1.6811	Ave		1.6589				15.0				
m,p-Xylene	0.6184 0.5983	0.5797	0.5702	0.5891	0.5982	Ave		0.5923				15.0				
o-Xylene	0.6088 0.5638	0.5551	0.5433	0.5579	0.5650	Ave		0.5657				15.0				
Styrene	0.9966 0.9981	0.9536	0.9310	0.9794	0.9895	Ave		0.9747				15.0				
Bromoform	0.4139 0.4286	0.3989	0.3956	0.4131	0.4148	Ave		0.4108		0.1000		15.0				
Isopropylbenzene	3.6135 3.4069	3.3223	3.2746	3.3252	3.3711	Ave		3.3856				15.0				
cis-1,4-Dichloro-2-butene	0.3213 0.2901	0.2972	0.2911	0.2853	0.2858	Ave		0.2951				15.0				
Bromobenzene	0.9819 0.8965	0.8862	0.8754	0.8964	0.8900	Ave		0.9044				15.0				
1,1,2,2-Tetrachloroethane	1.6104 1.3700	1.4304	1.3918	1.3871	1.3516	Ave		1.4236		0.3000		15.0				
1,2,3-Trichloropropane	0.4100 0.3205	0.3312	0.3205	0.3216	0.3109	Ave		0.3358				15.0				
trans-1,4-Dichloro-2-butene	0.3408 0.2591	0.2580	0.2599	0.2599	0.2524	Ave		0.2717				15.0				
n-Propylbenzene	0.8449 0.8286	0.7919	0.7783	0.8142	0.8159	Ave		0.8123				15.0				
2-Chlorotoluene	0.8294 0.7520	0.7401	0.7298	0.7435	0.7450	Ave		0.7566				15.0				
1,3,5-Trimethylbenzene	2.4365 2.4281	2.2275	2.2172	2.3119	2.3692	Ave		2.3317				15.0				
4-Chlorotoluene	0.8205 0.7429	0.7262	0.7169	0.7381	0.7476	Ave		0.7487				15.0				
tert-Butylbenzene	2.6366 2.6202	2.4718	2.4477	2.5101	2.5581	Ave		2.5408				15.0				

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUTION

Lab Name: TestAmerica Burlington Job No.: 200-2223-1 Analy Batch No.: 7468  
 SDG No.: MONTGO (200-2223) GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 10/04/2010 15:04 Calibration End Date: 10/04/2010 17:45 Calibration ID: 2582

ANALYTE	RRF						CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	B		M1	M2									
1,2,4-Trimethylbenzene	2.1340 2.3247	2.0058	2.0102	2.1231	2.2134	Ave		2.1352				5.7		15.0				
sec-Butylbenzene	3.6940 3.8152	3.4925	3.4441	3.6341	3.7371	Ave		3.6362				3.9		15.0				
1,3-Dichlorobenzene	1.6368 1.5204	1.4737	1.4414	1.4926	1.4994	Ave		1.5107				4.5		15.0				
4-Isopropyltoluene	2.6604 2.8838	2.4868	2.4744	2.6325	2.7566	Ave		2.6491				5.9		15.0				
1,4-Dichlorobenzene	1.6099 1.5865	1.4796	1.4657	1.5332	1.5520	Ave		1.5378				3.7		15.0				
n-Butylbenzene	2.2952 2.7553	2.2310	2.2184	2.4415	2.5859	Ave		2.4212				8.9		15.0				
1,2-Dichlorobenzene	1.4998 1.3622	1.3126	1.3157	1.3457	1.3478	Ave		1.3640				5.1		15.0				
1,2-Dibromo-3-Chloropropane	0.3122 0.2635	0.2691	0.2599	0.2607	0.2526	Ave		0.2697				8.0		15.0				
1,2,4-Trichlorobenzene	0.7776 0.8377	0.7102	0.6983	0.7619	0.7957	Ave		0.7636				6.9		15.0				
Hexachlorobutadiene	0.5217 0.5294	0.4873	0.4748	0.5070	0.5195	Ave		0.5066				4.2		15.0				
Naphthalene	1.8098 1.5943	1.4897	1.4651	1.4673	1.5003	Ave		1.5544				8.6		15.0				
1,2,3-Trichlorobenzene	0.6604 0.7333	0.6392	0.6178	0.6694	0.6976	Ave		0.6696				6.2		15.0				
1,2-Dichloroethane-d4	0.2609 0.2269	0.2279	0.2192	0.2260	0.2262	Ave		0.2312				6.4		15.0				
Toluene-d8	1.2611 1.1887	1.1406	1.1416	1.1654	1.1789	Ave		1.1794				3.8		15.0				
Bromofluorobenzene	1.7661 1.5429	1.5146	1.5013	1.5147	1.5333	Ave		1.5622				6.5		15.0				
1,2-Dichlorobenzene-d4	1.0010 0.8697	0.8640	0.8528	0.8739	0.8670	Ave		0.8881				6.3		15.0				

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.



FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-2223-1 Analy Batch No.: 7468  
 SDG No.: MONTGO (200-2223) GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 10/04/2010 15:04 Calibration End Date: 10/04/2010 17:45 Calibration ID: 2582

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		
tert-Butyl alcohol	FB	Ave	114727 4440835	246317	471546	1109051	2124399	50.0 2000	100	200	500	1000		
Acrylonitrile	FB	Ave	8591 778982	32547	65748	186710	365739	1.00 100	5.00	10.0	25.0	50.0		
trans-1,2-Dichloroethene	FB	Ave	47172 4269000	212380	409461	1050249	2149001	1.00 100	5.00	10.0	25.0	50.0		
Methyl t-butyl ether	FB	Ave	84420 7997902	395931	768369	2013752	3947606	1.00 100	5.00	10.0	25.0	50.0		
1,1-Dichloroethane	FB	Ave	81797 7873521	386065	749888	1923359	3875506	1.00 100	5.00	10.0	25.0	50.0		
Vinyl acetate	FB	Ave	76614 6072150	354625	685722	1782436	3288508	1.00 100	5.00	10.0	25.0	50.0		
Chloroprene	FB	Ave	67335 6025307	289385	585087	1505874	3008044	1.00 100	5.00	10.0	25.0	50.0		
2,2-Dichloropropane	FB	Ave	68050 5720953	304940	586026	1470553	2942779	1.00 100	5.00	10.0	25.0	50.0		
cis-1,2-Dichloroethene	FB	Ave	48985 4460755	224281	433625	1120505	2258921	1.00 100	5.00	10.0	25.0	50.0		
2-Butanone	FB	Ave	15515 1454164	72318	143290	369210	700736	5.00 500	25.0	50.0	125	250		
Propionitrile	FB	Ave	12536 1143670	57853	111480	280997	549451	4.00 400	20.0	40.0	100	200		
Methacrylonitrile	FB	Ave	13244 1012666	43549	96718	253843	499682	1.00 100	5.00	10.0	25.0	50.0		
Bromochloromethane	FB	Ave	25426 2315120	119634	233460	607799	1220272	1.00 100	5.00	10.0	25.0	50.0		
Tetrahydrofuran	FB	Ave	129802 12135602	598313	1179780	3009782	5839014	14.0 1400	70.0	140	350	700		
Chloroform	FB	Ave	84790 7958538	401462	768700	1993437	3991341	1.00 100	5.00	10.0	25.0	50.0		
1,1,1-Trichloroethane	FB	Ave	70276 6463908	328361	633369	1618735	3246227	1.00 100	5.00	10.0	25.0	50.0		
Cyclohexane	FB	Ave	69056 6566705	326110	626182	1634935	3287013	1.00 100	5.00	10.0	25.0	50.0		
1,1-Dichloropropene	FB	Ave	70676 6516153	320443	624121	1618820	3245157	1.00 100	5.00	10.0	25.0	50.0		
Carbon tetrachloride	FB	Ave	57625 5947585	294434	573481	1481767	2991141	1.00 100	5.00	10.0	25.0	50.0		
Isobutyl alcohol	FB	Ave	65690 6041524	307609	615191	1478907	2848574	50.0 5000	250	500	1250	2500		
Benzene	FB	Ave	127324 11949009	582593	1147600	2971607	6014615	1.00 100	5.00	10.0	25.0	50.0		



FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-2223-1 Analy Batch No.: 7468  
 SDG No.: MONTGO (200-2223) GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) N  
 Instrument ID: L.1 Calibration Start Date: 10/04/2010 15:04 Calibration End Date: 10/04/2010 17:45 Calibration ID: 2582

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		
1,2-Dichloroethane	FB	Ave	40755 3818734	189997	364995	944503	1884333	1.00 100	5.00	10.0	25.0	50.0		
Trichloroethene	FB	Ave	56029 5404844	259017	512009	1320258	2711415	1.00 100	5.00	10.0	25.0	50.0		
Methylcyclohexane	FB	Ave	72914 6731304	328800	636352	1687009	3383115	1.00 100	5.00	10.0	25.0	50.0		
1,2-Dichloropropane	FB	Ave	48701 4832202	240213	466105	1206201	2426526	1.00 100	5.00	10.0	25.0	50.0		
Dibromomethane	FB	Ave	43412 4041602	199532	384905	1018748	2012029	1.00 100	5.00	10.0	25.0	50.0		
Methyl methacrylate	CBZ	Ave	30722 2666038	131748	258920	667650	1296492	1.00 100	5.00	10.0	25.0	50.0		
1,4-Dioxane	FB	Ave	13223 1480032	76750	148661	368028	682613	50.0 5000	250	500	1250	2500		
Bromodichloromethane	FB	Ave	77698 7674465	368220	722678	1884439	3837268	1.00 100	5.00	10.0	25.0	50.0		
2-Chloroethyl vinyl ether	FB	Ave	28113 2831179	137450	263524	712921	1401514	1.00 100	5.00	10.0	25.0	50.0		
cis-1,3-Dichloropropene	FB	Ave	74350 7046685	342735	673682	1749746	3507596	1.00 100	5.00	10.0	25.0	50.0		
4-Methyl-2-pentanone	FB	Ave	182203 18611795	879672	1778835	4622290	8916397	5.00 500	25.0	50.0	125	250		
Toluene	CBZ	Ave	86777 8318981	409611	791225	2068467	4171563	1.00 100	5.00	10.0	25.0	50.0		
trans-1,3-Dichloropropene	CBZ	Ave	63307 5850385	286123	542426	1435560	2909739	1.00 100	5.00	10.0	25.0	50.0		
Ethyl methacrylate	FB	Ave	59831 5595601	268482	537614	1404163	2759465	1.00 100	5.00	10.0	25.0	50.0		
1,1,2-Trichloroethane	CBZ	Ave	36944 3628820	177481	348878	911622	1801296	1.00 100	5.00	10.0	25.0	50.0		
Tetrachloroethene	CBZ	Ave	50866 4943873	247383	478645	1244114	2500398	1.00 100	5.00	10.0	25.0	50.0		
1,3-Dichloropropane	CBZ	Ave	70946 6639424	329762	638149	1648273	3345758	1.00 100	5.00	10.0	25.0	50.0		
2-Hexanone	CBZ	Ave	126574 12591081	605758	1201225	3092277	6056418	5.00 500	25.0	50.0	125	250		
Dibromochloromethane	CBZ	Ave	66675 6430233	302002	593735	1593138	3179254	1.00 100	5.00	10.0	25.0	50.0		
1,2-Dibromoethane	CBZ	Ave	63979 6160207	299871	588273	1531114	3040639	1.00 100	5.00	10.0	25.0	50.0		
Chlorobenzene	CBZ	Ave	104592 10145433	500375	968612	2511020	5079867	1.00 100	5.00	10.0	25.0	50.0		

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-2223-1 Analy Batch No.: 7468  
 SDG No.: MONTGO (200-2223) GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 10/04/2010 15:04 Calibration End Date: 10/04/2010 17:45 Calibration ID: 2582

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		
1,1,1,2-Tetrachloroethane	CBZ	Ave	48039 4794129	238603	461983	1197451	2405917	1.00 100	5.00	10.0	25.0	50.0		
Ethylbenzene	CBZ	Ave	167359 17039891	826971	1602638	4194205	8485631	1.00 100	5.00	10.0	25.0	50.0		
m,p-Xylene	CBZ	Ave	123012 12032002	585778	1141426	2981597	6038657	2.00 200	10.0	20.0	50.0	100		
o-Xylene	CBZ	Ave	60553 5669489	280482	543777	1411906	2852128	1.00 100	5.00	10.0	25.0	50.0		
Styrene	CBZ	Ave	99131 10035783	481801	931780	2478728	4994624	1.00 100	5.00	10.0	25.0	50.0		
Bromoform	CBZ	Ave	41171 4310045	201551	395999	1045566	2093641	1.00 100	5.00	10.0	25.0	50.0		
Isopropylbenzene	DCB	Ave	166325 16866952	816933	1574153	4135898	8408558	1.00 100	5.00	10.0	25.0	50.0		
cis-1,4-Dichloro-2-butene	DCB	Ave	14791 1436385	73075	139941	354810	712954	1.00 100	5.00	10.0	25.0	50.0		
Bromobenzene	DCB	Ave	45195 4438114	217918	420810	1114995	2219901	1.00 100	5.00	10.0	25.0	50.0		
1,1,2,2-Tetrachloroethane	DCB	Ave	74123 6782603	351727	669054	1725329	3371259	1.00 100	5.00	10.0	25.0	50.0		
1,2,3-Trichloropropane	DCB	Ave	18871 1586779	81449	154080	400029	775459	1.00 100	5.00	10.0	25.0	50.0		
trans-1,4-Dichloro-2-butene	DCB	Ave	15687 1282956	63441	124918	323314	629440	1.00 100	5.00	10.0	25.0	50.0		
n-Propylbenzene	DCB	Ave	38888 4102284	194715	374143	1012745	2035195	1.00 100	5.00	10.0	25.0	50.0		
2-Chlorotoluene	DCB	Ave	38174 3723185	181993	350845	924702	1858124	1.00 100	5.00	10.0	25.0	50.0		
1,3,5-Trimethylbenzene	DCB	Ave	112149 12021161	547730	1065834	2875513	5909471	1.00 100	5.00	10.0	25.0	50.0		
4-Chlorotoluene	DCB	Ave	37765 3678143	178571	344633	918014	1864830	1.00 100	5.00	10.0	25.0	50.0		
tert-Butylbenzene	DCB	Ave	121360 12972128	607791	1176650	3122041	6380580	1.00 100	5.00	10.0	25.0	50.0		
1,2,4-Trimethylbenzene	DCB	Ave	98226 11508973	493218	966341	2640756	5520953	1.00 100	5.00	10.0	25.0	50.0		
sec-Butylbenzene	DCB	Ave	170029 18887918	858775	1655639	4520056	9321319	1.00 100	5.00	10.0	25.0	50.0		
1,3-Dichlorobenzene	DCB	Ave	75339 7526898	362364	692901	1856526	3740035	1.00 100	5.00	10.0	25.0	50.0		
4-Isopropyltoluene	DCB	Ave	122455 14276859	611473	1189468	3274305	6875651	1.00 100	5.00	10.0	25.0	50.0		

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-2223-1 Analy Batch No.: 7468  
 SDG No.: MONTGO (200-2223) GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 10/04/2010 15:04 Calibration End Date: 10/04/2010 17:45 Calibration ID: 2582

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)								
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6			
1,4-Dichlorobenzene	DCB	Ave	74104 7854198	363820	704599	1907046	3871059	1.00 100	5.00	10.0	25.0	50.0	1.00 100	5.00	10.0	25.0	50.0
n-Butylbenzene	DCB	Ave	105647 13640728	548588	1066389	3036773	6450030	1.00 100	5.00	10.0	25.0	50.0	1.00 100	5.00	10.0	25.0	50.0
1,2-Dichlorobenzene	DCB	Ave	69034 6743701	322769	632460	1673817	3361857	1.00 100	5.00	10.0	25.0	50.0	1.00 100	5.00	10.0	25.0	50.0
1,2-Dibromo-3-Chloropropane	DCB	Ave	14372	66181	124950	324255	630082	1.00 100	5.00	10.0	25.0	50.0	1.00 100	5.00	10.0	25.0	50.0
1,2,4-Trichlorobenzene	DCB	Ave	35790 4147104	174632	335669	947603	1984804	1.00 100	5.00	10.0	25.0	50.0	1.00 100	5.00	10.0	25.0	50.0
Hexachlorobutadiene	DCB	Ave	24014 2621122	119823	228265	630643	1295762	1.00 100	5.00	10.0	25.0	50.0	1.00 100	5.00	10.0	25.0	50.0
Naphthalene	DCB	Ave	83301 7893044	366309	704275	1824999	3742190	1.00 100	5.00	10.0	25.0	50.0	1.00 100	5.00	10.0	25.0	50.0
1,2,3-Trichlorobenzene	DCB	Ave	30398 3630614	157177	296982	832593	1739943	1.00 100	5.00	10.0	25.0	50.0	1.00 100	5.00	10.0	25.0	50.0
1,2-Dichloroethane-d4	FB	Ave	35067 3094865	155478	295072	773869	1550849	1.00 100	5.00	10.0	25.0	50.0	1.00 100	5.00	10.0	25.0	50.0
Toluene-d8	CBZ	Ave	125436 11952589	576307	1142633	2949437	5950616	1.00 100	5.00	10.0	25.0	50.0	1.00 100	5.00	10.0	25.0	50.0
Bromofluorobenzene	DCB	Ave	81293 7638498	372432	721713	1884037	3824511	1.00 100	5.00	10.0	25.0	50.0	1.00 100	5.00	10.0	25.0	50.0
1,2-Dichlorobenzene-d4	DCB	Ave	46076 4305546	212447	409971	1085940	2162638	1.00 100	5.00	10.0	25.0	50.0	1.00 100	5.00	10.0	25.0	50.0

Curve Type Legend:  
Ave = Average ISTD

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington

Job No.: 200-2223-1

SDG No.: MONTGO (200-2223)

Lab Sample ID: ICV 200-7497/3

Calibration Date: 10/05/2010 10:11

Instrument ID: L.i

Calib Start Date: 10/04/2010 15:04

GC Column: DB-624

ID: 0.53(mm)

Calib End Date: 10/04/2010 17:45

Lab File ID: lfaa03.d

Conc. Units: ug/Kg

Heated Purge: (Y/N) N

EPA Sample No.: ICV

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4631	0.4833		26.1	25.0	4.4	25.0
Chloromethane	Ave	0.2324	0.2297	0.1000	24.7	25.0	-1.2	25.0
Vinyl chloride	Ave	0.2885	0.2963		25.7	25.0	2.7	25.0
Bromomethane	Ave	0.1678	0.1760		26.2	25.0	4.9	25.0
Chloroethane	Ave	0.1743	0.1790		25.7	25.0	2.7	25.0
Trichlorofluoromethane	Ave	0.5340	0.5242		24.5	25.0	-1.8	25.0
Acrolein	Ave	0.0273	0.0284		130	125	3.8	25.0
1,1-Dichloroethene	Ave	0.2909	0.2833		24.3	25.0	-2.6	25.0
Freon TF	Ave	0.6051	0.5620		23.2	25.0	-7.1	25.0
Acetone	Ave	0.0402	0.0376		117	125	-6.4	25.0
Methyl iodide	Ave	0.2913	0.2844		24.4	25.0	-2.4	25.0
Carbon disulfide	Ave	0.8178	0.7553		23.1	25.0	-7.6	25.0
Allyl chloride	Ave	0.4269	0.4246		24.9	25.0	-0.5	25.0
Methyl acetate	Ave	0.0382	0.0382		25.0	25.0	-0.0	25.0
Methylene Chloride	Ave	0.2830	0.2874		25.4	25.0	1.6	25.0
tert-Butyl alcohol	Ave	0.0168	0.0160		478	500	-4.4	25.0
Acrylonitrile	Ave	0.0542	0.0557		25.7	25.0	2.7	25.0
trans-1,2-Dichloroethene	Ave	0.3166	0.3259		25.7	25.0	2.9	25.0
Methyl t-butyl ether	Ave	0.5883	0.5792		24.6	25.0	-1.6	25.0
1,1-Dichloroethane	Ave	0.5727	0.5789	0.1000	25.3	25.0	1.1	25.0
Vinyl acetate	Ave	0.5075	0.5766		28.4	25.0	13.6	25.0
Chloroprene	Ave	0.4467	0.3877		21.7	25.0	-13.2	25.0
2,2-Dichloropropane	Ave	0.4445	0.4602		25.9	25.0	3.5	25.0
cis-1,2-Dichloroethene	Ave	0.3332	0.3311		24.8	25.0	-0.6	25.0
2-Butanone	Ave	0.0215	0.0219		127	125	1.9	25.0
Propionitrile	Ave	0.0211	0.0213		101	100	0.8	25.0
Methacrylonitrile	Ave	0.0759	0.0746		24.6	25.0	-1.8	25.0
Bromochloromethane	Ave	0.1772	0.1821		25.7	25.0	2.7	25.0
Tetrahydrofuran	Ave	0.0636	0.0617		340	350	-2.9	25.0
Chloroform	Ave	0.5897	0.5741		24.3	25.0	-2.6	25.0
1,1,1-Trichloroethane	Ave	0.4825	0.4805		24.9	25.0	-0.4	25.0
Cyclohexane	Ave	0.4826	0.4811		24.9	25.0	-0.3	25.0
1,1-Dichloropropene	Ave	0.4805	0.4913		25.6	25.0	2.2	25.0
Carbon tetrachloride	Ave	0.4319	0.4439		25.7	25.0	2.8	25.0
Isobutyl alcohol	Ave	0.0090	0.0091		1270	1250	1.7	25.0
Benzene	Ave	0.8792	0.8955		25.5	25.0	1.8	25.0
1,2-Dichloroethane	Ave	0.2806	0.2794		24.9	25.0	-0.4	25.0
Trichloroethene	Ave	0.3924	0.3952		25.2	25.0	0.7	25.0
Methylcyclohexane	Ave	0.4962	0.5023		25.3	25.0	1.2	25.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington

Job No.: 200-2223-1

SDG No.: MONTGO (200-2223)

Lab Sample ID: ICV 200-7497/3

Calibration Date: 10/05/2010 10:11

Instrument ID: L.i

Calib Start Date: 10/04/2010 15:04

GC Column: DB-624

ID: 0.53(mm)

Calib End Date: 10/04/2010 17:45

Lab File ID: lfaa03.d

Conc. Units: ug/Kg

Heated Purge: (Y/N) N

EPA Sample No.: ICV

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.3536	0.3630		25.7	25.0	2.7	25.0
Dibromomethane	Ave	0.2981	0.3080		25.8	25.0	3.3	25.0
Methyl methacrylate	Ave	0.2690	0.2797		26.0	25.0	4.0	25.0
1,4-Dioxane	Ave	0.0021	0.0022		1310	1250	5.0	25.0
Bromodichloromethane	Ave	0.5546	0.5685		25.6	25.0	2.5	25.0
2-Chloroethyl vinyl ether	Ave	0.2044	0.2081		25.4	25.0	1.8	25.0
cis-1,3-Dichloropropene	Ave	0.5159	0.5327		25.8	25.0	3.3	25.0
4-Methyl-2-pentanone	Ave	0.2661	0.2816		132	125	5.8	25.0
Toluene	Ave	0.8241	0.8492		25.8	25.0	3.0	25.0
trans-1,3-Dichloropropene	Ave	0.5784	0.5989		25.9	25.0	3.5	25.0
Ethyl methacrylate	Ave	0.4102	0.4275		26.1	25.0	4.2	25.0
1,1,2-Trichloroethane	Ave	0.3582	0.3735		26.1	25.0	4.3	25.0
Tetrachloroethene	Ave	0.4930	0.5109		25.9	25.0	3.6	25.0
1,3-Dichloropropane	Ave	0.6630	0.6757		25.5	25.0	1.9	25.0
2-Hexanone	Ave	0.2449	0.2646		135	125	8.0	25.0
Dibromochloromethane	Ave	0.6267	0.6656		26.6	25.0	6.2	25.0
1,2-Dibromoethane	Ave	0.6074	0.6355		26.2	25.0	4.6	25.0
Chlorobenzene	Ave	1.003	1.026	0.3000	25.6	25.0	2.3	25.0
1,1,1,2-Tetrachloroethane	Ave	0.4739	0.4876		25.7	25.0	2.9	25.0
Ethylbenzene	Ave	1.659	1.709		25.8	25.0	3.0	25.0
m&p-Xylene	Ave	0.5923	0.6062		51.2	50.0	2.4	25.0
o-Xylene	Ave	0.5657	0.5769		25.5	25.0	2.0	25.0
Styrene	Ave	0.9747	1.009		25.9	25.0	3.5	25.0
Bromoform	Ave	0.4108	0.4288	0.1000	26.1	25.0	4.4	25.0
Isopropylbenzene	Ave	3.386	3.446		25.4	25.0	1.8	25.0
Bromobenzene	Ave	0.9044	0.9095		25.1	25.0	0.6	25.0
1,1,2,2-Tetrachloroethane	Ave	1.424	1.473	0.3000	25.9	25.0	3.5	25.0
1,2,3-Trichloropropane	Ave	0.3358	0.3020		22.5	25.0	-10.1	25.0
trans-1,4-Dichloro-2-butene	Ave	0.2717	0.2734		25.2	25.0	0.6	25.0
n-Propylbenzene	Ave	0.8123	0.8196		25.2	25.0	0.9	25.0
2-Chlorotoluene	Ave	0.7566	0.7610		25.1	25.0	0.6	25.0
1,3,5-Trimethylbenzene	Ave	2.332	2.383		25.5	25.0	2.2	25.0
4-Chlorotoluene	Ave	0.7487	0.7707		25.7	25.0	2.9	25.0
tert-Butylbenzene	Ave	2.541	2.604		25.6	25.0	2.5	25.0
1,2,4-Trimethylbenzene	Ave	2.135	2.223		26.0	25.0	4.1	25.0
sec-Butylbenzene	Ave	3.636	3.781		26.0	25.0	4.0	25.0
1,3-Dichlorobenzene	Ave	1.511	1.538		25.5	25.0	1.8	25.0
4-Isopropyltoluene	Ave	2.649	2.665		25.1	25.0	0.6	25.0
1,4-Dichlorobenzene	Ave	1.538	1.560		25.4	25.0	1.4	25.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Lab Sample ID: ICV 200-7497/3 Calibration Date: 10/05/2010 10:11  
 Instrument ID: L.i Calib Start Date: 10/04/2010 15:04  
 GC Column: DB-624 ID: 0.53 (mm) Calib End Date: 10/04/2010 17:45  
 Lab File ID: lfaa03.d Conc. Units: ug/Kg Heated Purge: (Y/N) N  
 EPA Sample No.: ICV

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Ave	2.421	2.526		26.1	25.0	4.3	25.0
1,2-Dichlorobenzene	Ave	1.364	1.388		25.4	25.0	1.7	25.0
1,2-Dibromo-3-Chloropropane	Ave	0.2697	0.2718		25.2	25.0	0.8	25.0
1,2,4-Trichlorobenzene	Ave	0.7636	0.7665		25.1	25.0	0.4	25.0
Hexachlorobutadiene	Ave	0.5066	0.5300		26.2	25.0	4.6	25.0
Naphthalene	Ave	1.554	1.576		25.3	25.0	1.4	25.0
1,2,3-Trichlorobenzene	Ave	0.6696	0.7008		26.2	25.0	4.6	25.0
1,2-Dichloroethane-d4	Ave	0.2312	0.2301		24.9	25.0	-0.5	25.0
Toluene-d8	Ave	1.179	1.172		24.8	25.0	-0.6	25.0
Bromofluorobenzene	Ave	1.562	1.523		24.4	25.0	-2.5	25.0
1,2-Dichlorobenzene-d4	Ave	0.8881	0.8751		24.6	25.0	-1.5	25.0



FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington

Job No.: 200-2223-1

SDG No.: MONTGO (200-2223)

Lab Sample ID: CCVIS 200-9383/3

Calibration Date: 11/08/2010 11:02

Instrument ID: L.i

Calib Start Date: 10/04/2010 15:04

GC Column: DB-624 ID: 0.53(mm)

Calib End Date: 10/04/2010 17:45

Lab File ID: lfaad03.d

Conc. Units: ug/Kg Heated Purge: (Y/N) N

EPA Sample No.: CCVIS

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4631	0.3626		19.6	25.0	-21.7*	20.0
Chloromethane	Ave	0.2324	0.2113	0.1000	22.7	25.0	-9.1	20.0
Vinyl chloride	Ave	0.2885	0.2800		24.3	25.0	-3.0	20.0
Bromomethane	Ave	0.1678	0.1414		21.1	25.0	-15.7	20.0
Chloroethane	Ave	0.1743	0.1705		24.5	25.0	-2.2	20.0
Trichlorofluoromethane	Ave	0.5340	0.5014		23.5	25.0	-6.1	20.0
Acrolein	Ave	0.0273	0.0302		138	125	10.7	20.0
1,1-Dichloroethene	Ave	0.2909	0.2743		23.6	25.0	-5.7	20.0
Freon TF	Ave	0.6051	0.5745		23.7	25.0	-5.1	20.0
Acetone	Ave	0.0402	0.0413		128	125	2.8	20.0
Methyl iodide	Ave	0.2913	0.3037		26.1	25.0	4.2	20.0
Carbon disulfide	Ave	0.8178	0.7410		22.7	25.0	-9.4	20.0
Allyl chloride	Ave	0.4269	0.4311		25.2	25.0	1.0	20.0
Methyl acetate	Ave	0.0382	0.0394		25.8	25.0	3.3	20.0
Methylene Chloride	Ave	0.2830	0.2695		23.8	25.0	-4.8	20.0
tert-Butyl alcohol	Ave	0.0168	0.0194		578	500	15.5	20.0
Acrylonitrile	Ave	0.0542	0.0585		27.0	25.0	7.8	20.0
trans-1,2-Dichloroethene	Ave	0.3166	0.2994		23.6	25.0	-5.4	20.0
Methyl t-butyl ether	Ave	0.5883	0.5514		23.4	25.0	-6.3	20.0
1,1-Dichloroethane	Ave	0.5727	0.5390	0.1000	23.5	25.0	-5.9	20.0
Vinyl acetate	Ave	0.5075	0.5784		28.5	25.0	14.0	20.0
Chloroprene	Ave	0.4467	0.3970		22.2	25.0	-11.1	20.0
2,2-Dichloropropane	Ave	0.4445	0.4118		23.2	25.0	-7.4	20.0
cis-1,2-Dichloroethene	Ave	0.3332	0.3182		23.9	25.0	-4.5	20.0
2-Butanone	Ave	0.0215	0.0227		132	125	5.8	20.0
Propionitrile	Ave	0.0211	0.0208		98.3	100	-1.7	20.0
Methacrylonitrile	Ave	0.0759	0.0768		25.3	25.0	1.1	20.0
Bromochloromethane	Ave	0.1772	0.1730		24.4	25.0	-2.4	20.0
Tetrahydrofuran	Ave	0.0636	0.0653		360	350	2.8	20.0
Chloroform	Ave	0.5897	0.5501		23.3	25.0	-6.7	20.0
1,1,1-Trichloroethane	Ave	0.4825	0.4201		21.8	25.0	-12.9	20.0
Cyclohexane	Ave	0.4826	0.4821		25.0	25.0	-0.1	20.0
1,1-Dichloropropene	Ave	0.4805	0.4501		23.4	25.0	-6.3	20.0
Carbon tetrachloride	Ave	0.4319	0.3908		22.6	25.0	-9.5	20.0
Isobutyl alcohol	Ave	0.0090	0.0103		1430	1250	14.5	20.0
Benzene	Ave	0.8792	0.8373		23.8	25.0	-4.8	20.0
1,2-Dichloroethane	Ave	0.2806	0.2532		22.6	25.0	-9.8	20.0
Trichloroethene	Ave	0.3924	0.3621		23.1	25.0	-7.7	20.0
Methylcyclohexane	Ave	0.4962	0.5022		25.3	25.0	1.2	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington

Job No.: 200-2223-1

SDG No.: MONTGO (200-2223)

Lab Sample ID: CCVIS 200-9383/3

Calibration Date: 11/08/2010 11:02

Instrument ID: L.i

Calib Start Date: 10/04/2010 15:04

GC Column: DB-624 ID: 0.53(mm)

Calib End Date: 10/04/2010 17:45

Lab File ID: lfaad03.d

Conc. Units: ug/Kg Heated Purge: (Y/N) N

EPA Sample No.: CCVIS

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.3536	0.3503		24.8	25.0	-0.9	20.0
Dibromomethane	Ave	0.2981	0.2941		24.7	25.0	-1.4	20.0
Methyl methacrylate	Ave	0.2690	0.2684		24.9	25.0	-0.2	20.0
1,4-Dioxane	Ave	0.0021	0.0025		1480	1250	18.6	20.0
Bromodichloromethane	Ave	0.5546	0.5375		24.2	25.0	-3.1	20.0
2-Chloroethyl vinyl ether	Ave	0.2044	0.2019		24.7	25.0	-1.3	20.0
cis-1,3-Dichloropropene	Ave	0.5159	0.5054		24.5	25.0	-2.0	20.0
4-Methyl-2-pentanone	Ave	0.2661	0.2854		134	125	7.3	20.0
Toluene	Ave	0.8241	0.7837		23.8	25.0	-4.9	20.0
trans-1,3-Dichloropropene	Ave	0.5784	0.5629		24.3	25.0	-2.7	20.0
Ethyl methacrylate	Ave	0.4102	0.4211		25.7	25.0	2.7	20.0
1,1,2-Trichloroethane	Ave	0.3582	0.3678		25.7	25.0	2.7	20.0
Tetrachloroethene	Ave	0.4930	0.4550		23.1	25.0	-7.7	20.0
1,3-Dichloropropane	Ave	0.6630	0.6497		24.5	25.0	-2.0	20.0
2-Hexanone	Ave	0.2449	0.2592		132	125	5.9	20.0
Dibromochloromethane	Ave	0.6267	0.6223		24.8	25.0	-0.7	20.0
1,2-Dibromoethane	Ave	0.6074	0.6037		24.8	25.0	-0.6	20.0
Chlorobenzene	Ave	1.003	0.9780	0.3000	24.4	25.0	-2.5	20.0
1,1,1,2-Tetrachloroethane	Ave	0.4739	0.4675		24.7	25.0	-1.4	20.0
Ethylbenzene	Ave	1.659	1.613		24.3	25.0	-2.8	20.0
m&p-Xylene	Ave	0.5923	0.5799		48.9	50.0	-2.1	20.0
o-Xylene	Ave	0.5657	0.5556		24.6	25.0	-1.8	20.0
Styrene	Ave	0.9747	0.9636		24.7	25.0	-1.1	20.0
Bromoform	Ave	0.4108	0.4211	0.1000	25.6	25.0	2.5	20.0
Isopropylbenzene	Ave	3.386	3.364		24.8	25.0	-0.7	20.0
Bromobenzene	Ave	0.9044	0.9080		25.1	25.0	0.4	20.0
1,1,2,2-Tetrachloroethane	Ave	1.424	1.616	0.3000	28.4	25.0	13.5	20.0
1,2,3-Trichloropropane	Ave	0.3358	0.3409		25.4	25.0	1.5	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2717	0.2741		25.2	25.0	0.9	20.0
n-Propylbenzene	Ave	0.8123	0.8152		25.1	25.0	0.4	20.0
2-Chlorotoluene	Ave	0.7566	0.7741		25.6	25.0	2.3	20.0
1,3,5-Trimethylbenzene	Ave	2.332	2.359		25.3	25.0	1.2	20.0
4-Chlorotoluene	Ave	0.7487	0.7704		25.7	25.0	2.9	20.0
tert-Butylbenzene	Ave	2.541	2.546		25.1	25.0	0.2	20.0
1,2,4-Trimethylbenzene	Ave	2.135	2.230		26.1	25.0	4.4	20.0
sec-Butylbenzene	Ave	3.636	3.735		25.7	25.0	2.7	20.0
1,3-Dichlorobenzene	Ave	1.511	1.554		25.7	25.0	2.8	20.0
4-Isopropyltoluene	Ave	2.649	2.714		25.6	25.0	2.5	20.0
1,4-Dichlorobenzene	Ave	1.538	1.609		26.2	25.0	4.7	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Lab Sample ID: CCVIS 200-9383/3 Calibration Date: 11/08/2010 11:02  
 Instrument ID: L.i Calib Start Date: 10/04/2010 15:04  
 GC Column: DB-624 ID: 0.53(mm) Calib End Date: 10/04/2010 17:45  
 Lab File ID: lfaad03.d Conc. Units: ug/Kg Heated Purge: (Y/N) N  
 EPA Sample No.: CCVIS

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichlorobenzene	Ave	1.364	1.416		26.0	25.0	3.8	20.0
n-Butylbenzene	Ave	2.421	2.634		27.2	25.0	8.8	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.2697	0.2827		26.2	25.0	4.8	20.0
1,2,4-Trichlorobenzene	Ave	0.7636	0.8719		28.5	25.0	14.2	20.0
Hexachlorobutadiene	Ave	0.5066	0.5210		25.7	25.0	2.8	20.0
Naphthalene	Ave	1.554	1.876		30.2	25.0	20.7*	20.0
1,2,3-Trichlorobenzene	Ave	0.6696	0.7639		28.5	25.0	14.1	20.0
1,2-Dichloroethane-d4	Ave	0.2312	0.2050		22.2	25.0	-11.3	20.0
Toluene-d8	Ave	1.179	1.136		24.1	25.0	-3.6	20.0
Bromofluorobenzene	Ave	1.562	1.586		25.4	25.0	1.5	20.0
1,2-Dichlorobenzene-d4	Ave	0.8881	0.9128		25.7	25.0	2.8	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Lab Sample ID: CCVIS 200-9400/2 Calibration Date: 11/10/2010 06:57  
 Instrument ID: L.i Calib Start Date: 10/04/2010 15:04  
 GC Column: DB-624 ID: 0.53 (mm) Calib End Date: 10/04/2010 17:45  
 Lab File ID: lfaag02.d Conc. Units: ug/Kg Heated Purge: (Y/N) N  
 EPA Sample No.: CCVIS

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4631	0.4660		25.2	25.0	0.6	20.0
Chloromethane	Ave	0.2324	0.2557	0.1000	27.5	25.0	10.1	20.0
Vinyl chloride	Ave	0.2885	0.2979		25.8	25.0	3.2	20.0
Bromomethane	Ave	0.1678	0.1744		26.0	25.0	4.0	20.0
Chloroethane	Ave	0.1743	0.1731		24.8	25.0	-0.7	20.0
Trichlorofluoromethane	Ave	0.5340	0.4904		23.0	25.0	-8.2	20.0
Acrolein	Ave	0.0273	0.0304		139	125	11.1	20.0
1,1-Dichloroethene	Ave	0.2909	0.2719		23.4	25.0	-6.5	20.0
Freon TF	Ave	0.6051	0.5633		23.3	25.0	-6.9	20.0
Acetone	Ave	0.0402	0.0387		120	125	-3.8	20.0
Methyl iodide	Ave	0.2913	0.2960		25.4	25.0	1.6	20.0
Carbon disulfide	Ave	0.8178	0.7392		22.6	25.0	-9.6	20.0
Allyl chloride	Ave	0.4269	0.4316		25.3	25.0	1.1	20.0
Methyl acetate	Ave	0.0382	0.0375		24.6	25.0	-1.8	20.0
Methylene Chloride	Ave	0.2830	0.2630		23.2	25.0	-7.1	20.0
tert-Butyl alcohol	Ave	0.0168	0.0161		480	500	-4.0	20.0
Acrylonitrile	Ave	0.0542	0.0557		25.7	25.0	2.6	20.0
trans-1,2-Dichloroethene	Ave	0.3166	0.2955		23.3	25.0	-6.7	20.0
Methyl t-butyl ether	Ave	0.5883	0.5315		22.6	25.0	-9.7	20.0
1,1-Dichloroethane	Ave	0.5727	0.5409	0.1000	23.6	25.0	-5.5	20.0
Vinyl acetate	Ave	0.5075	0.5549		27.3	25.0	9.3	20.0
Chloroprene	Ave	0.4467	0.3923		22.0	25.0	-12.2	20.0
2,2-Dichloropropane	Ave	0.4445	0.4022		22.6	25.0	-9.5	20.0
cis-1,2-Dichloroethene	Ave	0.3332	0.3124		23.4	25.0	-6.2	20.0
2-Butanone	Ave	0.0215	0.0214		125	125	-0.3	20.0
Propionitrile	Ave	0.0211	0.0204		96.6	100	-3.4	20.0
Methacrylonitrile	Ave	0.0759	0.0696		22.9	25.0	-8.3	20.0
Bromochloromethane	Ave	0.1772	0.1679		23.7	25.0	-5.2	20.0
Tetrahydrofuran	Ave	0.0636	0.0625		344	350	-1.7	20.0
Chloroform	Ave	0.5897	0.5350		22.7	25.0	-9.3	20.0
1,1,1-Trichloroethane	Ave	0.4825	0.4097		21.2	25.0	-15.1	20.0
Cyclohexane	Ave	0.4826	0.4803		24.9	25.0	-0.5	20.0
1,1-Dichloropropene	Ave	0.4805	0.4410		22.9	25.0	-8.2	20.0
Carbon tetrachloride	Ave	0.4319	0.3738		21.6	25.0	-13.5	20.0
Isobutyl alcohol	Ave	0.0090	0.0097		1360	1250	8.8	20.0
Benzene	Ave	0.8792	0.8241		23.4	25.0	-6.3	20.0
1,2-Dichloroethane	Ave	0.2806	0.2387		21.3	25.0	-14.9	20.0
Trichloroethene	Ave	0.3924	0.3594		22.9	25.0	-8.4	20.0
Methylcyclohexane	Ave	0.4962	0.4930		24.8	25.0	-0.6	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington

Job No.: 200-2223-1

SDG No.: MONTGO (200-2223)

Lab Sample ID: CCVIS 200-9400/2

Calibration Date: 11/10/2010 06:57

Instrument ID: L.i

Calib Start Date: 10/04/2010 15:04

GC Column: DB-624 ID: 0.53 (mm)

Calib End Date: 10/04/2010 17:45

Lab File ID: lfaag02.d

Conc. Units: ug/Kg Heated Purge: (Y/N) N

EPA Sample No.: CCVIS

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.3536	0.3464		24.5	25.0	-2.0	20.0
Dibromomethane	Ave	0.2981	0.2851		23.9	25.0	-4.4	20.0
Methyl methacrylate	Ave	0.2690	0.2592		24.1	25.0	-3.6	20.0
1,4-Dioxane	Ave	0.0021	0.0023		1340	1250	7.2	20.0
Bromodichloromethane	Ave	0.5546	0.5168		23.3	25.0	-6.8	20.0
2-Chloroethyl vinyl ether	Ave	0.2044	0.2075		25.4	25.0	1.5	20.0
cis-1,3-Dichloropropene	Ave	0.5159	0.4919		23.8	25.0	-4.7	20.0
4-Methyl-2-pentanone	Ave	0.2661	0.2690		126	125	1.1	20.0
Toluene	Ave	0.8241	0.7706		23.4	25.0	-6.5	20.0
trans-1,3-Dichloropropene	Ave	0.5784	0.5517		23.8	25.0	-4.6	20.0
Ethyl methacrylate	Ave	0.4102	0.4035		24.6	25.0	-1.6	20.0
1,1,2-Trichloroethane	Ave	0.3582	0.3575		25.0	25.0	-0.2	20.0
Tetrachloroethene	Ave	0.4930	0.4418		22.4	25.0	-10.4	20.0
1,3-Dichloropropane	Ave	0.6630	0.6447		24.3	25.0	-2.8	20.0
2-Hexanone	Ave	0.2449	0.2460		126	125	0.5	20.0
Dibromochloromethane	Ave	0.6267	0.6042		24.1	25.0	-3.6	20.0
1,2-Dibromoethane	Ave	0.6074	0.5941		24.5	25.0	-2.2	20.0
Chlorobenzene	Ave	1.003	0.9592	0.3000	23.9	25.0	-4.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.4739	0.4554		24.0	25.0	-3.9	20.0
Ethylbenzene	Ave	1.659	1.582		23.8	25.0	-4.7	20.0
m&p-Xylene	Ave	0.5923	0.5720		48.3	50.0	-3.4	20.0
o-Xylene	Ave	0.5657	0.5460		24.1	25.0	-3.5	20.0
Styrene	Ave	0.9747	0.9447		24.2	25.0	-3.1	20.0
Bromoform	Ave	0.4108	0.4050	0.1000	24.6	25.0	-1.4	20.0
Isopropylbenzene	Ave	3.386	3.310		24.4	25.0	-2.2	20.0
Bromobenzene	Ave	0.9044	0.8830		24.4	25.0	-2.4	20.0
1,1,2,2-Tetrachloroethane	Ave	1.424	1.560	0.3000	27.4	25.0	9.6	20.0
1,2,3-Trichloropropane	Ave	0.3358	0.3274		24.4	25.0	-2.5	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2717	0.2673		24.6	25.0	-1.6	20.0
n-Propylbenzene	Ave	0.8123	0.8041		24.7	25.0	-1.0	20.0
2-Chlorotoluene	Ave	0.7566	0.7456		24.6	25.0	-1.5	20.0
1,3,5-Trimethylbenzene	Ave	2.332	2.346		25.2	25.0	0.6	20.0
4-Chlorotoluene	Ave	0.7487	0.7592		25.4	25.0	1.4	20.0
tert-Butylbenzene	Ave	2.541	2.504		24.6	25.0	-1.4	20.0
1,2,4-Trimethylbenzene	Ave	2.135	2.214		25.9	25.0	3.7	20.0
sec-Butylbenzene	Ave	3.636	3.715		25.5	25.0	2.2	20.0
1,3-Dichlorobenzene	Ave	1.511	1.513		25.0	25.0	0.1	20.0
4-Isopropyltoluene	Ave	2.649	2.689		25.4	25.0	1.5	20.0
1,4-Dichlorobenzene	Ave	1.538	1.563		25.4	25.0	1.6	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Lab Sample ID: CCVIS 200-9400/2 Calibration Date: 11/10/2010 06:57  
 Instrument ID: L.i Calib Start Date: 10/04/2010 15:04  
 GC Column: DB-624 ID: 0.53(mm) Calib End Date: 10/04/2010 17:45  
 Lab File ID: lfaag02.d Conc. Units: ug/Kg Heated Purge: (Y/N) N  
 EPA Sample No.: CCVIS

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichlorobenzene	Ave	1.364	1.370		25.1	25.0	0.5	20.0
n-Butylbenzene	Ave	2.421	2.637		27.2	25.0	8.9	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.2697	0.2684		24.9	25.0	-0.5	20.0
1,2,4-Trichlorobenzene	Ave	0.7636	0.8467		27.7	25.0	10.9	20.0
Hexachlorobutadiene	Ave	0.5066	0.5119		25.3	25.0	1.0	20.0
Naphthalene	Ave	1.554	1.833		29.5	25.0	17.9	20.0
1,2,3-Trichlorobenzene	Ave	0.6696	0.7387		27.6	25.0	10.3	20.0
1,2-Dichloroethane-d4	Ave	0.2312	0.1982		21.4	25.0	-14.3	20.0
Toluene-d8	Ave	1.179	1.124		23.8	25.0	-4.7	20.0
Bromofluorobenzene	Ave	1.562	1.549		24.8	25.0	-0.9	20.0
1,2-Dichlorobenzene-d4	Ave	0.8881	0.8775		24.7	25.0	-1.2	20.0



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-9200/2-A  
 Matrix: Solid Lab File ID: lfaad09.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/08/2010 14:28  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	10	U	10	5.0
74-87-3	Chloromethane	10	U	10	3.7
75-01-4	Vinyl chloride	10	U	10	5.0
74-83-9	Bromomethane	13.0		10	3.5
75-00-3	Chloroethane	10	U	10	6.0
75-69-4	Trichlorofluoromethane	10	U	10	5.0
75-35-4	1,1-Dichloroethene	10	U	10	2.1
76-13-1	Freon TF	10	U	10	2.8
67-64-1	Acetone	10	U	10	10
74-88-4	Methyl iodide	10	U	10	5.0
75-15-0	Carbon disulfide	10	U	10	1.9
79-20-9	Methyl acetate	10	U	10	5.0
75-09-2	Methylene Chloride	10	U	10	5.0
156-60-5	trans-1,2-Dichloroethene	10	U	10	5.0
1634-04-4	Methyl t-butyl ether	10	U	10	5.0
75-34-3	1,1-Dichloroethane	10	U	10	3.6
108-05-4	Vinyl acetate	10	U	10	5.0
594-20-7	2,2-Dichloropropane	10	U	10	4.6
156-59-2	cis-1,2-Dichloroethene	10	U	10	2.1
78-93-3	2-Butanone	10	U	10	11
74-97-5	Bromochloromethane	10	U	10	5.3
109-99-9	Tetrahydrofuran	100	U	100	50
67-66-3	Chloroform	10	U	10	3.3
71-55-6	1,1,1-Trichloroethane	10	U	10	3.6
110-82-7	Cyclohexane	10	U	10	3.5
563-58-6	1,1-Dichloropropene	10	U	10	2.2
56-23-5	Carbon tetrachloride	10	U	10	3.2
78-83-1	Isobutyl alcohol	500	U	500	250
71-43-2	Benzene	10	U	10	3.1
107-06-2	1,2-Dichloroethane	10	U	10	3.3
79-01-6	Trichloroethene	10	U	10	5.0
108-87-2	Methylcyclohexane	10	U	10	5.0
78-87-5	1,2-Dichloropropane	10	U	10	3.8
74-95-3	Dibromomethane	10	U	10	2.5
123-91-1	1,4-Dioxane	500	U	500	270
75-27-4	Bromodichloromethane	10	U	10	3.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-9200/2-A  
 Matrix: Solid Lab File ID: lfaad09.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/08/2010 14:28  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	10	U	10	1.3
10061-01-5	cis-1,3-Dichloropropene	10	U	10	3.2
108-10-1	4-Methyl-2-pentanone	10	U	10	2.1
108-88-3	Toluene	10	U	10	5.0
10061-02-6	trans-1,3-Dichloropropene	10	U	10	5.0
79-00-5	1,1,2-Trichloroethane	10	U	10	4.2
127-18-4	Tetrachloroethene	10	U	10	5.0
142-28-9	1,3-Dichloropropane	10	U	10	3.3
591-78-6	2-Hexanone	10	U	10	10
124-48-1	Dibromochloromethane	10	U	10	3.7
106-93-4	1,2-Dibromoethane	10	U	10	5.0
108-90-7	Chlorobenzene	10	U	10	2.3
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	3.6
100-41-4	Ethylbenzene	10	U	10	5.0
179601-23-1	m&p-Xylene	10	U	10	5.0
95-47-6	o-Xylene	10	U	10	5.0
100-42-5	Styrene	10	U	10	5.0
75-25-2	Bromoform	10	U	10	3.9
98-82-8	Isopropylbenzene	10	U	10	5.0
108-86-1	Bromobenzene	10	U	10	3.7
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	3.7
96-18-4	1,2,3-Trichloropropane	10	U	10	5.4
103-65-1	n-Propylbenzene	10	U	10	5.0
95-49-8	2-Chlorotoluene	10	U	10	3.3
106-43-4	4-Chlorotoluene	10	U	10	3.4
108-67-8	1,3,5-Trimethylbenzene	10	U	10	3.2
98-06-6	tert-Butylbenzene	10	U	10	5.0
95-63-6	1,2,4-Trimethylbenzene	10	U	10	3.4
135-98-8	sec-Butylbenzene	10	U	10	5.0
541-73-1	1,3-Dichlorobenzene	10	U	10	2.5
99-87-6	4-Isopropyltoluene	10	U	10	1.8
106-46-7	1,4-Dichlorobenzene	10	U	10	2.3
95-50-1	1,2-Dichlorobenzene	10	U	10	2.8
104-51-8	n-Butylbenzene	10	U	10	5.0
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	10	4.6
120-82-1	1,2,4-Trichlorobenzene	10	U	10	1.6

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-9200/2-A  
 Matrix: Solid Lab File ID: lfaad09.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/08/2010 14:28  
 Soil Aliquot Vol.: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	10	U	10	5.0
91-20-3	Naphthalene	10	U	10	5.0
87-61-6	1,2,3-Trichlorobenzene	10	U	10	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	87		65-155
2037-26-5	Toluene-d8	100		80-115
460-00-4	Bromofluorobenzene	100		80-115
2199-69-1	1,2-Dichlorobenzene-d4	95		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-9200/3-A  
 Matrix: Solid Lab File ID: lfaag07.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 09:59  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	10	U	10	5.0
74-87-3	Chloromethane	4.09	J	10	3.7
75-01-4	Vinyl chloride	10	U	10	5.0
74-83-9	Bromomethane	17.4		10	3.5
75-00-3	Chloroethane	10	U	10	6.0
75-69-4	Trichlorofluoromethane	10	U	10	5.0
75-35-4	1,1-Dichloroethene	10	U	10	2.1
76-13-1	Freon TF	10	U	10	2.8
67-64-1	Acetone	10	U	10	10
74-88-4	Methyl iodide	5.82	J	10	5.0
75-15-0	Carbon disulfide	10	U	10	1.9
79-20-9	Methyl acetate	10	U	10	5.0
75-09-2	Methylene Chloride	10	U	10	5.0
156-60-5	trans-1,2-Dichloroethene	10	U	10	5.0
1634-04-4	Methyl t-butyl ether	10	U	10	5.0
75-34-3	1,1-Dichloroethane	10	U	10	3.6
108-05-4	Vinyl acetate	10	U	10	5.0
594-20-7	2,2-Dichloropropane	10	U	10	4.6
156-59-2	cis-1,2-Dichloroethene	10	U	10	2.1
78-93-3	2-Butanone	10	U	10	11
74-97-5	Bromochloromethane	10	U	10	5.3
109-99-9	Tetrahydrofuran	100	U	100	50
67-66-3	Chloroform	10	U	10	3.3
71-55-6	1,1,1-Trichloroethane	10	U	10	3.6
110-82-7	Cyclohexane	10	U	10	3.5
563-58-6	1,1-Dichloropropene	10	U	10	2.2
56-23-5	Carbon tetrachloride	10	U	10	3.2
78-83-1	Isobutyl alcohol	500	U	500	250
71-43-2	Benzene	10	U	10	3.1
107-06-2	1,2-Dichloroethane	10	U	10	3.3
79-01-6	Trichloroethene	10	U	10	5.0
108-87-2	Methylcyclohexane	10	U	10	5.0
78-87-5	1,2-Dichloropropane	10	U	10	3.8
74-95-3	Dibromomethane	10	U	10	2.5
123-91-1	1,4-Dioxane	500	U	500	270
75-27-4	Bromodichloromethane	10	U	10	3.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-9200/3-A  
 Matrix: Solid Lab File ID: lfaag07.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 09:59  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	10	U	10	1.3
10061-01-5	cis-1,3-Dichloropropene	10	U	10	3.2
108-10-1	4-Methyl-2-pentanone	10	U	10	2.1
108-88-3	Toluene	10	U	10	5.0
10061-02-6	trans-1,3-Dichloropropene	10	U	10	5.0
79-00-5	1,1,2-Trichloroethane	10	U	10	4.2
127-18-4	Tetrachloroethene	10	U	10	5.0
142-28-9	1,3-Dichloropropane	10	U	10	3.3
591-78-6	2-Hexanone	10	U	10	10
124-48-1	Dibromochloromethane	10	U	10	3.7
106-93-4	1,2-Dibromoethane	10	U	10	5.0
108-90-7	Chlorobenzene	10	U	10	2.3
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	3.6
100-41-4	Ethylbenzene	10	U	10	5.0
179601-23-1	m&p-Xylene	10	U	10	5.0
95-47-6	o-Xylene	10	U	10	5.0
100-42-5	Styrene	10	U	10	5.0
75-25-2	Bromoform	10	U	10	3.9
98-82-8	Isopropylbenzene	10	U	10	5.0
108-86-1	Bromobenzene	10	U	10	3.7
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	3.7
96-18-4	1,2,3-Trichloropropane	10	U	10	5.4
103-65-1	n-Propylbenzene	10	U	10	5.0
95-49-8	2-Chlorotoluene	10	U	10	3.3
106-43-4	4-Chlorotoluene	10	U	10	3.4
108-67-8	1,3,5-Trimethylbenzene	10	U	10	3.2
98-06-6	tert-Butylbenzene	10	U	10	5.0
95-63-6	1,2,4-Trimethylbenzene	10	U	10	3.4
135-98-8	sec-Butylbenzene	10	U	10	5.0
541-73-1	1,3-Dichlorobenzene	10	U	10	2.5
99-87-6	4-Isopropyltoluene	10	U	10	1.8
106-46-7	1,4-Dichlorobenzene	10	U	10	2.3
95-50-1	1,2-Dichlorobenzene	10	U	10	2.8
104-51-8	n-Butylbenzene	10	U	10	5.0
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	10	4.6
120-82-1	1,2,4-Trichlorobenzene	10	U	10	1.6

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-9200/3-A  
 Matrix: Solid Lab File ID: lfaag07.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 09:59  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	10	U	10	5.0
91-20-3	Naphthalene	10	U	10	5.0
87-61-6	1,2,3-Trichlorobenzene	10	U	10	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	88		65-155
2037-26-5	Toluene-d8	101		80-115
460-00-4	Bromofluorobenzene	100		80-115
2199-69-1	1,2-Dichlorobenzene-d4	99		45-145



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9200/7-A  
 Matrix: Solid Lab File ID: lfaad05.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/08/2010 12:07  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	211		10	5.0
74-87-3	Chloromethane	252		10	3.7
75-01-4	Vinyl chloride	247		10	5.0
74-83-9	Bromomethane	76.7		10	3.5
75-00-3	Chloroethane	120		10	6.0
75-69-4	Trichlorofluoromethane	126		10	5.0
75-35-4	1,1-Dichloroethene	98.4		10	2.1
76-13-1	Freon TF	108		10	2.8
67-64-1	Acetone	706		10	10
74-88-4	Methyl iodide	43.2		10	5.0
75-15-0	Carbon disulfide	105		10	1.9
79-20-9	Methyl acetate	200		10	5.0
75-09-2	Methylene Chloride	188		10	5.0
156-60-5	trans-1,2-Dichloroethene	200		10	5.0
1634-04-4	Methyl t-butyl ether	188		10	5.0
75-34-3	1,1-Dichloroethane	182		10	3.6
108-05-4	Vinyl acetate	228		10	5.0
594-20-7	2,2-Dichloropropane	191		10	4.6
156-59-2	cis-1,2-Dichloroethene	200		10	2.1
78-93-3	2-Butanone	1140		10	11
74-97-5	Bromochloromethane	173		10	5.3
109-99-9	Tetrahydrofuran	2980		100	50
67-66-3	Chloroform	190		10	3.3
71-55-6	1,1,1-Trichloroethane	188		10	3.6
110-82-7	Cyclohexane	213		10	3.5
563-58-6	1,1-Dichloropropene	205		10	2.2
56-23-5	Carbon tetrachloride	183		10	3.2
78-83-1	Isobutyl alcohol	1370		500	250
71-43-2	Benzene	207		10	3.1
107-06-2	1,2-Dichloroethane	188		10	3.3
79-01-6	Trichloroethene	207		10	5.0
108-87-2	Methylcyclohexane	220		10	5.0
78-87-5	1,2-Dichloropropane	220		10	3.8
74-95-3	Dibromomethane	196		10	2.5
123-91-1	1,4-Dioxane	11500		500	270
75-27-4	Bromodichloromethane	208		10	3.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9200/7-A  
 Matrix: Solid Lab File ID: lfaad05.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/08/2010 12:07  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	256		10	1.3
10061-01-5	cis-1,3-Dichloropropene	211		10	3.2
108-10-1	4-Methyl-2-pentanone	1180		10	2.1
108-88-3	Toluene	218		10	5.0
10061-02-6	trans-1,3-Dichloropropene	215		10	5.0
79-00-5	1,1,2-Trichloroethane	231		10	4.2
127-18-4	Tetrachloroethene	210		10	5.0
142-28-9	1,3-Dichloropropane	218		10	3.3
591-78-6	2-Hexanone	1160		10	10
124-48-1	Dibromochloromethane	221		10	3.7
106-93-4	1,2-Dibromoethane	219		10	5.0
108-90-7	Chlorobenzene	222		10	2.3
630-20-6	1,1,1,2-Tetrachloroethane	221		10	3.6
100-41-4	Ethylbenzene	225		10	5.0
179601-23-1	m&p-Xylene	460		10	5.0
95-47-6	o-Xylene	229		10	5.0
100-42-5	Styrene	227		10	5.0
75-25-2	Bromoform	211		10	3.9
98-82-8	Isopropylbenzene	232		10	5.0
108-86-1	Bromobenzene	223		10	3.7
79-34-5	1,1,2,2-Tetrachloroethane	230		10	3.7
96-18-4	1,2,3-Trichloropropane	191		10	5.4
103-65-1	n-Propylbenzene	238		10	5.0
95-49-8	2-Chlorotoluene	234		10	3.3
106-43-4	4-Chlorotoluene	240		10	3.4
108-67-8	1,3,5-Trimethylbenzene	243		10	3.2
98-06-6	tert-Butylbenzene	242		10	5.0
95-63-6	1,2,4-Trimethylbenzene	258		10	3.4
135-98-8	sec-Butylbenzene	257		10	5.0
541-73-1	1,3-Dichlorobenzene	235		10	2.5
99-87-6	4-Isopropyltoluene	250		10	1.8
106-46-7	1,4-Dichlorobenzene	242		10	2.3
95-50-1	1,2-Dichlorobenzene	235		10	2.8
104-51-8	n-Butylbenzene	284		10	5.0
96-12-8	1,2-Dibromo-3-Chloropropane	188		10	4.6
120-82-1	1,2,4-Trichlorobenzene	263		10	1.6

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9200/7-A  
 Matrix: Solid Lab File ID: lfaad05.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/08/2010 12:07  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	269		10	5.0
91-20-3	Naphthalene	202		10	5.0
87-61-6	1,2,3-Trichlorobenzene	243		10	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	98		65-155
2037-26-5	Toluene-d8	106		80-115
460-00-4	Bromofluorobenzene	103		80-115
2199-69-1	1,2-Dichlorobenzene-d4	100		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTIGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9200/8-A  
 Matrix: Solid Lab File ID: lfaag04.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 08:22  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	247		10	5.0
74-87-3	Chloromethane	267		10	3.7
75-01-4	Vinyl chloride	257		10	5.0
74-83-9	Bromomethane	100		10	3.5
75-00-3	Chloroethane	113		10	6.0
75-69-4	Trichlorofluoromethane	124		10	5.0
75-35-4	1,1-Dichloroethene	105		10	2.1
76-13-1	Freon TF	115		10	2.8
67-64-1	Acetone	492		10	10
74-88-4	Methyl iodide	32.2		10	5.0
75-15-0	Carbon disulfide	118		10	1.9
79-20-9	Methyl acetate	210		10	5.0
75-09-2	Methylene Chloride	190		10	5.0
156-60-5	trans-1,2-Dichloroethene	210		10	5.0
1634-04-4	Methyl t-butyl ether	198		10	5.0
75-34-3	1,1-Dichloroethane	188		10	3.6
108-05-4	Vinyl acetate	229		10	5.0
594-20-7	2,2-Dichloropropane	204		10	4.6
156-59-2	cis-1,2-Dichloroethene	211		10	2.1
78-93-3	2-Butanone	1000		10	11
74-97-5	Bromochloromethane	181		10	5.3
109-99-9	Tetrahydrofuran	2930		100	50
67-66-3	Chloroform	198		10	3.3
71-55-6	1,1,1-Trichloroethane	197		10	3.6
110-82-7	Cyclohexane	226		10	3.5
563-58-6	1,1-Dichloropropene	217		10	2.2
56-23-5	Carbon tetrachloride	196		10	3.2
78-83-1	Isobutyl alcohol	1290		500	250
71-43-2	Benzene	217		10	3.1
107-06-2	1,2-Dichloroethane	193		10	3.3
79-01-6	Trichloroethene	218		10	5.0
108-87-2	Methylcyclohexane	228		10	5.0
78-87-5	1,2-Dichloropropane	230		10	3.8
74-95-3	Dibromomethane	199		10	2.5
123-91-1	1,4-Dioxane	10800		500	270
75-27-4	Bromodichloromethane	219		10	3.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9200/8-A  
 Matrix: Solid Lab File ID: lfaag04.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 08:22  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	253		10	1.3
10061-01-5	cis-1,3-Dichloropropene	224		10	3.2
108-10-1	4-Methyl-2-pentanone	1050		10	2.1
108-88-3	Toluene	229		10	5.0
10061-02-6	trans-1,3-Dichloropropene	227		10	5.0
79-00-5	1,1,2-Trichloroethane	244		10	4.2
127-18-4	Tetrachloroethene	225		10	5.0
142-28-9	1,3-Dichloropropane	234		10	3.3
591-78-6	2-Hexanone	1050		10	10
124-48-1	Dibromochloromethane	234		10	3.7
106-93-4	1,2-Dibromoethane	233		10	5.0
108-90-7	Chlorobenzene	236		10	2.3
630-20-6	1,1,1,2-Tetrachloroethane	237		10	3.6
100-41-4	Ethylbenzene	242		10	5.0
179601-23-1	m&p-Xylene	492		10	5.0
95-47-6	o-Xylene	243		10	5.0
100-42-5	Styrene	241		10	5.0
75-25-2	Bromoform	224		10	3.9
98-82-8	Isopropylbenzene	252		10	5.0
108-86-1	Bromobenzene	241		10	3.7
79-34-5	1,1,2,2-Tetrachloroethane	248		10	3.7
96-18-4	1,2,3-Trichloropropane	206		10	5.4
103-65-1	n-Propylbenzene	255		10	5.0
95-49-8	2-Chlorotoluene	251		10	3.3
106-43-4	4-Chlorotoluene	260		10	3.4
108-67-8	1,3,5-Trimethylbenzene	265		10	3.2
98-06-6	tert-Butylbenzene	264		10	5.0
95-63-6	1,2,4-Trimethylbenzene	280		10	3.4
135-98-8	sec-Butylbenzene	281		10	5.0
541-73-1	1,3-Dichlorobenzene	255		10	2.5
99-87-6	4-Isopropyltoluene	272		10	1.8
106-46-7	1,4-Dichlorobenzene	256		10	2.3
95-50-1	1,2-Dichlorobenzene	255		10	2.8
104-51-8	n-Butylbenzene	310		10	5.0
96-12-8	1,2-Dibromo-3-Chloropropane	165		10	4.6
120-82-1	1,2,4-Trichlorobenzene	283		10	1.6

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9200/8-A  
 Matrix: Solid Lab File ID: lfaag04.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 08:22  
 Soil Aliquot Vol.: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	295		10	5.0
91-20-3	Naphthalene	128		10	5.0
87-61-6	1,2,3-Trichlorobenzene	205		10	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	92		65-155
2037-26-5	Toluene-d8	100		80-115
460-00-4	Bromofluorobenzene	98		80-115
2199-69-1	1,2-Dichlorobenzene-d4	96		45-145



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9383/4  
 Matrix: Solid Lab File ID: lfaad04.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 11/08/2010 11:35  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	19.6		1.0	0.50
74-87-3	Chloromethane	23.4		1.0	0.37
75-01-4	Vinyl chloride	25.0		1.0	0.50
74-83-9	Bromomethane	22.6		1.0	0.35
75-00-3	Chloroethane	25.3		1.0	0.60
75-69-4	Trichlorofluoromethane	22.2		1.0	0.50
75-35-4	1,1-Dichloroethene	21.6		1.0	0.21
76-13-1	Freon TF	21.5		1.0	0.28
67-64-1	Acetone	125		1.0	1.0
74-88-4	Methyl iodide	23.6		1.0	0.50
75-15-0	Carbon disulfide	20.9		1.0	0.19
79-20-9	Methyl acetate	23.6		1.0	0.50
75-09-2	Methylene Chloride	23.1		1.0	0.50
156-60-5	trans-1,2-Dichloroethene	22.9		1.0	0.50
1634-04-4	Methyl t-butyl ether	22.6		1.0	0.50
75-34-3	1,1-Dichloroethane	22.6		1.0	0.36
108-05-4	Vinyl acetate	26.9		1.0	0.50
594-20-7	2,2-Dichloropropane	21.8		1.0	0.46
156-59-2	cis-1,2-Dichloroethene	23.1		1.0	0.21
78-93-3	2-Butanone	131		1.0	1.1
74-97-5	Bromochloromethane	23.4		1.0	0.53
109-99-9	Tetrahydrofuran	346		10	5.0
67-66-3	Chloroform	22.3		1.0	0.33
71-55-6	1,1,1-Trichloroethane	21.2		1.0	0.36
110-82-7	Cyclohexane	23.4		1.0	0.35
563-58-6	1,1-Dichloropropene	22.8		1.0	0.22
56-23-5	Carbon tetrachloride	21.6		1.0	0.32
78-83-1	Isobutyl alcohol	1440		50	25
71-43-2	Benzene	23.5		1.0	0.31
107-06-2	1,2-Dichloroethane	21.6		1.0	0.33
79-01-6	Trichloroethene	23.1		1.0	0.50
108-87-2	Methylcyclohexane	23.9		1.0	0.50
78-87-5	1,2-Dichloropropane	24.8		1.0	0.38
74-95-3	Dibromomethane	24.9		1.0	0.25
123-91-1	1,4-Dioxane	1380		50	27
75-27-4	Bromodichloromethane	24.4		1.0	0.37

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9383/4  
 Matrix: Solid Lab File ID: lfaad04.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5(mL) Date Analyzed: 11/08/2010 11:35  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	24.6		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	24.6		1.0	0.32
108-10-1	4-Methyl-2-pentanone	136		1.0	0.21
108-88-3	Toluene	24.2		1.0	0.50
10061-02-6	trans-1,3-Dichloropropene	25.0		1.0	0.50
79-00-5	1,1,2-Trichloroethane	26.9		1.0	0.42
127-18-4	Tetrachloroethene	23.4		1.0	0.50
142-28-9	1,3-Dichloropropane	25.2		1.0	0.33
591-78-6	2-Hexanone	137		1.0	1.0
124-48-1	Dibromochloromethane	26.1		1.0	0.37
106-93-4	1,2-Dibromoethane	25.5		1.0	0.50
108-90-7	Chlorobenzene	25.0		1.0	0.23
630-20-6	1,1,1,2-Tetrachloroethane	25.5		1.0	0.36
100-41-4	Ethylbenzene	25.0		1.0	0.50
179601-23-1	m&p-Xylene	50.8		1.0	0.50
95-47-6	o-Xylene	25.5		1.0	0.50
100-42-5	Styrene	25.4		1.0	0.50
75-25-2	Bromoform	25.9		1.0	0.39
98-82-8	Isopropylbenzene	26.0		1.0	0.50
108-86-1	Bromobenzene	25.8		1.0	0.37
79-34-5	1,1,2,2-Tetrachloroethane	29.8		1.0	0.37
96-18-4	1,2,3-Trichloropropane	24.3		1.0	0.54
103-65-1	n-Propylbenzene	25.9		1.0	0.50
95-49-8	2-Chlorotoluene	26.4		1.0	0.33
106-43-4	4-Chlorotoluene	26.8		1.0	0.34
108-67-8	1,3,5-Trimethylbenzene	26.7		1.0	0.32
98-06-6	tert-Butylbenzene	26.3		1.0	0.50
95-63-6	1,2,4-Trimethylbenzene	27.6		1.0	0.34
135-98-8	sec-Butylbenzene	27.3		1.0	0.50
541-73-1	1,3-Dichlorobenzene	26.8		1.0	0.25
99-87-6	4-Isopropyltoluene	26.0		1.0	0.18
106-46-7	1,4-Dichlorobenzene	27.1		1.0	0.23
95-50-1	1,2-Dichlorobenzene	27.3		1.0	0.28
104-51-8	n-Butylbenzene	28.6		1.0	0.50
96-12-8	1,2-Dibromo-3-Chloropropane	26.9		1.0	0.46
120-82-1	1,2,4-Trichlorobenzene	29.0		1.0	0.16

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9383/4  
 Matrix: Solid Lab File ID: lfaad04.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5(mL) Date Analyzed: 11/08/2010 11:35  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9383 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	27.2		1.0	0.50
91-20-3	Naphthalene	31.9		1.0	0.50
87-61-6	1,2,3-Trichlorobenzene	29.9		1.0	0.25

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	93		65-155
2037-26-5	Toluene-d8	103		80-115
460-00-4	Bromofluorobenzene	103		80-115
2199-69-1	1,2-Dichlorobenzene-d4	104		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9400/3  
 Matrix: Solid Lab File ID: lfaag03.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5(mL) Date Analyzed: 11/10/2010 07:51  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	24.2		1.0	0.50
74-87-3	Chloromethane	26.7		1.0	0.37
75-01-4	Vinyl chloride	26.6		1.0	0.50
74-83-9	Bromomethane	26.5		1.0	0.35
75-00-3	Chloroethane	27.3		1.0	0.60
75-69-4	Trichlorofluoromethane	23.2		1.0	0.50
75-35-4	1,1-Dichloroethene	21.3		1.0	0.21
76-13-1	Freon TF	21.0		1.0	0.28
67-64-1	Acetone	120		1.0	1.0
74-88-4	Methyl iodide	24.3		1.0	0.50
75-15-0	Carbon disulfide	20.6		1.0	0.19
79-20-9	Methyl acetate	23.7		1.0	0.50
75-09-2	Methylene Chloride	22.9		1.0	0.50
156-60-5	trans-1,2-Dichloroethene	22.4		1.0	0.50
1634-04-4	Methyl t-butyl ether	21.9		1.0	0.50
75-34-3	1,1-Dichloroethane	22.4		1.0	0.36
108-05-4	Vinyl acetate	26.2		1.0	0.50
594-20-7	2,2-Dichloropropane	21.5		1.0	0.46
156-59-2	cis-1,2-Dichloroethene	22.6		1.0	0.21
78-93-3	2-Butanone	129		1.0	1.1
74-97-5	Bromochloromethane	22.9		1.0	0.53
109-99-9	Tetrahydrofuran	338		10	5.0
67-66-3	Chloroform	22.0		1.0	0.33
71-55-6	1,1,1-Trichloroethane	20.7		1.0	0.36
110-82-7	Cyclohexane	23.1		1.0	0.35
563-58-6	1,1-Dichloropropene	22.3		1.0	0.22
56-23-5	Carbon tetrachloride	20.9		1.0	0.32
78-83-1	Isobutyl alcohol	1430		50	25
71-43-2	Benzene	23.1		1.0	0.31
107-06-2	1,2-Dichloroethane	20.8		1.0	0.33
79-01-6	Trichloroethene	22.8		1.0	0.50
108-87-2	Methylcyclohexane	23.5		1.0	0.50
78-87-5	1,2-Dichloropropane	24.4		1.0	0.38
74-95-3	Dibromomethane	24.3		1.0	0.25
123-91-1	1,4-Dioxane	1440		50	27
75-27-4	Bromodichloromethane	24.0		1.0	0.37

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9400/3  
 Matrix: Solid Lab File ID: lfaag03.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 11/10/2010 07:51  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	25.9		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	24.4		1.0	0.32
108-10-1	4-Methyl-2-pentanone	130		1.0	0.21
108-88-3	Toluene	24.0		1.0	0.50
10061-02-6	trans-1,3-Dichloropropene	24.5		1.0	0.50
79-00-5	1,1,2-Trichloroethane	26.3		1.0	0.42
127-18-4	Tetrachloroethene	23.1		1.0	0.50
142-28-9	1,3-Dichloropropane	25.0		1.0	0.33
591-78-6	2-Hexanone	134		1.0	1.0
124-48-1	Dibromochloromethane	25.7		1.0	0.37
106-93-4	1,2-Dibromoethane	25.3		1.0	0.50
108-90-7	Chlorobenzene	24.7		1.0	0.23
630-20-6	1,1,1,2-Tetrachloroethane	25.1		1.0	0.36
100-41-4	Ethylbenzene	24.8		1.0	0.50
179601-23-1	m&p-Xylene	50.3		1.0	0.50
95-47-6	o-Xylene	25.3		1.0	0.50
100-42-5	Styrene	25.5		1.0	0.50
75-25-2	Bromoform	25.1		1.0	0.39
98-82-8	Isopropylbenzene	25.6		1.0	0.50
108-86-1	Bromobenzene	25.2		1.0	0.37
79-34-5	1,1,2,2-Tetrachloroethane	28.6		1.0	0.37
96-18-4	1,2,3-Trichloropropane	23.2		1.0	0.54
103-65-1	n-Propylbenzene	25.5		1.0	0.50
95-49-8	2-Chlorotoluene	25.9		1.0	0.33
106-43-4	4-Chlorotoluene	26.6		1.0	0.34
108-67-8	1,3,5-Trimethylbenzene	26.3		1.0	0.32
98-06-6	tert-Butylbenzene	26.0		1.0	0.50
95-63-6	1,2,4-Trimethylbenzene	27.5		1.0	0.34
135-98-8	sec-Butylbenzene	27.1		1.0	0.50
541-73-1	1,3-Dichlorobenzene	26.3		1.0	0.25
99-87-6	4-Isopropyltoluene	26.0		1.0	0.18
106-46-7	1,4-Dichlorobenzene	26.4		1.0	0.23
95-50-1	1,2-Dichlorobenzene	26.4		1.0	0.28
104-51-8	n-Butylbenzene	28.6		1.0	0.50
96-12-8	1,2-Dibromo-3-Chloropropane	26.3		1.0	0.46
120-82-1	1,2,4-Trichlorobenzene	28.4		1.0	0.16

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2223-1  
 SDG No.: MONTGO (200-2223)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9400/3  
 Matrix: Solid Lab File ID: lfaag03.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 11/10/2010 07:51  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	26.9		1.0	0.50
91-20-3	Naphthalene	31.5		1.0	0.50
87-61-6	1,2,3-Trichlorobenzene	29.2		1.0	0.25

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	91		65-155
2037-26-5	Toluene-d8	101		80-115
460-00-4	Bromofluorobenzene	99		80-115
2199-69-1	1,2-Dichlorobenzene-d4	98		45-145



# GC/MS VOA Worksheet

Batch Number: 200-9068

Method: 5035

Analyst: Jackson, Thomas

Date Open: Nov 04 2010 5:03PM

Batch End: Nov 04 2010 5:34PM

Lab ID	Client ID	Method Chain	Basis	Preservation Type	Tare Weight	Vial and Sample weight	Initial weight/volume of sample	Final weight/volume of sample
200-2223-A-1	MC-S-32312	5035, 8260B	T	NA	25.423 g	37.01 g	11.587 g	10 mL
200-2223-A-2	MC-S-32284	5035, 8260B	T	NA	25.339 g	35.82 g	10.481 g	10 mL
200-2223-A-3	MC-S-32221	5035, 8260B	T	NA	25.20 g	38.97 g	13.77 g	10 mL
200-2223-A-4	MC-S-32280	5035, 8260B	T	NA	25.07 g	34.64 g	9.57 g	10 mL
200-2223-A-5	MC-S-32198	5035, 8260B	T	NA	25.261 g	36.61 g	11.349 g	10 mL
200-2223-A-6	MC-S-32241	5035, 8260B	T	NA	25.267 g	38.20 g	12.933 g	10 mL
200-2223-A-7	MC-S-32187	5035, 8260B	T	NA	25.297 g	35.08 g	9.783 g	10 mL
200-2223-A-8	MC-S-32182	5035, 8260B	T	NA	25.846 g	35.37 g	9.524 g	10 mL
200-2223-A-9	MC-S-32311	5035, 8260B	T	NA	25.675 g	38.41 g	12.735 g	10 mL
200-2223-A-10	MC-S-32240	5035, 8260B	T	NA	324.774 g	34.04 g	9.266 g	10 mL
200-2223-A-11	MC-S-32223	5035, 8260B	T	NA	25.268 g	38.75 g	13.482 g	10 mL
200-2223-A-12	MC-S-32318	5035, 8260B	T	NA	25.515 g	37.65 g	12.135 g	10 mL
200-2223-A-13	MC-S-32300	5035, 8260B	T	NA	25.314 g	36.08 g	10.766 g	10 mL
200-2223-A-14	MC-S-32263	5035, 8260B	T	NA	25.58 g	38.33 g	12.75 g	10 mL
200-2223-A-15	MC-S-32196	5035, 8260B	T	NA	25.344 g	35.53 g	10.186 g	10 mL
200-2223-A-16	MC-S-32288	5035, 8260B	T	NA	25.035 g	39.98 g	14.945 g	10 mL
200-2223-A-17	MC-S-32253	5035, 8260B	T	NA	25.577 g	35.24 g	9.663 g	10 mL
200-2223-A-18	MC-S-MEOH	5035, 8260B	T	NA	20.39 g	30.39 g	10 g	10 mL
200-2223-A-19	MC-S-32350	5035, 8260B	T	NA	25.347 g	34.84 g	9.493 g	10 mL
200-2223-A-20	MC-S-32366	5035, 8260B	T	NA	25.37 g	37.46 g	12.09 g	10 mL

# GC/MS VOA Worksheet

Date Open: Nov 04 2010 5:03PM  
 Batch End: Nov 04 2010 5:34PM

Batch Number: 200-9068  
 Method: 5035  
 Analyst: Jackson, Thomas

Comments

Lab ID	Client ID	Method Chain	Basis	Analysis comment
200-2223-A-1	MC-S-32312	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-2	MC-S-32284	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-3	MC-S-32221	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-4	MC-S-32280	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-5	MC-S-32198	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-6	MC-S-32241	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-7	MC-S-32187	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-8	MC-S-32182	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-9	MC-S-32311	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-10	MC-S-32240	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-11	MC-S-32223	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-12	MC-S-32318	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-13	MC-S-32300	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-14	MC-S-32263	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-15	MC-S-32196	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-16	MC-S-32288	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated

# GC/MS VOA Worksheet

Date Open: Nov 04 2010 5:03PM  
 Batch End: Nov 04 2010 5:34PM

Batch Number: 200-9068  
 Method: 5035  
 Analyst: Jackson, Thomas

200-2223-A-17	MC-S-32253	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-18	MC-S-MEOH	5035, 8260B	T	Trip Blank Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-19	MC-S-32350	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated
200-2223-A-20	MC-S-32366	5035, 8260B	T	Initial Amount WT from Client COC - Tare Weight calculated

Batch Comment: ARGONNE National Laboratory Soil in 10ml MeOH in 20ml vials

# GC/MS VOA Worksheet

Batch Number: 200-9200  
 Method: 5035  
 Analyst: Heald, John

Date Open: Nov 08 2010 10:25AM  
 Batch End:

Lab ID	Client ID	Method Chain	Basis	Initial weight/volume of sample	Final weight/volume of sample
MB-200-9200/1				10 g	10 mL
MB-200-9200/2		5035, 8260B		10 g	10 mL
MB-200-9200/3		5035, 8260B		10 g	10 mL
MB-200-9200/4				10 g	10 mL
MB-200-9200/5				10 g	10 mL
MB-200-9200/6				10 g	10 mL
LCS-200-9200/7		5035, 8260B		10 g	10 mL
LCS-200-9200/8		5035, 8260B		10 g	10 mL

## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica BurlingtonJob No.: 200-2223-1SDG No.: MONTGO (200-2223)Instrument ID: L.iStart Date: 10/04/2010 14:12Analysis Batch Number: 7468End Date: 10/05/2010 08:24

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 200-7468/1		10/04/2010 14:12	1	1fa01.d	DB-624 0.53 (mm)
VIBLK 200-7468/2		10/04/2010 14:32	1		DB-624 0.53 (mm)
IC 200-7468/3		10/04/2010 15:04	1	1fa03.d	DB-624 0.53 (mm)
IC 200-7468/4		10/04/2010 15:37	1	1fa04.d	DB-624 0.53 (mm)
IC 200-7468/5		10/04/2010 16:09	1	1fa05.d	DB-624 0.53 (mm)
ICIS 200-7468/6		10/04/2010 16:41	1	1fa06.d	DB-624 0.53 (mm)
IC 200-7468/7		10/04/2010 17:13	1	1fa07.d	DB-624 0.53 (mm)
IC 200-7468/8		10/04/2010 17:45	1	1fa08.d	DB-624 0.53 (mm)
VIBLK 200-7468/9		10/04/2010 18:18	1		DB-624 0.53 (mm)
VIBLK 200-7468/10		10/04/2010 18:50	1		DB-624 0.53 (mm)
ICV 200-7468/11		10/04/2010 19:22	1		DB-624 0.53 (mm)
VIBLK 200-7468/12		10/04/2010 19:55	1		DB-624 0.53 (mm)
VIBLK 200-7468/13		10/05/2010 08:24	1		DB-624 0.53 (mm)

## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica BurlingtonJob No.: 200-2223-1SDG No.: MONTGO (200-2223)Instrument ID: L.iStart Date: 10/05/2010 09:14Analysis Batch Number: 7497End Date: 10/05/2010 20:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 200-7497/1		10/05/2010 09:14	1	lfaa01.d	DB-624 0.53 (mm)
CCVIS 200-7497/2		10/05/2010 09:39	1		DB-624 0.53 (mm)
ICV 200-7497/3		10/05/2010 10:11	1	lfaa03.d	DB-624 0.53 (mm)
ZZZZZ		10/05/2010 10:43	1		DB-624 0.53 (mm)
VIBLK 200-7497/5		10/05/2010 11:16	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 11:48	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 12:31	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 13:03	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 13:36	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 14:08	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 14:40	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 15:13	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 15:45	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 16:18	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 16:50	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 17:23	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 17:55	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 18:28	1		DB-624 0.53 (mm)
VIBLK 200-7497/19		10/05/2010 19:00	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 19:33	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 20:05	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 20:37	1		DB-624 0.53 (mm)



## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica BurlingtonJob No.: 200-2223-1SDG No.: MONTGO (200-2223)Instrument ID: L.iStart Date: 11/08/2010 10:08Analysis Batch Number: 9383End Date: 11/08/2010 21:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 200-9383/1		11/08/2010 10:08	1	lfaad01.d	DB-624 0.53 (mm)
VIBLK 200-9383/2		11/08/2010 10:29	1		DB-624 0.53 (mm)
CCVIS 200-9383/3		11/08/2010 11:02	1	lfaad03.d	DB-624 0.53 (mm)
LCS 200-9383/4		11/08/2010 11:35	1	lfaad04.d	DB-624 0.53 (mm)
LCS 200-9200/7-A		11/08/2010 12:07	1	lfaad05.d	DB-624 0.53 (mm)
ZZZZZ		11/08/2010 12:39	1		DB-624 0.53 (mm)
ZZZZZ		11/08/2010 13:12	1		DB-624 0.53 (mm)
ZZZZZ		11/08/2010 13:45	1		DB-624 0.53 (mm)
MB 200-9200/2-A		11/08/2010 14:28	1	lfaad09.d	DB-624 0.53 (mm)
200-2223-1	MC-S-32312	11/08/2010 15:21	1	lfaad10.d	DB-624 0.53 (mm)
200-2223-2	MC-S-32284	11/08/2010 15:53	1	lfaad11.d	DB-624 0.53 (mm)
200-2223-3	MC-S-32221	11/08/2010 16:26	1	lfaad12.d	DB-624 0.53 (mm)
200-2223-4	MC-S-32280	11/08/2010 16:58	1	lfaad13.d	DB-624 0.53 (mm)
200-2223-5	MC-S-32198	11/08/2010 17:31	1	lfaad14.d	DB-624 0.53 (mm)
200-2223-6	MC-S-32241	11/08/2010 18:03	1	lfaad15.d	DB-624 0.53 (mm)
200-2223-7	MC-S-32187	11/08/2010 18:36	1	lfaad16.d	DB-624 0.53 (mm)
200-2223-8	MC-S-32182	11/08/2010 19:08	1	lfaad17.d	DB-624 0.53 (mm)
200-2223-9	MC-S-32311	11/08/2010 19:41	1	lfaad18.d	DB-624 0.53 (mm)
200-2223-10	MC-S-32240	11/08/2010 20:13	1	lfaad19.d	DB-624 0.53 (mm)
200-2223-11	MC-S-32223	11/08/2010 20:45	1	lfaad20.d	DB-624 0.53 (mm)
200-2223-12	MC-S-32318	11/08/2010 21:18	1	lfaad21.d	DB-624 0.53 (mm)
200-2223-13	MC-S-32300	11/08/2010 21:50	1	lfaad22.d	DB-624 0.53 (mm)

## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica BurlingtonJob No.: 200-2223-1SDG No.: MONTGO (200-2223)Instrument ID: L.iStart Date: 11/10/2010 06:43Analysis Batch Number: 9400End Date: 11/10/2010 17:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 200-9400/1		11/10/2010 06:43	1	lfaaf01.d	DB-624 0.53 (mm)
CCVIS 200-9400/2		11/10/2010 06:57	1	lfaag02.d	DB-624 0.53 (mm)
LCS 200-9400/3		11/10/2010 07:51	1	lfaag03.d	DB-624 0.53 (mm)
LCS 200-9200/8-A		11/10/2010 08:22	1	lfaag04.d	DB-624 0.53 (mm)
ZZZZZ		11/10/2010 08:55	1		DB-624 0.53 (mm)
ZZZZZ		11/10/2010 09:27	1		DB-624 0.53 (mm)
MB 200-9200/3-A		11/10/2010 09:59	1	lfaag07.d	DB-624 0.53 (mm)
200-2223-14	MC-S-32263	11/10/2010 10:40	1	lfaag08.d	DB-624 0.53 (mm)
200-2223-15	MC-S-32196	11/10/2010 11:12	1	lfaag09.d	DB-624 0.53 (mm)
200-2223-16	MC-S-32288	11/10/2010 11:44	1	lfaag10.d	DB-624 0.53 (mm)
200-2223-17	MC-S-32253	11/10/2010 12:16	1	lfaag11.d	DB-624 0.53 (mm)
200-2223-18	MC-S-MEOH	11/10/2010 12:48	1	lfaag12.d	DB-624 0.53 (mm)
200-2223-19	MC-S-32350	11/10/2010 13:20	1	lfaag13.d	DB-624 0.53 (mm)
200-2223-20	MC-S-32366	11/10/2010 13:52	1	lfaag14.d	DB-624 0.53 (mm)
ZZZZZ		11/10/2010 14:24	1		DB-624 0.53 (mm)
ZZZZZ		11/10/2010 14:57	1		DB-624 0.53 (mm)
ZZZZZ		11/10/2010 15:29	1		DB-624 0.53 (mm)
ZZZZZ		11/10/2010 16:01	1		DB-624 0.53 (mm)
ZZZZZ		11/10/2010 16:33	2.9		DB-624 0.53 (mm)
200-2223-1 DL	MC-S-32312 DL	11/10/2010 16:33	2.9	lfaag19.d	DB-624 0.53 (mm)
ZZZZZ		11/10/2010 17:05	2		DB-624 0.53 (mm)
200-2223-9 DL	MC-S-32311 DL	11/10/2010 17:05	2	lfaag20.d	DB-624 0.53 (mm)

# **Shipping and Receiving Documents**

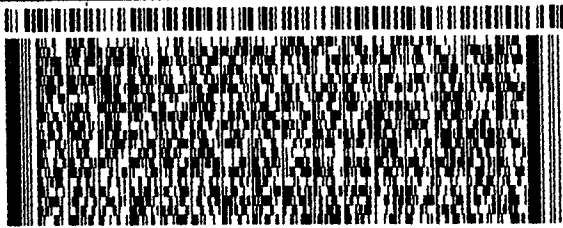
ORIGIN ID: ENLA (630) 252-2977  
CHARLES BLAIR  
ARGONNE NATIONAL LABORATORY  
9700 S. CASS AVENUE  
BLDG. 46  
LEMONT, IL 60439  
UNITED STATES US

SHIP DATE: 27OCT10  
ACTWGT: 14.9 LB MAN  
CAD: 0015778/CAFE2471  
DIMS: 24x24x13 IN  
BILL SENDER

TO **KIRK YOUNG**  
**TEST AMERICA LABORATORIES INC**  
**30 COMMUNITY DR., STE 11**

**SOUTH BURLINGTON VT 05403**

(802) 860-1990  
REF: 366260JW



**FedEx**  
Express

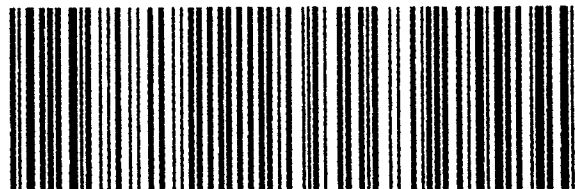


TRK# 7269 3170 7430  
0201

**THU - 28 OCT AA**  
**PRIORITY OVERNIGHT**

**XH BTVA**

**05403**  
VT-US  
**BTVA**



Part # 154254-354 INT2 08/10

## Login Sample Receipt Check List

Client: Argonne National Laboratory

Job Number: 200-2223-1  
SDG Number: MONTGO (200-2223)

**Login Number: 2223**  
**Creator: Kolb, Chris M**  
**List Number: 1**

**List Source: TestAmerica Burlington**

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	No custody seals present at time of receipt
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	5.8°C
Cooler Temperature is recorded.	True	IR Gun ID:96, CF= -1.0°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	Incomplete sample IDs on sample containers.
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	No times provided for all samples.
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	pH of organic samples is performed in lab
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	Received all samples in a 20ml vial preserved with 10 mL of MeOH.
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	

# ANALYTICAL REPORT

Job Number: 200-2345-1

SDG Number: MONTGO (200-2345)

Job Description: Montgomery City (200-2345)

Contract Number: 8E-00302

For:

Argonne National Laboratory

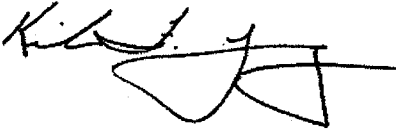
9700 South Cass Avenue

Building 203

Office B-149

Argonne, IL 60439

Attention: Mr. Clyde Dennis



Approved for release.  
Kirk F Young  
Project Manager I  
11/19/2010 1:29 PM

---

Kirk F Young

Project Manager I

kirk.young@testamericainc.com

11/19/2010

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

TestAmerica Laboratories, Inc.

TestAmerica Burlington 30 Community Drive, Suite 11, South Burlington, VT 05403

Tel (802) 660-1990 Fax (802) 660-1919 [www.testamericainc.com](http://www.testamericainc.com)





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## CASE NARRATIVE

**Client: Argonne National Laboratory**

**Project: Montgomery City (200-2345)**

**Report Number: 200-2345-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### Receipt

The samples were received on 11/4/2010. 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 sample volumes were received without thermal preservation.

### SW846 Method(s) 5035/8260B Volatile Organics (Medium Level Soil)

The samples were analyzed by the referenced method(s), 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 analysis associated with the samples in this 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 analytical sequence. 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 that for naphthalene, there was an acceptable recovery of each target analyte in the laboratory control sample analysis that defined method performance. In that analysis the recovery of naphthalene was high (126 percent). The upper control limit that is used by the laboratory in assessing the recovery of performance of naphthalene in a laboratory control sample analysis is 125 percent. 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 bromomethane, chloroethane, trichlorofluoromethane, 1,1-dichloroethene, Freon TF, acetone, methyl iodide, carbon disulfide, and isobutyl alcohol, for which the recovery was at or below 50 percent. Additionally, the recoveries of chloroform (79 percent) and carbon tetrachloride (79 percent) were low in the analysis of the laboratory control sample with methanol, compared to the lower control limits of 85 percent (chloroform) and 80 percent (carbon tetrachloride). Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. A trace concentration of bromomethane was identified in the analysis sample MC-S-MeOH BLANK. Trace concentrations of chloromethane and methyl iodide were identified in the analysis of the instrument blank associated with the analytical work, as was a relatively high concentration of bromomethane. While the concentrations of chloromethane and methyl iodide in that analysis were below the established reporting limit of 10 ug/Kg, the derived concentration of bromomethane (17.4 ug/Kg) was above that level.

Manual integration was employed in deriving certain of the analytical results. The values that have been derived from manual integration are qualified on the quantitation reports. Extracted ion current profiles for each manual integration are included in the data package, and further documented in the Sample Preparation section of this submittal.







## SAMPLE SUMMARY

Client: Argonne National Laboratory

Job Number: 200-2345-1  
Sdg Number: MONTGO (200-2345)

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
200-2345-1	MC-S-32380	Solid	11/02/2010 00:00	11/04/2010 10:10
200-2345-2	MC-S-32385	Solid	11/02/2010 00:00	11/04/2010 10:10
200-2345-3	MC-S-32394	Solid	11/02/2010 00:00	11/04/2010 10:10
200-2345-4	MC-S-MeOH BLANK	Solid	11/02/2010 00:00	11/04/2010 10:10

## METHOD SUMMARY

Client: Argonne National Laboratory

Job Number: 200-2345-1  
Sdg Number: MONTGO (200-2345)

Description	Lab Location	Method	Preparation Method
<b>Matrix: Solid</b>			
Volatile Organic Compounds (GC/MS)	TAL BUR	SW846 8260B	
Purge and Trap	TAL BUR		SW846 5035

### Lab References:

TAL BUR = TestAmerica Burlington

### Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**METHOD / ANALYST SUMMARY**

Client: Argonne National Laboratory

Job Number: 200-2345-1  
Sdg Number: MONTGO (200-2345)

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 8260B	Heald, John	JRH

## Quality Control Results

Client: Argonne National Laboratory

Job Number: 200-2345-1  
Sdg Number: MONTGO (200-2345)

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Prep Batch: 200-9128</b>					
200-2345-1	MC-S-32380	T	Solid	5035	
200-2345-2	MC-S-32385	T	Solid	5035	
200-2345-3	MC-S-32394	T	Solid	5035	
200-2345-4	MC-S-MeOH BLANK	T	Solid	5035	
<b>Prep Batch: 200-9200</b>					
LCS 200-9200/8-A	Lab Control Sample	T	Solid	5035	
MB 200-9200/3-A	Method Blank	T	Solid	5035	
<b>Analysis Batch: 200-9400</b>					
LCS 200-9400/3	Lab Control Sample	T	Solid	8260B	
LCS 200-9200/8-A	Lab Control Sample	T	Solid	8260B	200-9200
MB 200-9200/3-A	Method Blank	T	Solid	8260B	200-9200
200-2345-1	MC-S-32380	T	Solid	8260B	200-9128
200-2345-2	MC-S-32385	T	Solid	8260B	200-9128
200-2345-3	MC-S-32394	T	Solid	8260B	200-9128
200-2345-4	MC-S-MeOH BLANK	T	Solid	8260B	200-9128

**Report Basis**

T = Total

## DATA REPORTING QUALIFIERS

Client: Argonne National Laboratory

Job Number: 200-2345-1  
Sdg Number: MONTGO (200-2345)

<b>Lab Section</b>	<b>Qualifier</b>	<b>Description</b>
GC/MS VOA		
	B	Compound was found in the blank and sample.
	U	Indicates the analyte was analyzed for but not detected.
	*	Recovery or RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

# Method 8260B

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Volatile Organic Compounds (GC/MS)  
by Method 8260B



FORM II  
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2345-1

SDG No.: MONTGO (200-2345)

Matrix: Solid

Level: Medium

GC Column (1): DB-624 ID: 0.53 (mm)

Client Sample ID	Lab Sample ID	DCA #	TOL #	BFB #	DCZ #
MC-S-32380	200-2345-1	89	101	101	97
MC-S-32385	200-2345-2	87	100	99	97
MC-S-32394	200-2345-3	87	99	98	96
MC-S-MeOH BLANK	200-2345-4	86	99	100	98
	MB 200-9200/3-A	88	101	100	99
	LCS 200-9200/8-A	92	100	98	96
	LCS 200-9400/3	91	101	99	98

QC LIMITS

DCA = 1,2-Dichloroethane-d4  
TOL = Toluene-d8  
BFB = Bromofluorobenzene  
DCZ = 1,2-Dichlorobenzene-d4

65-155  
80-115  
80-115  
45-145

# Column to be used to flag recovery values

FORM II 8260B

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2345-1

SDG No.: MONTGO (200-2345)

Matrix: Solid

Level: Medium

Lab File ID: lfaag04.d

Lab ID: LCS 200-9200/8-A

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dichlorodifluoromethane	250	247	99	30-180	
Chloromethane	250	267	107	55-150	
Vinyl chloride	250	257	103	65-145	
Bromomethane	250	100	40	65-145	*
Chloroethane	250	113	45	70-135	*
Trichlorofluoromethane	250	124	50	70-140	*
1,1-Dichloroethene	250	105	42	75-135	*
Freon TF	250	115	46	75-140	*
Acetone	1250	492	39	50-130	*
Methyl iodide	250	32.2	13	70-150	*
Carbon disulfide	250	118	47	80-135	*
Methyl acetate	250	210	84	60-140	
Methylene Chloride	250	190	76	75-140	
trans-1,2-Dichloroethene	250	210	84	80-130	
Methyl t-butyl ether	250	198	79	85-130	*
1,1-Dichloroethane	250	188	75	85-120	*
Vinyl acetate	250	229	92	70-135	
2,2-Dichloropropane	250	204	82	85-120	*
cis-1,2-Dichloroethene	250	211	85	80-120	
2-Butanone	1250	1000	80	70-135	
Bromochloromethane	250	181	72	75-125	*
Tetrahydrofuran	3500	2930	84	75-125	
Chloroform	250	198	79	85-120	*
1,1,1-Trichloroethane	250	197	79	80-115	*
Cyclohexane	250	226	90	60-140	
1,1-Dichloropropene	250	217	87	85-120	
Carbon tetrachloride	250	196	79	80-115	*
Isobutyl alcohol	12500	1290	10	70-135	*
Benzene	250	217	87	85-120	
1,2-Dichloroethane	250	193	77	75-120	
Trichloroethene	250	218	87	85-120	
Methylcyclohexane	250	228	91	60-140	
1,2-Dichloropropane	250	230	92	85-120	
Dibromomethane	250	199	80	80-120	
1,4-Dioxane	12500	10800	86	50-160	
Bromodichloromethane	250	219	88	80-115	
2-Chloroethyl vinyl ether	250	253	101	65-145	
cis-1,3-Dichloropropene	250	224	90	85-120	
4-Methyl-2-pentanone	1250	1050	84	65-135	
Toluene	250	229	92	75-125	
trans-1,3-Dichloropropene	250	227	91	85-120	
1,1,2-Trichloroethane	250	244	98	75-125	

# Column to be used to flag recovery and RPD values

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2345-1

SDG No.: MONTGO (200-2345)

Matrix: Solid

Level: Medium

Lab File ID: lfaag04.d

Lab ID: LCS 200-9200/8-A

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Tetrachloroethene	250	225	90	85-120	
1,3-Dichloropropane	250	234	94	85-120	
2-Hexanone	1250	1050	84	70-135	
Dibromochloromethane	250	234	94	80-120	
1,2-Dibromoethane	250	233	93	80-120	
Chlorobenzene	250	236	95	80-120	
1,1,1,2-Tetrachloroethane	250	237	95	80-115	
Ethylbenzene	250	242	97	80-120	
m&p-Xylene	500	492	98	80-120	
o-Xylene	250	243	97	85-120	
Styrene	250	241	96	80-125	
Bromoform	250	224	90	75-130	
Isopropylbenzene	250	252	101	85-120	
Bromobenzene	250	241	96	85-120	
1,1,2,2-Tetrachloroethane	250	248	99	75-125	
1,2,3-Trichloropropane	250	206	83	70-125	
n-Propylbenzene	250	255	102	85-120	
2-Chlorotoluene	250	251	101	85-120	
4-Chlorotoluene	250	260	104	85-120	
1,3,5-Trimethylbenzene	250	265	106	85-120	
tert-Butylbenzene	250	264	106	85-120	
1,2,4-Trimethylbenzene	250	280	112	85-120	
sec-Butylbenzene	250	281	112	85-120	
1,3-Dichlorobenzene	250	255	102	80-120	
4-Isopropyltoluene	250	272	109	85-120	
1,4-Dichlorobenzene	250	256	102	85-120	
1,2-Dichlorobenzene	250	255	102	85-120	
n-Butylbenzene	250	310	124	85-125	
1,2-Dibromo-3-Chloropropane	250	165	66	65-130	
1,2,4-Trichlorobenzene	250	283	113	80-125	
Hexachlorobutadiene	250	295	118	65-150	
Naphthalene	250	128	51	80-125	*
1,2,3-Trichlorobenzene	250	205	82	70-125	

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2345-1

SDG No.: MONTGO (200-2345)

Matrix: Solid

Level: Medium

Lab File ID: lfaag03.d

Lab ID: LCS 200-9400/3

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dichlorodifluoromethane	25.0	24.2	97	30-180	
Chloromethane	25.0	26.7	107	55-150	
Vinyl chloride	25.0	26.6	106	65-145	
Bromomethane	25.0	26.5	106	65-145	
Chloroethane	25.0	27.3	109	70-135	
Trichlorofluoromethane	25.0	23.2	93	70-140	
1,1-Dichloroethene	25.0	21.3	85	75-135	
Freon TF	25.0	21.0	84	75-140	
Acetone	125	120	96	50-130	
Methyl iodide	25.0	24.3	97	70-150	
Carbon disulfide	25.0	20.6	82	80-135	
Methyl acetate	25.0	23.7	95	60-140	
Methylene Chloride	25.0	22.9	92	75-140	
trans-1,2-Dichloroethene	25.0	22.4	90	80-130	
Methyl t-butyl ether	25.0	21.9	87	85-130	
1,1-Dichloroethane	25.0	22.4	90	85-120	
Vinyl acetate	25.0	26.2	105	70-135	
2,2-Dichloropropane	25.0	21.5	86	85-120	
cis-1,2-Dichloroethene	25.0	22.6	90	80-120	
2-Butanone	125	129	103	70-135	
Bromochloromethane	25.0	22.9	92	75-125	
Tetrahydrofuran	350	338	97	75-125	
Chloroform	25.0	22.0	88	85-120	
1,1,1-Trichloroethane	25.0	20.7	83	80-115	
Cyclohexane	25.0	23.1	92	60-140	
1,1-Dichloropropene	25.0	22.3	89	85-120	
Carbon tetrachloride	25.0	20.9	84	80-115	
Isobutyl alcohol	1250	1430	114	70-135	
Benzene	25.0	23.1	93	85-120	
1,2-Dichloroethane	25.0	20.8	83	75-120	
Trichloroethene	25.0	22.8	91	85-120	
Methylcyclohexane	25.0	23.5	94	60-140	
1,2-Dichloropropane	25.0	24.4	98	85-120	
Dibromomethane	25.0	24.3	97	80-120	
1,4-Dioxane	1250	1440	115	50-160	
Bromodichloromethane	25.0	24.0	96	80-115	
2-Chloroethyl vinyl ether	25.0	25.9	104	65-145	
cis-1,3-Dichloropropene	25.0	24.4	98	85-120	
4-Methyl-2-pentanone	125	130	104	65-135	
Toluene	25.0	24.0	96	75-125	
trans-1,3-Dichloropropene	25.0	24.5	98	85-120	
1,1,2-Trichloroethane	25.0	26.3	105	75-125	

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2345-1

SDG No.: MONTGO (200-2345)

Matrix: Solid

Level: Medium

Lab File ID: lfaag03.d

Lab ID: LCS 200-9400/3

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Tetrachloroethene	25.0	23.1	92	85-120	
1,3-Dichloropropane	25.0	25.0	100	85-120	
2-Hexanone	125	134	107	70-135	
Dibromochloromethane	25.0	25.7	103	80-120	
1,2-Dibromoethane	25.0	25.3	101	80-120	
Chlorobenzene	25.0	24.7	99	80-120	
1,1,1,2-Tetrachloroethane	25.0	25.1	100	80-115	
Ethylbenzene	25.0	24.8	99	80-120	
m&p-Xylene	50.0	50.3	101	80-120	
o-Xylene	25.0	25.3	101	85-120	
Styrene	25.0	25.5	102	80-125	
Bromoform	25.0	25.1	100	75-130	
Isopropylbenzene	25.0	25.6	102	85-120	
Bromobenzene	25.0	25.2	101	85-120	
1,1,2,2-Tetrachloroethane	25.0	28.6	115	75-125	
1,2,3-Trichloropropane	25.0	23.2	93	70-125	
n-Propylbenzene	25.0	25.5	102	85-120	
2-Chlorotoluene	25.0	25.9	104	85-120	
4-Chlorotoluene	25.0	26.6	106	85-120	
1,3,5-Trimethylbenzene	25.0	26.3	105	85-120	
tert-Butylbenzene	25.0	26.0	104	85-120	
1,2,4-Trimethylbenzene	25.0	27.5	110	85-120	
sec-Butylbenzene	25.0	27.1	108	85-120	
1,3-Dichlorobenzene	25.0	26.3	105	80-120	
4-Isopropyltoluene	25.0	26.0	104	85-120	
1,4-Dichlorobenzene	25.0	26.4	105	85-120	
1,2-Dichlorobenzene	25.0	26.4	106	85-120	
n-Butylbenzene	25.0	28.6	114	85-125	
1,2-Dibromo-3-Chloropropane	25.0	26.3	105	65-130	
1,2,4-Trichlorobenzene	25.0	28.4	114	80-125	
Hexachlorobutadiene	25.0	26.9	108	65-150	
Naphthalene	25.0	31.5	126	80-125	*
1,2,3-Trichlorobenzene	25.0	29.2	117	70-125	

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV  
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
SDG No.: MONTGO (200-2345)  
Lab File ID: lfaag07.d Lab Sample ID: MB 200-9200/3-A  
Matrix: Solid Heated Purge: (Y/N) N  
Instrument ID: L.i Date Analyzed: 11/10/2010 09:59  
GC Column: DB-624 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 200-9400/3	lfaag03.d	11/10/2010 07:51
	LCS 200-9200/8-A	lfaag04.d	11/10/2010 08:22
MC-S-32380	200-2345-1	lfaag15.d	11/10/2010 14:24
MC-S-32385	200-2345-2	lfaag16.d	11/10/2010 14:57
MC-S-32394	200-2345-3	lfaag17.d	11/10/2010 15:29
MC-S-MeOH BLANK	200-2345-4	lfaag18.d	11/10/2010 16:01



FORM V  
GC/MS VOA INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Burlington

Job No.: 200-2345-1

SDG No.: MONTGO (200-2345)

Lab File ID: 1fa01.d

BFB Injection Date: 10/04/2010

Instrument ID: L.i

BFB Injection Time: 14:12

Analysis Batch No.: 7468

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.2	
75	30.0 - 60.0 % of mass 95	42.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	57.7	
175	5.0 - 9.0 % of mass 174	4.5	(7.8)1
176	95.0 - 101.0 % of mass 174	56.7	(98.3)1
177	5.0 - 9.0 % of mass 176	3.6	(6.4)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 200-7468/3	1fa03.d	10/04/2010	15:04
	IC 200-7468/4	1fa04.d	10/04/2010	15:37
	IC 200-7468/5	1fa05.d	10/04/2010	16:09
	ICIS 200-7468/6	1fa06.d	10/04/2010	16:41
	IC 200-7468/7	1fa07.d	10/04/2010	17:13
	IC 200-7468/8	1fa08.d	10/04/2010	17:45

FORM V  
GC/MS VOA INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Lab File ID: lfaa01.d BFB Injection Date: 10/05/2010  
 Instrument ID: L.i BFB Injection Time: 09:14  
 Analysis Batch No.: 7497

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.8	
75	30.0 - 60.0 % of mass 95	41.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	56.9	
175	5.0 - 9.0 % of mass 174	4.3	(7.5)1
176	95.0 - 101.0 % of mass 174	55.6	(97.7)1
177	5.0 - 9.0 % of mass 176	3.5	(6.2)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICV 200-7497/3	lfaa03.d	10/05/2010	10:11

FORM V  
GC/MS VOA INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Lab File ID: 1faaf01.d BFB Injection Date: 11/10/2010  
 Instrument ID: L.i BFB Injection Time: 06:43  
 Analysis Batch No.: 9400

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.2	
75	30.0 - 60.0 % of mass 95	40.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	53.5	
175	5.0 - 9.0 % of mass 174	4.2	(7.8)1
176	95.0 - 101.0 % of mass 174	51.6	(96.4)1
177	5.0 - 9.0 % of mass 176	3.2	(6.2)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 200-9400/2	1faag02.d	11/10/2010	06:57
	LCS 200-9400/3	1faag03.d	11/10/2010	07:51
	LCS 200-9200/8-A	1faag04.d	11/10/2010	08:22
	MB 200-9200/3-A	1faag07.d	11/10/2010	09:59
MC-S-32380	200-2345-1	1faag15.d	11/10/2010	14:24
MC-S-32385	200-2345-2	1faag16.d	11/10/2010	14:57
MC-S-32394	200-2345-3	1faag17.d	11/10/2010	15:29
MC-S-MeOH BLANK	200-2345-4	1faag18.d	11/10/2010	16:01

FORM VIII  
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Sample No.: ICIS 200-7468/6 Date Analyzed: 10/04/2010 16:41  
 Instrument ID: L.i GC Column: DB-624 ID: 0.53 (mm)  
 Lab File ID (Standard): lfa06.d Heated Purge: (Y/N) N  
 Calibration ID: 2582

	FB		CBZ		DCB	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	3423847	9.95	2530764	15.78	1243795	20.15
UPPER LIMIT	6847694	10.45	5061528	16.28	2487590	20.65
LOWER LIMIT	1711924	9.45	1265382	15.28	621898	19.65
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 200-7497/3	3416358	9.96	2513062	15.78	1238721	20.15

FB = Fluorobenzene

CBZ = Chlorobenzene-d5

DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area

RT Limit = ± 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII  
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Sample No.: CCVIS 200-9400/2 Date Analyzed: 11/10/2010 06:57  
 Instrument ID: L.i GC Column: DB-624 ID: 0.53 (mm)  
 Lab File ID (Standard): lfaag02.d Heated Purge: (Y/N) N  
 Calibration ID: 2582

	FB		CBZ		DCB			
	AREA #	RT #	AREA #	RT #	AREA #	RT #		
12/24 HOUR STD	3317128	9.91	2436133	15.73	1165652	20.12		
UPPER LIMIT	6634256	10.41	4872266	16.23	2331304	20.62		
LOWER LIMIT	1658564	9.41	1218067	15.23	582826	19.62		
LAB SAMPLE ID	CLIENT SAMPLE ID							
LCS 200-9400/3			3372443	9.93	2465872	15.75	1184227	20.14
LCS 200-9200/8-A			3826400	9.87	2744172	15.74	1320077	20.14
200-2345-1	MC-S-32380		3075113	9.89	2268945	15.75	1071049	20.14
200-2345-2	MC-S-32385		3199520	9.89	2369469	15.74	1107779	20.14
200-2345-3	MC-S-32394		3098172	9.88	2276828	15.75	1084957	20.13
200-2345-4	MC-S-MeOH BLANK		3057668	9.87	2259438	15.75	1048351	20.14

FB = Fluorobenzene

CBZ = Chlorobenzene-d5

DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area

RT Limit = ± 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8260B

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: MC-S-32380 Lab Sample ID: 200-2345-1  
 Matrix: Solid Lab File ID: lfaag15.d  
 Analysis Method: 8260B Date Collected: 11/02/2010 00:00  
 Sample wt/vol: 10.102(g) Date Analyzed: 11/10/2010 14:24  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	9.9	U	9.9	4.9
74-87-3	Chloromethane	9.9	U	9.9	3.7
75-01-4	Vinyl chloride	9.9	U	9.9	4.9
74-83-9	Bromomethane	9.8	J B *	9.9	3.5
75-00-3	Chloroethane	9.9	U *	9.9	5.9
75-69-4	Trichlorofluoromethane	9.9	U *	9.9	4.9
75-35-4	1,1-Dichloroethene	9.9	U *	9.9	2.1
76-13-1	Freon TF	9.9	U *	9.9	2.8
67-64-1	Acetone	9.9	U *	9.9	9.9
74-88-4	Methyl iodide	9.9	U *	9.9	4.9
75-15-0	Carbon disulfide	9.9	U *	9.9	1.9
79-20-9	Methyl acetate	9.9	U	9.9	4.9
75-09-2	Methylene Chloride	9.9	U	9.9	4.9
156-60-5	trans-1,2-Dichloroethene	9.9	U	9.9	4.9
1634-04-4	Methyl t-butyl ether	9.9	U *	9.9	4.9
75-34-3	1,1-Dichloroethane	9.9	U *	9.9	3.6
108-05-4	Vinyl acetate	9.9	U	9.9	4.9
594-20-7	2,2-Dichloropropane	9.9	U *	9.9	4.6
156-59-2	cis-1,2-Dichloroethene	9.9	U	9.9	2.1
78-93-3	2-Butanone	9.9	U	9.9	11
74-97-5	Bromochloromethane	9.9	U *	9.9	5.2
109-99-9	Tetrahydrofuran	99	U	99	49
67-66-3	Chloroform	9.9	U *	9.9	3.3
71-55-6	1,1,1-Trichloroethane	9.9	U *	9.9	3.6
110-82-7	Cyclohexane	9.9	U	9.9	3.5
563-58-6	1,1-Dichloropropene	9.9	U	9.9	2.2
56-23-5	Carbon tetrachloride	140	*	9.9	3.2
78-83-1	Isobutyl alcohol	490	U *	490	250
71-43-2	Benzene	9.9	U	9.9	3.1
107-06-2	1,2-Dichloroethane	9.9	U	9.9	3.3
79-01-6	Trichloroethene	9.9	U	9.9	4.9
108-87-2	Methylcyclohexane	9.9	U	9.9	4.9
78-87-5	1,2-Dichloropropane	9.9	U	9.9	3.8
74-95-3	Dibromomethane	9.9	U	9.9	2.5
123-91-1	1,4-Dioxane	490	U	490	270
75-27-4	Bromodichloromethane	9.9	U	9.9	3.7



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: MC-S-32380 Lab Sample ID: 200-2345-1  
 Matrix: Solid Lab File ID: lfaag15.d  
 Analysis Method: 8260B Date Collected: 11/02/2010 00:00  
 Sample wt/vol: 10.102(g) Date Analyzed: 11/10/2010 14:24  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	9.9	U	9.9	1.3
10061-01-5	cis-1,3-Dichloropropene	9.9	U	9.9	3.2
108-10-1	4-Methyl-2-pentanone	9.9	U	9.9	2.1
108-88-3	Toluene	9.9	U	9.9	4.9
10061-02-6	trans-1,3-Dichloropropene	9.9	U	9.9	4.9
79-00-5	1,1,2-Trichloroethane	9.9	U	9.9	4.2
127-18-4	Tetrachloroethene	9.9	U	9.9	4.9
142-28-9	1,3-Dichloropropane	9.9	U	9.9	3.3
591-78-6	2-Hexanone	9.9	U	9.9	9.9
124-48-1	Dibromochloromethane	9.9	U	9.9	3.7
106-93-4	1,2-Dibromoethane	9.9	U	9.9	4.9
108-90-7	Chlorobenzene	9.9	U	9.9	2.3
630-20-6	1,1,1,2-Tetrachloroethane	9.9	U	9.9	3.6
100-41-4	Ethylbenzene	9.9	U	9.9	4.9
179601-23-1	m&p-Xylene	9.9	U	9.9	4.9
95-47-6	o-Xylene	9.9	U	9.9	4.9
100-42-5	Styrene	9.9	U	9.9	4.9
75-25-2	Bromoform	9.9	U	9.9	3.9
98-82-8	Isopropylbenzene	9.9	U	9.9	4.9
108-86-1	Bromobenzene	9.9	U	9.9	3.7
79-34-5	1,1,2,2-Tetrachloroethane	9.9	U	9.9	3.7
96-18-4	1,2,3-Trichloropropane	9.9	U	9.9	5.3
103-65-1	n-Propylbenzene	9.9	U	9.9	4.9
95-49-8	2-Chlorotoluene	9.9	U	9.9	3.3
106-43-4	4-Chlorotoluene	9.9	U	9.9	3.4
108-67-8	1,3,5-Trimethylbenzene	9.9	U	9.9	3.2
98-06-6	tert-Butylbenzene	9.9	U	9.9	4.9
95-63-6	1,2,4-Trimethylbenzene	9.9	U	9.9	3.4
135-98-8	sec-Butylbenzene	9.9	U	9.9	4.9
541-73-1	1,3-Dichlorobenzene	9.9	U	9.9	2.5
99-87-6	4-Isopropyltoluene	9.9	U	9.9	1.8
106-46-7	1,4-Dichlorobenzene	9.9	U	9.9	2.3
95-50-1	1,2-Dichlorobenzene	9.9	U	9.9	2.8
104-51-8	n-Butylbenzene	9.9	U	9.9	4.9
96-12-8	1,2-Dibromo-3-Chloropropane	9.9	U	9.9	4.6
120-82-1	1,2,4-Trichlorobenzene	9.9	U	9.9	1.6

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: MC-S-32380 Lab Sample ID: 200-2345-1  
 Matrix: Solid Lab File ID: lfaag15.d  
 Analysis Method: 8260B Date Collected: 11/02/2010 00:00  
 Sample wt/vol: 10.102(g) Date Analyzed: 11/10/2010 14:24  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	9.9	U	9.9	4.9
91-20-3	Naphthalene	9.9	U *	9.9	4.9
87-61-6	1,2,3-Trichlorobenzene	9.9	U	9.9	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	89		65-155
2037-26-5	Toluene-d8	101		80-115
460-00-4	Bromofluorobenzene	101		80-115
2199-69-1	1,2-Dichlorobenzene-d4	97		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: MC-S-32385 Lab Sample ID: 200-2345-2  
 Matrix: Solid Lab File ID: lfaag16.d  
 Analysis Method: 8260B Date Collected: 11/02/2010 00:00  
 Sample wt/vol: 9.102(g) Date Analyzed: 11/10/2010 14:57  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	11	U	11	5.5
74-87-3	Chloromethane	11	U	11	4.1
75-01-4	Vinyl chloride	11	U	11	5.5
74-83-9	Bromomethane	12	B *	11	3.8
75-00-3	Chloroethane	11	U *	11	6.6
75-69-4	Trichlorofluoromethane	11	U *	11	5.5
75-35-4	1,1-Dichloroethene	11	U *	11	2.3
76-13-1	Freon TF	11	U *	11	3.1
67-64-1	Acetone	11	U *	11	11
74-88-4	Methyl iodide	11	U *	11	5.5
75-15-0	Carbon disulfide	11	U *	11	2.1
79-20-9	Methyl acetate	11	U	11	5.5
75-09-2	Methylene Chloride	11	U	11	5.5
156-60-5	trans-1,2-Dichloroethene	11	U	11	5.5
1634-04-4	Methyl t-butyl ether	11	U *	11	5.5
75-34-3	1,1-Dichloroethane	11	U *	11	4.0
108-05-4	Vinyl acetate	11	U	11	5.5
594-20-7	2,2-Dichloropropane	11	U *	11	5.1
156-59-2	cis-1,2-Dichloroethene	11	U	11	2.3
78-93-3	2-Butanone	11	U	11	12
74-97-5	Bromochloromethane	11	U *	11	5.8
109-99-9	Tetrahydrofuran	110	U	110	55
67-66-3	Chloroform	11	U *	11	3.6
71-55-6	1,1,1-Trichloroethane	11	U *	11	4.0
110-82-7	Cyclohexane	11	U	11	3.8
563-58-6	1,1-Dichloropropene	11	U	11	2.4
56-23-5	Carbon tetrachloride	11	U *	11	3.5
78-83-1	Isobutyl alcohol	550	U *	550	270
71-43-2	Benzene	11	U	11	3.4
107-06-2	1,2-Dichloroethane	11	U	11	3.6
79-01-6	Trichloroethene	11	U	11	5.5
108-87-2	Methylcyclohexane	11	U	11	5.5
78-87-5	1,2-Dichloropropane	11	U	11	4.2
74-95-3	Dibromomethane	11	U	11	2.7
123-91-1	1,4-Dioxane	550	U	550	300
75-27-4	Bromodichloromethane	11	U	11	4.1

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: MC-S-32385 Lab Sample ID: 200-2345-2  
 Matrix: Solid Lab File ID: lfaag16.d  
 Analysis Method: 8260B Date Collected: 11/02/2010 00:00  
 Sample wt/vol: 9.102(g) Date Analyzed: 11/10/2010 14:57  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	11	U	11	1.4
10061-01-5	cis-1,3-Dichloropropene	11	U	11	3.5
108-10-1	4-Methyl-2-pentanone	11	U	11	2.3
108-88-3	Toluene	11	U	11	5.5
10061-02-6	trans-1,3-Dichloropropene	11	U	11	5.5
79-00-5	1,1,2-Trichloroethane	11	U	11	4.6
127-18-4	Tetrachloroethene	11	U	11	5.5
142-28-9	1,3-Dichloropropane	11	U	11	3.6
591-78-6	2-Hexanone	11	U	11	11
124-48-1	Dibromochloromethane	11	U	11	4.1
106-93-4	1,2-Dibromoethane	11	U	11	5.5
108-90-7	Chlorobenzene	11	U	11	2.5
630-20-6	1,1,1,2-Tetrachloroethane	11	U	11	4.0
100-41-4	Ethylbenzene	11	U	11	5.5
179601-23-1	m&p-Xylene	11	U	11	5.5
95-47-6	o-Xylene	11	U	11	5.5
100-42-5	Styrene	11	U	11	5.5
75-25-2	Bromoform	11	U	11	4.3
98-82-8	Isopropylbenzene	11	U	11	5.5
108-86-1	Bromobenzene	11	U	11	4.1
79-34-5	1,1,2,2-Tetrachloroethane	11	U	11	4.1
96-18-4	1,2,3-Trichloropropane	11	U	11	5.9
103-65-1	n-Propylbenzene	11	U	11	5.5
95-49-8	2-Chlorotoluene	11	U	11	3.6
106-43-4	4-Chlorotoluene	11	U	11	3.7
108-67-8	1,3,5-Trimethylbenzene	11	U	11	3.5
98-06-6	tert-Butylbenzene	11	U	11	5.5
95-63-6	1,2,4-Trimethylbenzene	11	U	11	3.7
135-98-8	sec-Butylbenzene	11	U	11	5.5
541-73-1	1,3-Dichlorobenzene	11	U	11	2.7
99-87-6	4-Isopropyltoluene	11	U	11	2.0
106-46-7	1,4-Dichlorobenzene	11	U	11	2.5
95-50-1	1,2-Dichlorobenzene	11	U	11	3.1
104-51-8	n-Butylbenzene	11	U	11	5.5
96-12-8	1,2-Dibromo-3-Chloropropane	11	U	11	5.1
120-82-1	1,2,4-Trichlorobenzene	11	U	11	1.8

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: MC-S-32385 Lab Sample ID: 200-2345-2  
 Matrix: Solid Lab File ID: lfaag16.d  
 Analysis Method: 8260B Date Collected: 11/02/2010 00:00  
 Sample wt/vol.: 9.102(g) Date Analyzed: 11/10/2010 14:57  
 Soil Aliquot Vol.: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	11	U	11	5.5
91-20-3	Naphthalene	11	U *	11	5.5
87-61-6	1,2,3-Trichlorobenzene	11	U	11	2.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	87		65-155
2037-26-5	Toluene-d8	100		80-115
460-00-4	Bromofluorobenzene	99		80-115
2199-69-1	1,2-Dichlorobenzene-d4	97		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: MC-S-32394 Lab Sample ID: 200-2345-3  
 Matrix: Solid Lab File ID: lfaag17.d  
 Analysis Method: 8260B Date Collected: 11/02/2010 00:00  
 Sample wt/vol: 11.38(g) Date Analyzed: 11/10/2010 15:29  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	8.8	U	8.8	4.4
74-87-3	Chloromethane	8.8	U	8.8	3.3
75-01-4	Vinyl chloride	8.8	U	8.8	4.4
74-83-9	Bromomethane	7.3	J B *	8.8	3.1
75-00-3	Chloroethane	8.8	U *	8.8	5.3
75-69-4	Trichlorofluoromethane	8.8	U *	8.8	4.4
75-35-4	1,1-Dichloroethene	8.8	U *	8.8	1.8
76-13-1	Freon TF	8.8	U *	8.8	2.5
67-64-1	Acetone	8.8	U *	8.8	8.8
74-88-4	Methyl iodide	8.8	U *	8.8	4.4
75-15-0	Carbon disulfide	8.8	U *	8.8	1.7
79-20-9	Methyl acetate	8.8	U	8.8	4.4
75-09-2	Methylene Chloride	8.8	U	8.8	4.4
156-60-5	trans-1,2-Dichloroethene	8.8	U	8.8	4.4
1634-04-4	Methyl t-butyl ether	8.8	U *	8.8	4.4
75-34-3	1,1-Dichloroethane	8.8	U *	8.8	3.2
108-05-4	Vinyl acetate	8.8	U	8.8	4.4
594-20-7	2,2-Dichloropropane	8.8	U *	8.8	4.0
156-59-2	cis-1,2-Dichloroethene	8.8	U	8.8	1.8
78-93-3	2-Butanone	8.8	U	8.8	9.7
74-97-5	Bromochloromethane	8.8	U *	8.8	4.7
109-99-9	Tetrahydrofuran	8.8	U	8.8	4.4
67-66-3	Chloroform	8.8	U *	8.8	2.9
71-55-6	1,1,1-Trichloroethane	8.8	U *	8.8	3.2
110-82-7	Cyclohexane	8.8	U	8.8	3.1
563-58-6	1,1-Dichloropropene	8.8	U	8.8	1.9
56-23-5	Carbon tetrachloride	8.8	U *	8.8	2.8
78-83-1	Isobutyl alcohol	440	U *	440	220
71-43-2	Benzene	8.8	U	8.8	2.7
107-06-2	1,2-Dichloroethane	8.8	U	8.8	2.9
79-01-6	Trichloroethene	8.8	U	8.8	4.4
108-87-2	Methylcyclohexane	8.8	U	8.8	4.4
78-87-5	1,2-Dichloropropane	8.8	U	8.8	3.3
74-95-3	Dibromomethane	8.8	U	8.8	2.2
123-91-1	1,4-Dioxane	440	U	440	240
75-27-4	Bromodichloromethane	8.8	U	8.8	3.3

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: MC-S-32394 Lab Sample ID: 200-2345-3  
 Matrix: Solid Lab File ID: lfaag17.d  
 Analysis Method: 8260B Date Collected: 11/02/2010 00:00  
 Sample wt/vol: 11.38 (g) Date Analyzed: 11/10/2010 15:29  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	8.8	U	8.8	1.1
10061-01-5	cis-1,3-Dichloropropene	8.8	U	8.8	2.8
108-10-1	4-Methyl-2-pentanone	8.8	U	8.8	1.8
108-88-3	Toluene	8.8	U	8.8	4.4
10061-02-6	trans-1,3-Dichloropropene	8.8	U	8.8	4.4
79-00-5	1,1,2-Trichloroethane	8.8	U	8.8	3.7
127-18-4	Tetrachloroethene	8.8	U	8.8	4.4
142-28-9	1,3-Dichloropropane	8.8	U	8.8	2.9
591-78-6	2-Hexanone	8.8	U	8.8	8.8
124-48-1	Dibromochloromethane	8.8	U	8.8	3.3
106-93-4	1,2-Dibromoethane	8.8	U	8.8	4.4
108-90-7	Chlorobenzene	8.8	U	8.8	2.0
630-20-6	1,1,1,2-Tetrachloroethane	8.8	U	8.8	3.2
100-41-4	Ethylbenzene	8.8	U	8.8	4.4
179601-23-1	m&p-Xylene	8.8	U	8.8	4.4
95-47-6	o-Xylene	8.8	U	8.8	4.4
100-42-5	Styrene	8.8	U	8.8	4.4
75-25-2	Bromoform	8.8	U	8.8	3.4
98-82-8	Isopropylbenzene	8.8	U	8.8	4.4
108-86-1	Bromobenzene	8.8	U	8.8	3.3
79-34-5	1,1,2,2-Tetrachloroethane	8.8	U	8.8	3.3
96-18-4	1,2,3-Trichloropropane	8.8	U	8.8	4.7
103-65-1	n-Propylbenzene	8.8	U	8.8	4.4
95-49-8	2-Chlorotoluene	8.8	U	8.8	2.9
106-43-4	4-Chlorotoluene	8.8	U	8.8	3.0
108-67-8	1,3,5-Trimethylbenzene	8.8	U	8.8	2.8
98-06-6	tert-Butylbenzene	8.8	U	8.8	4.4
95-63-6	1,2,4-Trimethylbenzene	8.8	U	8.8	3.0
135-98-8	sec-Butylbenzene	8.8	U	8.8	4.4
541-73-1	1,3-Dichlorobenzene	8.8	U	8.8	2.2
99-87-6	4-Isopropyltoluene	8.8	U	8.8	1.6
106-46-7	1,4-Dichlorobenzene	8.8	U	8.8	2.0
95-50-1	1,2-Dichlorobenzene	8.8	U	8.8	2.5
104-51-8	n-Butylbenzene	8.8	U	8.8	4.4
96-12-8	1,2-Dibromo-3-Chloropropane	8.8	U	8.8	4.0
120-82-1	1,2,4-Trichlorobenzene	8.8	U	8.8	1.4



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: MC-S-32394 Lab Sample ID: 200-2345-3  
 Matrix: Solid Lab File ID: lfaag17.d  
 Analysis Method: 8260B Date Collected: 11/02/2010 00:00  
 Sample wt/vol: 11.38(g) Date Analyzed: 11/10/2010 15:29  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	8.8	U	8.8	4.4
91-20-3	Naphthalene	8.8	U *	8.8	4.4
87-61-6	1,2,3-Trichlorobenzene	8.8	U	8.8	2.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	87		65-155
2037-26-5	Toluene-d8	99		80-115
460-00-4	Bromofluorobenzene	98		80-115
2199-69-1	1,2-Dichlorobenzene-d4	96		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: MC-S-MeOH BLANK Lab Sample ID: 200-2345-4  
 Matrix: Solid Lab File ID: lfaag18.d  
 Analysis Method: 8260B Date Collected: 11/02/2010 00:00  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 16:01  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	10	U	10	5.0
74-87-3	Chloromethane	10	U	10	3.7
75-01-4	Vinyl chloride	10	U	10	5.0
74-83-9	Bromomethane	9.4	J B *	10	3.5
75-00-3	Chloroethane	10	U *	10	6.0
75-69-4	Trichlorofluoromethane	10	U *	10	5.0
75-35-4	1,1-Dichloroethene	10	U *	10	2.1
76-13-1	Freon TF	10	U *	10	2.8
67-64-1	Acetone	10	U *	10	10
74-88-4	Methyl iodide	10	U *	10	5.0
75-15-0	Carbon disulfide	10	U *	10	1.9
79-20-9	Methyl acetate	10	U	10	5.0
75-09-2	Methylene Chloride	10	U	10	5.0
156-60-5	trans-1,2-Dichloroethene	10	U	10	5.0
1634-04-4	Methyl t-butyl ether	10	U *	10	5.0
75-34-3	1,1-Dichloroethane	10	U *	10	3.6
108-05-4	Vinyl acetate	10	U	10	5.0
594-20-7	2,2-Dichloropropane	10	U *	10	4.6
156-59-2	cis-1,2-Dichloroethene	10	U	10	2.1
78-93-3	2-Butanone	10	U	10	11
74-97-5	Bromochloromethane	10	U *	10	5.3
109-99-9	Tetrahydrofuran	100	U	100	50
67-66-3	Chloroform	10	U *	10	3.3
71-55-6	1,1,1-Trichloroethane	10	U *	10	3.6
110-82-7	Cyclohexane	10	U	10	3.5
563-58-6	1,1-Dichloropropene	10	U	10	2.2
56-23-5	Carbon tetrachloride	10	U *	10	3.2
78-83-1	Isobutyl alcohol	500	U *	500	250
71-43-2	Benzene	10	U	10	3.1
107-06-2	1,2-Dichloroethane	10	U	10	3.3
79-01-6	Trichloroethene	10	U	10	5.0
108-87-2	Methylcyclohexane	10	U	10	5.0
78-87-5	1,2-Dichloropropane	10	U	10	3.8
74-95-3	Dibromomethane	10	U	10	2.5
123-91-1	1,4-Dioxane	500	U	500	270
75-27-4	Bromodichloromethane	10	U	10	3.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: MC-S-MeOH BLANK Lab Sample ID: 200-2345-4  
 Matrix: Solid Lab File ID: lfaag18.d  
 Analysis Method: 8260B Date Collected: 11/02/2010 00:00  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 16:01  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	10	U	10	1.3
10061-01-5	cis-1,3-Dichloropropene	10	U	10	3.2
108-10-1	4-Methyl-2-pentanone	10	U	10	2.1
108-88-3	Toluene	10	U	10	5.0
10061-02-6	trans-1,3-Dichloropropene	10	U	10	5.0
79-00-5	1,1,2-Trichloroethane	10	U	10	4.2
127-18-4	Tetrachloroethene	10	U	10	5.0
142-28-9	1,3-Dichloropropane	10	U	10	3.3
591-78-6	2-Hexanone	10	U	10	10
124-48-1	Dibromochloromethane	10	U	10	3.7
106-93-4	1,2-Dibromoethane	10	U	10	5.0
108-90-7	Chlorobenzene	10	U	10	2.3
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	3.6
100-41-4	Ethylbenzene	10	U	10	5.0
179601-23-1	m&p-Xylene	10	U	10	5.0
95-47-6	o-Xylene	10	U	10	5.0
100-42-5	Styrene	10	U	10	5.0
75-25-2	Bromoform	10	U	10	3.9
98-82-8	Isopropylbenzene	10	U	10	5.0
108-86-1	Bromobenzene	10	U	10	3.7
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	3.7
96-18-4	1,2,3-Trichloropropane	10	U	10	5.4
103-65-1	n-Propylbenzene	10	U	10	5.0
95-49-8	2-Chlorotoluene	10	U	10	3.3
106-43-4	4-Chlorotoluene	10	U	10	3.4
108-67-8	1,3,5-Trimethylbenzene	10	U	10	3.2
98-06-6	tert-Butylbenzene	10	U	10	5.0
95-63-6	1,2,4-Trimethylbenzene	10	U	10	3.4
135-98-8	sec-Butylbenzene	10	U	10	5.0
541-73-1	1,3-Dichlorobenzene	10	U	10	2.5
99-87-6	4-Isopropyltoluene	10	U	10	1.8
106-46-7	1,4-Dichlorobenzene	10	U	10	2.3
95-50-1	1,2-Dichlorobenzene	10	U	10	2.8
104-51-8	n-Butylbenzene	10	U	10	5.0
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	10	4.6
120-82-1	1,2,4-Trichlorobenzene	10	U	10	1.6

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: MC-S-MeOH BLANK Lab Sample ID: 200-2345-4  
 Matrix: Solid Lab File ID: lfaag18.d  
 Analysis Method: 8260B Date Collected: 11/02/2010 00:00  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 16:01  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	10	U	10	5.0
91-20-3	Naphthalene	10	U *	10	5.0
87-61-6	1,2,3-Trichlorobenzene	10	U	10	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	86		65-155
2037-26-5	Toluene-d8	99		80-115
460-00-4	Bromofluorobenzene	100		80-115
2199-69-1	1,2-Dichlorobenzene-d4	98		45-145

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 200-2345-1 Analyt Batch No.: 7468

SDG No.: MONTGO (200-2345)

Instrument ID: L.i GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N  
Calibration Start Date: 10/04/2010 15:04 Calibration End Date: 10/04/2010 17:45 Calibration ID: 2582

Calibration Files:

LEVEL:	LAB SAMPLE ID:	EPA SAMPLE NO:	LAB FILE ID:
Level 1	IC 200-7468/3	IC	lfa03.d
Level 2	IC 200-7468/4	IC	lfa04.d
Level 3	IC 200-7468/5	IC	lfa05.d
Level 4	ICIS 200-7468/6	ICIS	lfa06.d
Level 5	IC 200-7468/7	IC	lfa07.d
Level 6	IC 200-7468/8	IC	lfa08.d

ANALYTE	RRF						CURVE TYPE			COEFFICIENT			#	MIN RRE	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	CURVE TYPE	B	M1	M2										
	LVL 6	LVL 5	LVL 4	LVL 3	LVL 2	LVL 1														
Freon 123a	0	0	0	0	0	0	Ave													
Dichlorodifluoromethane	0.4757	0.4671	0.4435	0.4696	0.4637	0.4590	Ave		0.4631						15.0					
Chloromethane	0.2472	0.2292	0.2170	0.2143	0.2390	0.2475	Ave		0.2324				0.1000		15.0					
Vinyl chloride	0.2922	0.2881	0.2790	0.2921	0.2911	0.2887	Ave		0.2885						15.0					
Bromomethane	0.1947	0.1545	0.1670	0.1639	0.1674	0.1591	Ave		0.1678						15.0					
Chloroethane	0.2163	0.1791	0.1681	0.1697	0.1673	0.1454	Ave		0.1743						15.0					
Trichlorofluoromethane	0.5514	0.5317	0.5118	0.5427	0.5352	0.5312	Ave		0.5340						15.0					
Acrolein	0.0285	0.0276	0.0260	0.0276	0.0272	0.0270	Ave		0.0273						15.0					
1,1-Dichloroethene	0.3268	0.2843	0.2794	0.2835	0.2842	0.2874	Ave		0.2909						15.0					
Freon TF	0.6274	0.6113	0.5869	0.6036	0.6017	0.5996	Ave		0.6051						15.0					
Acetone	0.0472	0.0377	0.0389	0.0385	0.0386	0.0402	Ave		0.0402						15.0					
Methyl iodide	0.2397	0.2259	0.2717	0.3189	0.3465	0.3453	Ave		0.2913						15.0					
Carbon disulfide	0.9222	0.8034	0.7881	0.7920	0.8023	0.7985	Ave		0.8178						15.0					
Allyl chloride	0.4596	0.4162	0.4165	0.4223	0.4271	0.4195	Ave		0.4269						15.0					
Methyl acetate	0.0434	0.0360	0.0345	0.0377	0.0378	0.0397	Ave		0.0382						15.0					

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington

Job No.: 200-2345-1

Analy Batch No.: 7468

SDG No.: MONTGO (200-2345)

Instrument ID: L.i GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/04/2010 15:04 Calibration End Date: 10/04/2010 17:45 Calibration ID: 2582

ANALYTE	RRF						CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R <sup>2</sup> OR COD	#	MIN R <sup>2</sup> OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	B		M1	M2									
Methylene Chloride	0.3289 0.2723	0.2786	0.2705	0.2739	0.2736			0.2830				8.0		15.0				
tert-Butyl alcohol	0.0171 0.0163	0.0181	0.0175	0.0162	0.0155			0.0168				5.6		15.0				
Acrylonitrile	0.0639 0.0571	0.0477	0.0488	0.0545	0.0534			0.0542				10.9		15.0				
trans-1,2-Dichloroethene	0.3510 0.3130	0.3113	0.3042	0.3067	0.3135			0.3166				5.4		15.0				
Methyl t-butyl ether	0.5864 0.6087	0.5804	0.5708	0.5882	0.5759			0.5883				3.5		15.0				
1,1-Dichloroethane	0.5773 0.5701	0.5659	0.5571	0.5618	0.5654			0.5727		0.1000		3.3		15.0				
Vinyl acetate	0.4452 0.5010	0.5198	0.5094	0.5206	0.4797			0.5075				8.3		15.0				
Chloroprene	0.4418 0.5064	0.4242	0.4346	0.4398	0.4388			0.4467				6.1		15.0				
2,2-Dichloropropane	0.4194 0.3645	0.4470	0.4353	0.4295	0.4293			0.4445				7.1		15.0				
cis-1,2-Dichloroethene	0.3271 0.0231	0.3288	0.3221	0.3273	0.3295			0.3332				4.7		15.0				
2-Butanone	0.0213 0.0233	0.0212	0.0213	0.0216	0.0204			0.0215				4.1		15.0				
Propionitrile	0.0210 0.0985	0.0212	0.0207	0.0205	0.0200			0.0211				5.4		15.0				
Methacrylonitrile	0.0742 0.1892	0.0638	0.0718	0.0741	0.0729			0.0759				15.5 *		15.0				
Bromochloromethane	0.1697 0.0636	0.1754	0.1734	0.1775	0.1780			0.1772				3.7		15.0				
Tetrahydrofuran	0.6309 0.5835	0.0626	0.0626	0.0628	0.0608			0.0636				4.4		15.0				
Chloroform	0.4739 0.5138	0.5885	0.5710	0.5822	0.5823			0.5897				3.6		15.0				
1,1,1-Trichloroethane	0.4778 0.4288	0.4813	0.4705	0.4728	0.4736			0.4825				4.2		15.0				
Cyclohexane	0.4815 0.5259	0.4780	0.4652	0.4775	0.4795			0.4826				3.4		15.0				
1,1-Dichloropropene	0.4778 0.4361	0.4697	0.4636	0.4728	0.4734			0.4805				4.7		15.0				
Carbon tetrachloride	0.4361 0.4361	0.4316	0.4260	0.4328	0.4363			0.4319				0.9		15.0				

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington

Job No.: 200-2345-1

Analy Batch No.: 7468

SDG No.: MONTGO (200-2345)

Instrument ID: L.i

GC Column: DB-624

ID: 0.53 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 10/04/2010 15:04

Calibration End Date: 10/04/2010 17:45

Calibration ID: 2582

ANALYTE	RRF						CURVE TYPE			COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R <sup>2</sup> OR COD	#	MTN R <sup>2</sup> OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	B	M1	M2												
Isobutyl alcohol	0.0098 0.0089	0.0090	0.0091	0.0086	0.0083			0.0090							5.6	15.0				
Benzene	0.9474 0.8761	0.8540	0.8525	0.8679	0.8774			0.8792							4.0	15.0				
1,2-Dichloroethane	0.3033 0.2800	0.2785	0.2711	0.2759	0.2749			0.2806							4.1	15.0				
Trichloroethene	0.4169 0.3963	0.3797	0.3803	0.3856	0.3955			0.3924							3.6	15.0				
Methylcyclohexane	0.5426 0.4935	0.4820	0.4727	0.4927	0.4935			0.4962							4.9	15.0				
1,2-Dichloropropane	0.3624 0.3543	0.3521	0.3462	0.3523	0.3540			0.3536							1.5	15.0				
Dibromomethane	0.3230 0.2963	0.2925	0.2859	0.2975	0.2935			0.2981							4.3	15.0				
Methyl methacrylate	0.3089 0.2651	0.2608	0.2587	0.2638	0.2568			0.2690							7.3	15.0				
1,4-Dioxane	0.0020 0.0022	0.0023	0.0022	0.0021	0.0020			0.0021							5.5	15.0				
Bromodichloromethane	0.5782 0.5627	0.5398	0.5368	0.5504	0.5598			0.5546							2.8	15.0				
2-Chloroethyl vinyl ether	0.2092 0.2076	0.2015	0.1958	0.2082	0.2045			0.2044							2.5	15.0				
cis-1,3-Dichloropropene	0.5532 0.5166	0.5024	0.5004	0.5110	0.5117			0.5159							3.7	15.0				
4-Methyl-2-pentanone	0.2712 0.2729	0.2579	0.2643	0.2700	0.2601			0.2661							2.3	15.0				
Toluene	0.8724 0.8273	0.8107	0.7905	0.8173	0.8264			0.8241							3.3	15.0				
trans-1,3-Dichloropropene	0.6365 0.5818	0.5663	0.5419	0.5672	0.5764			0.5784							5.5	15.0				
Ethyl methacrylate	0.4452 0.4103	0.3936	0.3994	0.4101	0.4026			0.4102							4.5	15.0				
1,1,2-Trichloroethane	0.3714 0.3609	0.3513	0.3486	0.3602	0.3569			0.3582							2.3	15.0				
Tetrachloroethene	0.5114 0.4917	0.4896	0.4782	0.4916	0.4953			0.4930							2.2	15.0				
1,3-Dichloropropane	0.7133 0.6603	0.6527	0.6376	0.6513	0.6628			0.6630							3.9	15.0				
2-Hexanone	0.2545 0.2504	0.2398	0.2400	0.2444	0.2400			0.2449							2.6	15.0				

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.



FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington

Job No.: 200-2345-1

Analy Batch No.: 7468

SDG No.: MONTGO (200-2345)

Instrument ID: L.i

GC Column: DB-624

Heated Purge: (Y/N) N

Calibration Start Date: 10/04/2010 15:04

Calibration End Date: 10/04/2010 17:45

Calibration ID: 2582

ANALYTE	RRF						CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R <sup>2</sup> OR COD	#	MIN R <sup>2</sup> OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	B		M1	M2									
Dibromochloromethane	0.6703 0.6395	0.5977	0.5932	0.6295	0.6298			0.6267						15.0				
1,2-Dibromoethane	0.6432 0.6126	0.5935	0.5878	0.6050	0.6024			0.6074						15.0				
Chlorobenzene	1.0515 1.0090	0.9903	0.9678	0.9922	1.0064			1.0029		0.3000				15.0				
1,1,1,2-Tetrachloroethane	0.4830 0.4768	0.4722	0.4616	0.4732	0.4766			0.4739						15.0				
Ethylbenzene	1.6826 1.6946	1.6367	1.6012	1.6573	1.6811			1.6589						15.0				
m&p-Xylene	0.6184 0.5983	0.5797	0.5702	0.5891	0.5982			0.5923						15.0				
o-Xylene	0.6088 0.5638	0.5551	0.5433	0.5579	0.5650			0.5657						15.0				
Styrene	0.9966 0.9981	0.9536	0.9310	0.9794	0.9895			0.9747						15.0				
Bromoform	0.4139 0.4286	0.3989	0.3956	0.4131	0.4148			0.4108		0.1000				15.0				
Isopropylbenzene	3.6135 3.4069	3.3223	3.2746	3.3252	3.3711			3.3856						15.0				
cis-1,4-Dichloro-2-butene	0.3213 0.2901	0.2972	0.2911	0.2853	0.2858			0.2951										
Bromobenzene	0.9819 0.8965	0.8862	0.8754	0.8964	0.8900			0.9044						15.0				
1,1,2,2-Tetrachloroethane	1.6104 1.3700	1.4304	1.3918	1.3871	1.3516			1.4236		0.3000				15.0				
1,2,3-Trichloropropane	0.4100 0.3205	0.3312	0.3205	0.3216	0.3109			0.3358						15.0				
trans-1,4-Dichloro-2-butene	0.3408 0.2591	0.2580	0.2599	0.2599	0.2524			0.2717						15.0				
n-Propylbenzene	0.8449 0.8286	0.7919	0.7783	0.8142	0.8159			0.8123						15.0				
2-Chlorotoluene	0.8294 0.7520	0.7401	0.7298	0.7435	0.7450			0.7566						15.0				
1,3,5-Trimethylbenzene	2.4365 2.4281	2.2275	2.2172	2.3119	2.3692			2.3317						15.0				
4-Chlorotoluene	0.8205 0.7429	0.7262	0.7169	0.7381	0.7476			0.7487						15.0				
tert-Butylbenzene	2.6366 2.6202	2.4718	2.4477	2.5101	2.5581			2.5408						15.0				

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 200-2345-1 Analyt Batch No.: 7468  
 SDG No.: MONTGO (200-2345) GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 10/04/2010 15:04 Calibration End Date: 10/04/2010 17:45 Calibration ID: 2582

ANALYTE	RRF						CURVE TYPE			COEFFICIENT			#	MIN RRF	%RSD	#	R <sup>2</sup> OR COD	MAX %RSD	#	R <sup>2</sup> OR COD	MIN R <sup>2</sup> OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	B	M1	M2	%RSD	#										
1,2,4-Trimethylbenzene	2.1340 2.3247	2.0038	2.0102	2.1231	2.2134	2.2134		2.1352										15.0			
sec-Butylbenzene	3.6940 3.8152	3.4925	3.4441	3.6341	3.7371	3.7371		3.6362										15.0			
1,3-Dichlorobenzene	1.6368 1.5204	1.4737	1.4414	1.4926	1.4994	1.4994		1.5107										15.0			
4-Isopropyltoluene	2.6604 2.8838	2.4868	2.4744	2.6325	2.7566	2.7566		2.6491										15.0			
1,4-Dichlorobenzene	1.6099 1.5865	1.4796	1.4657	1.5332	1.5520	1.5520		1.5378										15.0			
n-Butylbenzene	2.2952 2.7553	2.2310	2.2184	2.4415	2.5859	2.5859		2.4212										15.0			
1,2-Dichlorobenzene	1.4998 1.3622	1.3126	1.3157	1.3457	1.3478	1.3478		1.3640										15.0			
1,2-Dibromo-3-Chloropropane	0.3122 0.2635	0.2691	0.2599	0.2607	0.2526	0.2526		0.2697										15.0			
1,2,4-Trichlorobenzene	0.7776 0.8377	0.7102	0.6983	0.7619	0.7957	0.7957		0.7636										15.0			
Hexachlorobutadiene	0.5217 0.5294	0.4873	0.4748	0.5070	0.5195	0.5195		0.5066										15.0			
Naphthalene	1.8098 1.5943	1.4897	1.4651	1.4673	1.5003	1.5003		1.5544										15.0			
1,2,3-Trichlorobenzene	0.6604 0.7333	0.6392	0.6178	0.6694	0.6976	0.6976		0.6696										15.0			
1,2-Dichloroethane-d4	0.2609 0.2269	0.2279	0.2192	0.2260	0.2262	0.2262		0.2312										15.0			
Toluene-d8	1.2611 1.1887	1.1406	1.1416	1.1654	1.1789	1.1789		1.1794										15.0			
Bromofluorobenzene	1.7661 1.5429	1.5146	1.5013	1.5147	1.5333	1.5333		1.5622										15.0			
1,2-Dichlorobenzene-d4	1.0010 0.8697	0.8640	0.8528	0.8739	0.8670	0.8670		0.8881										15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.



FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-2345-1 Analytical Batch No.: 7468

SDG No.: MONTGO (200-2345) GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: L.i Calibration Start Date: 10/04/2010 15:04 Calibration End Date: 10/04/2010 17:45 Calibration ID: 2582

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		
tert-Butyl alcohol	FB	Ave	114727 4440835	246317	471546	1109051	2124399	50.0 2000	100	200	500	1000		
Acrylonitrile	FB	Ave	8591 778982	32547	65748	186710	365739	1.00 100	5.00	10.0	25.0	50.0		
trans-1,2-Dichloroethene	FB	Ave	47172 4289000	212380	409461	1050249	2149001	1.00 100	5.00	10.0	25.0	50.0		
Methyl t-butyl ether	FB	Ave	84420 7997902	395931	768369	2013752	3947606	1.00 100	5.00	10.0	25.0	50.0		
1,1-Dichloroethane	FB	Ave	81797 7873521	386065	749888	1923359	3875506	1.00 100	5.00	10.0	25.0	50.0		
Vinyl acetate	FB	Ave	76614 6072150	354625	685722	1782436	3288508	1.00 100	5.00	10.0	25.0	50.0		
Chloroprene	FB	Ave	67335 6025307	289385	585087	1505874	3008044	1.00 100	5.00	10.0	25.0	50.0		
2,2-Dichloropropane	FB	Ave	68050 5720953	304940	586026	1470553	2942779	1.00 100	5.00	10.0	25.0	50.0		
cis-1,2-Dichloroethene	FB	Ave	48985 4460755	224281	433625	1120505	2258921	1.00 100	5.00	10.0	25.0	50.0		
2-Butanone	FB	Ave	15515 1454164	72318	143290	369210	700736	5.00 500	25.0	50.0	125	250		
Propionitrile	FB	Ave	12536 1143670	57853	111480	280997	549451	4.00 400	20.0	40.0	100	200		
Methacrylonitrile	FB	Ave	13244 1012666	43549	96718	253843	499682	1.00 100	5.00	10.0	25.0	50.0		
Bromochloromethane	FB	Ave	25426 2315120	119634	233460	607799	1220272	1.00 100	5.00	10.0	25.0	50.0		
Tetrahydrofuran	FB	Ave	129802 12135602	598313	1179780	3009782	5839014	14.0 1400	70.0	140	350	700		
Chloroform	FB	Ave	84790 7958538	401462	768700	1993437	3991341	1.00 100	5.00	10.0	25.0	50.0		
1,1,1-Trichloroethane	FB	Ave	70276 6463908	328361	633369	1618735	3246227	1.00 100	5.00	10.0	25.0	50.0		
Cyclohexane	FB	Ave	69056 6566705	326110	626182	1634935	3287013	1.00 100	5.00	10.0	25.0	50.0		
1,1-Dichloropropene	FB	Ave	70676 6516153	320443	624121	1618820	3245157	1.00 100	5.00	10.0	25.0	50.0		
Carbon tetrachloride	FB	Ave	57625 5947585	294434	573481	1481767	2991141	1.00 100	5.00	10.0	25.0	50.0		
Isobutyl alcohol	FB	Ave	65690 6041524	307609	615191	1478907	2848574	50.0 5000	250	500	1250	2500		
Benzene	FB	Ave	127324 11949009	582593	1147600	2971607	6014615	1.00 100	5.00	10.0	25.0	50.0		

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-2345-1 Analyt Batch No.: 7468

SDG No.: MONTGO (200-2345)

Instrument ID: L.i GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/04/2010 15:04 Calibration End Date: 10/04/2010 17:45 Calibration ID: 2582

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		
			1,2-Dichloroethane	FB	Ave	40755 3818734	189997	364995	944503	1884333	1.00 100	5.00	10.0	25.0
Trichloroethene	FB	Ave	56029 5404844	259017	512009	1320258	2711415	1.00 100	5.00	10.0	25.0	50.0		
Methylcyclohexane	FB	Ave	72914 6731304	328800	636352	1687009	3383115	1.00 100	5.00	10.0	25.0	50.0		
1,2-Dichloropropane	FB	Ave	48701 4832202	240213	466105	1206201	2426526	1.00 100	5.00	10.0	25.0	50.0		
Dibromomethane	FB	Ave	43412 4041602	199532	384905	1018748	2012029	1.00 100	5.00	10.0	25.0	50.0		
Methyl methacrylate	CBZ	Ave	30722 2666038	131748	258920	667650	1296492	1.00 100	5.00	10.0	25.0	50.0		
1,4-Dioxane	FB	Ave	13223 1480032	76750	148661	368028	682613	50.0 5000	250	500	1250	2500		
Bromodichloromethane	FB	Ave	77698 7674465	368220	722678	1884439	3837268	1.00 100	5.00	10.0	25.0	50.0		
2-Chloroethyl vinyl ether	FB	Ave	28113 2831179	137450	263524	712921	1401514	1.00 100	5.00	10.0	25.0	50.0		
cis-1,3-Dichloropropene	FB	Ave	74350 7046685	342735	673682	1749746	3507596	1.00 100	5.00	10.0	25.0	50.0		
4-Methyl-2-pentanone	FB	Ave	182203 18611795	879672	1778835	4622290	8916397	5.00 500	25.0	50.0	125	250		
Toluene	CBZ	Ave	86777 8318981	409611	791225	2068467	4171563	1.00 100	5.00	10.0	25.0	50.0		
trans-1,3-Dichloropropene	CBZ	Ave	63307 5850385	286123	542426	1435560	2909739	1.00 100	5.00	10.0	25.0	50.0		
Ethyl methacrylate	FB	Ave	59831 5595601	268482	537614	1404163	2759465	1.00 100	5.00	10.0	25.0	50.0		
1,1,2-Trichloroethane	CBZ	Ave	36944 3628820	177481	348878	911622	1801296	1.00 100	5.00	10.0	25.0	50.0		
Tetrachloroethene	CBZ	Ave	50866 4943873	247383	478645	1244114	2500398	1.00 100	5.00	10.0	25.0	50.0		
1,3-Dichloropropane	CBZ	Ave	70946 6639424	329762	638149	1648273	3345758	1.00 100	5.00	10.0	25.0	50.0		
2-Hexanone	CBZ	Ave	126574 12591081	605758	1201225	3092277	6056418	5.00 500	25.0	50.0	125	250		
Dibromochloromethane	CBZ	Ave	66675 6430233	302002	593735	1593138	3179254	1.00 100	5.00	10.0	25.0	50.0		
1,2-Dibromoethane	CBZ	Ave	63979 6160207	299871	588273	1531114	3040639	1.00 100	5.00	10.0	25.0	50.0		
Chlorobenzene	CBZ	Ave	104592 10145433	500375	968612	2511020	5079867	1.00 100	5.00	10.0	25.0	50.0		

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-2345-1 Analytical Batch No.: 7468

SDG No.: MONTGO (200-2345)

Instrument ID: L.i GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/04/2010 15:04 Calibration End Date: 10/04/2010 17:45 Calibration ID: 2582

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		
1,1,1,2-Tetrachloroethane	CBZ	Ave	48039 4794129	238603	461983	1197451	2405917	1.00 100	5.00	10.0	25.0	50.0		
Ethylbenzene	CBZ	Ave	167359 17039891	826971	1602638	4194205	8485631	1.00 100	5.00	10.0	25.0	50.0		
m,p-Xylene	CBZ	Ave	123012 12032002	585778	1141426	2981597	6038657	2.00 200	10.0	20.0	50.0	100		
o-Xylene	CBZ	Ave	60553 5669489	280482	543777	1411906	2852128	1.00 100	5.00	10.0	25.0	50.0		
Styrene	CBZ	Ave	99131 10035783	481801	931780	2478728	4994624	1.00 100	5.00	10.0	25.0	50.0		
Bromoform	CBZ	Ave	41171 4310045	201551	395999	1045566	2093641	1.00 100	5.00	10.0	25.0	50.0		
Isopropylbenzene	DCB	Ave	166325 16866952	816933	1574153	4135898	8408558	1.00 100	5.00	10.0	25.0	50.0		
cis-1,4-Dichloro-2-butene	DCB	Ave	14791 1436385	73075	139941	354810	712954	1.00 100	5.00	10.0	25.0	50.0		
Bromobenzene	DCB	Ave	45195 4438114	217918	420810	1114995	2219901	1.00 100	5.00	10.0	25.0	50.0		
1,1,2,2-Tetrachloroethane	DCB	Ave	74123 6782603	351727	669054	1725329	3371259	1.00 100	5.00	10.0	25.0	50.0		
1,2,3-Trichloropropane	DCB	Ave	18871 1586779	81449	154080	400029	775459	1.00 100	5.00	10.0	25.0	50.0		
trans-1,4-Dichloro-2-butene	DCB	Ave	15687 1282956	63441	124918	323314	629440	1.00 100	5.00	10.0	25.0	50.0		
n-Propylbenzene	DCB	Ave	38888 4102284	194715	374143	1012745	2035195	1.00 100	5.00	10.0	25.0	50.0		
2-Chlorotoluene	DCB	Ave	38174 3723185	181993	350845	924702	1958124	1.00 100	5.00	10.0	25.0	50.0		
1,3,5-Trimethylbenzene	DCB	Ave	112149 12021161	547730	1065834	2875513	5909471	1.00 100	5.00	10.0	25.0	50.0		
4-Chlorotoluene	DCB	Ave	37765 3678143	178571	344633	918014	1864830	1.00 100	5.00	10.0	25.0	50.0		
tert-Butylbenzene	DCB	Ave	121360 12972128	607791	1176650	3122041	6380580	1.00 100	5.00	10.0	25.0	50.0		
1,2,4-Trimethylbenzene	DCB	Ave	98226 11508973	493218	966341	2640756	5520953	1.00 100	5.00	10.0	25.0	50.0		
sec-Butylbenzene	DCB	Ave	170029 18887918	858775	1655639	4520056	9321319	1.00 100	5.00	10.0	25.0	50.0		
1,3-Dichlorobenzene	DCB	Ave	75339 7526898	362364	692901	1856526	3740035	1.00 100	5.00	10.0	25.0	50.0		
4-Isopropyltoluene	DCB	Ave	122455 14276859	611473	1189468	3274305	6875651	1.00 100	5.00	10.0	25.0	50.0		

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-2345-1 Analyt Batch No.: 7468

SDG No.: MONTGO (200-2345)

Instrument ID: L.i GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/04/2010 15:04 Calibration End Date: 10/04/2010 17:45 Calibration ID: 2582

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		
1,4-Dichlorobenzene	DCB	Ave	74104 7854198	363820	704599	1907046	3871059	1.00 100	5.00	10.0	25.0	50.0		
n-Butylbenzene	DCB	Ave	105647 13640728	548588	1066389	3036773	6450030	1.00 100	5.00	10.0	25.0	50.0		
1,2-Dichlorobenzene	DCB	Ave	69034 6743701	322769	632460	1673817	3361857	1.00 100	5.00	10.0	25.0	50.0		
1,2-Dibromo-3-Chloropropane	DCB	Ave	14372 1304762	66181	124950	324255	630082	1.00 100	5.00	10.0	25.0	50.0		
1,2,4-Trichlorobenzene	DCB	Ave	35790 4147104	174632	335669	947603	1984804	1.00 100	5.00	10.0	25.0	50.0		
Hexachlorobutadiene	DCB	Ave	24014 2621122	119823	228265	630643	1295762	1.00 100	5.00	10.0	25.0	50.0		
Naphthalene	DCB	Ave	83301 7893044	366309	704275	1824999	3742190	1.00 100	5.00	10.0	25.0	50.0		
1,2,3-Trichlorobenzene	DCB	Ave	30398 3630614	157177	296982	832593	1739943	1.00 100	5.00	10.0	25.0	50.0		
1,2-Dichloroethane-d4	FB	Ave	35067 3094865	155478	295072	773869	1550849	1.00 100	5.00	10.0	25.0	50.0		
Toluene-d8	CBZ	Ave	125436 11952589	576307	1142633	2949437	5950616	1.00 100	5.00	10.0	25.0	50.0		
Bromofluorobenzene	DCB	Ave	81293 7638498	372432	721713	1884037	3824511	1.00 100	5.00	10.0	25.0	50.0		
1,2-Dichlorobenzene-d4	DCB	Ave	46076 4305546	212447	409971	1086940	2162638	1.00 100	5.00	10.0	25.0	50.0		

Curve Type Legend:  
Ave = Average ISTD



FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington

Job No.: 200-2345-1

SDG No.: MONTGO (200-2345)

Lab Sample ID: ICV 200-7497/3

Calibration Date: 10/05/2010 10:11

Instrument ID: L.i

Calib Start Date: 10/04/2010 15:04

GC Column: DB-624

ID: 0.53 (mm)

Calib End Date: 10/04/2010 17:45

Lab File ID: lfaa03.d

Conc. Units: ug/Kg

Heated Purge: (Y/N) N

EPA Sample No.: ICV

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4631	0.4833		26.1	25.0	4.4	25.0
Chloromethane	Ave	0.2324	0.2297	0.1000	24.7	25.0	-1.2	25.0
Vinyl chloride	Ave	0.2885	0.2963		25.7	25.0	2.7	25.0
Bromomethane	Ave	0.1678	0.1760		26.2	25.0	4.9	25.0
Chloroethane	Ave	0.1743	0.1790		25.7	25.0	2.7	25.0
Trichlorofluoromethane	Ave	0.5340	0.5242		24.5	25.0	-1.8	25.0
Acrolein	Ave	0.0273	0.0284		130	125	3.8	25.0
1,1-Dichloroethene	Ave	0.2909	0.2833		24.3	25.0	-2.6	25.0
Freon TF	Ave	0.6051	0.5620		23.2	25.0	-7.1	25.0
Acetone	Ave	0.0402	0.0376		117	125	-6.4	25.0
Methyl iodide	Ave	0.2913	0.2844		24.4	25.0	-2.4	25.0
Carbon disulfide	Ave	0.8178	0.7553		23.1	25.0	-7.6	25.0
Allyl chloride	Ave	0.4269	0.4246		24.9	25.0	-0.5	25.0
Methyl acetate	Ave	0.0382	0.0382		25.0	25.0	-0.0	25.0
Methylene Chloride	Ave	0.2830	0.2874		25.4	25.0	1.6	25.0
tert-Butyl alcohol	Ave	0.0168	0.0160		478	500	-4.4	25.0
Acrylonitrile	Ave	0.0542	0.0557		25.7	25.0	2.7	25.0
trans-1,2-Dichloroethene	Ave	0.3166	0.3259		25.7	25.0	2.9	25.0
Methyl t-butyl ether	Ave	0.5883	0.5792		24.6	25.0	-1.6	25.0
1,1-Dichloroethane	Ave	0.5727	0.5789	0.1000	25.3	25.0	1.1	25.0
Vinyl acetate	Ave	0.5075	0.5766		28.4	25.0	13.6	25.0
Chloroprene	Ave	0.4467	0.3877		21.7	25.0	-13.2	25.0
2,2-Dichloropropane	Ave	0.4445	0.4602		25.9	25.0	3.5	25.0
cis-1,2-Dichloroethene	Ave	0.3332	0.3311		24.8	25.0	-0.6	25.0
2-Butanone	Ave	0.0215	0.0219		127	125	1.9	25.0
Propionitrile	Ave	0.0211	0.0213		101	100	0.8	25.0
Methacrylonitrile	Ave	0.0759	0.0746		24.6	25.0	-1.8	25.0
Bromochloromethane	Ave	0.1772	0.1821		25.7	25.0	2.7	25.0
Tetrahydrofuran	Ave	0.0636	0.0617		340	350	-2.9	25.0
Chloroform	Ave	0.5897	0.5741		24.3	25.0	-2.6	25.0
1,1,1-Trichloroethane	Ave	0.4825	0.4805		24.9	25.0	-0.4	25.0
Cyclohexane	Ave	0.4826	0.4811		24.9	25.0	-0.3	25.0
1,1-Dichloropropene	Ave	0.4805	0.4913		25.6	25.0	2.2	25.0
Carbon tetrachloride	Ave	0.4319	0.4439		25.7	25.0	2.8	25.0
Isobutyl alcohol	Ave	0.0090	0.0091		1270	1250	1.7	25.0
Benzene	Ave	0.8792	0.8955		25.5	25.0	1.8	25.0
1,2-Dichloroethane	Ave	0.2806	0.2794		24.9	25.0	-0.4	25.0
Trichloroethene	Ave	0.3924	0.3952		25.2	25.0	0.7	25.0
Methylcyclohexane	Ave	0.4962	0.5023		25.3	25.0	1.2	25.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Lab Sample ID: ICV 200-7497/3 Calibration Date: 10/05/2010 10:11  
 Instrument ID: L.i Calib Start Date: 10/04/2010 15:04  
 GC Column: DB-624 ID: 0.53 (mm) Calib End Date: 10/04/2010 17:45  
 Lab File ID: lfaa03.d Conc. Units: ug/Kg Heated Purge: (Y/N) N  
 EPA Sample No.: ICV

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.3536	0.3630		25.7	25.0	2.7	25.0
Dibromomethane	Ave	0.2981	0.3080		25.8	25.0	3.3	25.0
Methyl methacrylate	Ave	0.2690	0.2797		26.0	25.0	4.0	25.0
1,4-Dioxane	Ave	0.0021	0.0022		1310	1250	5.0	25.0
Bromodichloromethane	Ave	0.5546	0.5685		25.6	25.0	2.5	25.0
2-Chloroethyl vinyl ether	Ave	0.2044	0.2081		25.4	25.0	1.8	25.0
cis-1,3-Dichloropropene	Ave	0.5159	0.5327		25.8	25.0	3.3	25.0
4-Methyl-2-pentanone	Ave	0.2661	0.2816		132	125	5.8	25.0
Toluene	Ave	0.8241	0.8492		25.8	25.0	3.0	25.0
trans-1,3-Dichloropropene	Ave	0.5784	0.5989		25.9	25.0	3.5	25.0
Ethyl methacrylate	Ave	0.4102	0.4275		26.1	25.0	4.2	25.0
1,1,2-Trichloroethane	Ave	0.3582	0.3735		26.1	25.0	4.3	25.0
Tetrachloroethene	Ave	0.4930	0.5109		25.9	25.0	3.6	25.0
1,3-Dichloropropane	Ave	0.6630	0.6757		25.5	25.0	1.9	25.0
2-Hexanone	Ave	0.2449	0.2646		135	125	8.0	25.0
Dibromochloromethane	Ave	0.6267	0.6656		26.6	25.0	6.2	25.0
1,2-Dibromoethane	Ave	0.6074	0.6355		26.2	25.0	4.6	25.0
Chlorobenzene	Ave	1.003	1.026	0.3000	25.6	25.0	2.3	25.0
1,1,1,2-Tetrachloroethane	Ave	0.4739	0.4876		25.7	25.0	2.9	25.0
Ethylbenzene	Ave	1.659	1.709		25.8	25.0	3.0	25.0
m&p-Xylene	Ave	0.5923	0.6062		51.2	50.0	2.4	25.0
o-Xylene	Ave	0.5657	0.5769		25.5	25.0	2.0	25.0
Styrene	Ave	0.9747	1.009		25.9	25.0	3.5	25.0
Bromoform	Ave	0.4108	0.4288	0.1000	26.1	25.0	4.4	25.0
Isopropylbenzene	Ave	3.386	3.446		25.4	25.0	1.8	25.0
Bromobenzene	Ave	0.9044	0.9095		25.1	25.0	0.6	25.0
1,1,2,2-Tetrachloroethane	Ave	1.424	1.473	0.3000	25.9	25.0	3.5	25.0
1,2,3-Trichloropropane	Ave	0.3358	0.3020		22.5	25.0	-10.1	25.0
trans-1,4-Dichloro-2-butene	Ave	0.2717	0.2734		25.2	25.0	0.6	25.0
n-Propylbenzene	Ave	0.8123	0.8196		25.2	25.0	0.9	25.0
2-Chlorotoluene	Ave	0.7566	0.7610		25.1	25.0	0.6	25.0
1,3,5-Trimethylbenzene	Ave	2.332	2.383		25.5	25.0	2.2	25.0
4-Chlorotoluene	Ave	0.7487	0.7707		25.7	25.0	2.9	25.0
tert-Butylbenzene	Ave	2.541	2.604		25.6	25.0	2.5	25.0
1,2,4-Trimethylbenzene	Ave	2.135	2.223		26.0	25.0	4.1	25.0
sec-Butylbenzene	Ave	3.636	3.781		26.0	25.0	4.0	25.0
1,3-Dichlorobenzene	Ave	1.511	1.538		25.5	25.0	1.8	25.0
4-Isopropyltoluene	Ave	2.649	2.665		25.1	25.0	0.6	25.0
1,4-Dichlorobenzene	Ave	1.538	1.560		25.4	25.0	1.4	25.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Lab Sample ID: ICV 200-7497/3 Calibration Date: 10/05/2010 10:11  
 Instrument ID: L.i Calib Start Date: 10/04/2010 15:04  
 GC Column: DB-624 ID: 0.53 (mm) Calib End Date: 10/04/2010 17:45  
 Lab File ID: lfaa03.d Conc. Units: ug/Kg Heated Purge: (Y/N) N  
 EPA Sample No.: ICV

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Ave	2.421	2.526		26.1	25.0	4.3	25.0
1,2-Dichlorobenzene	Ave	1.364	1.388		25.4	25.0	1.7	25.0
1,2-Dibromo-3-Chloropropane	Ave	0.2697	0.2718		25.2	25.0	0.8	25.0
1,2,4-Trichlorobenzene	Ave	0.7636	0.7665		25.1	25.0	0.4	25.0
Hexachlorobutadiene	Ave	0.5066	0.5300		26.2	25.0	4.6	25.0
Naphthalene	Ave	1.554	1.576		25.3	25.0	1.4	25.0
1,2,3-Trichlorobenzene	Ave	0.6696	0.7008		26.2	25.0	4.6	25.0
1,2-Dichloroethane-d4	Ave	0.2312	0.2301		24.9	25.0	-0.5	25.0
Toluene-d8	Ave	1.179	1.172		24.8	25.0	-0.6	25.0
Bromofluorobenzene	Ave	1.562	1.523		24.4	25.0	-2.5	25.0
1,2-Dichlorobenzene-d4	Ave	0.8881	0.8751		24.6	25.0	-1.5	25.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Lab Sample ID: CCVIS 200-9400/2 Calibration Date: 11/10/2010 06:57  
 Instrument ID: L.i Calib Start Date: 10/04/2010 15:04  
 GC Column: DB-624 ID: 0.53 (mm) Calib End Date: 10/04/2010 17:45  
 Lab File ID: lfaag02.d Conc. Units: ug/Kg Heated Purge: (Y/N) N  
 EPA Sample No.: CCVIS

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.4631	0.4660		25.2	25.0	0.6	20.0
Chloromethane	Ave	0.2324	0.2557	0.1000	27.5	25.0	10.1	20.0
Vinyl chloride	Ave	0.2885	0.2979		25.8	25.0	3.2	20.0
Bromomethane	Ave	0.1678	0.1744		26.0	25.0	4.0	20.0
Chloroethane	Ave	0.1743	0.1731		24.8	25.0	-0.7	20.0
Trichlorofluoromethane	Ave	0.5340	0.4904		23.0	25.0	-8.2	20.0
Acrolein	Ave	0.0273	0.0304		139	125	11.1	20.0
1,1-Dichloroethene	Ave	0.2909	0.2719		23.4	25.0	-6.5	20.0
Freon TF	Ave	0.6051	0.5633		23.3	25.0	-6.9	20.0
Acetone	Ave	0.0402	0.0387		120	125	-3.8	20.0
Methyl iodide	Ave	0.2913	0.2960		25.4	25.0	1.6	20.0
Carbon disulfide	Ave	0.8178	0.7392		22.6	25.0	-9.6	20.0
Allyl chloride	Ave	0.4269	0.4316		25.3	25.0	1.1	20.0
Methyl acetate	Ave	0.0382	0.0375		24.6	25.0	-1.8	20.0
Methylene Chloride	Ave	0.2830	0.2630		23.2	25.0	-7.1	20.0
tert-Butyl alcohol	Ave	0.0168	0.0161		480	500	-4.0	20.0
Acrylonitrile	Ave	0.0542	0.0557		25.7	25.0	2.6	20.0
trans-1,2-Dichloroethene	Ave	0.3166	0.2955		23.3	25.0	-6.7	20.0
Methyl t-butyl ether	Ave	0.5883	0.5315		22.6	25.0	-9.7	20.0
1,1-Dichloroethane	Ave	0.5727	0.5409	0.1000	23.6	25.0	-5.5	20.0
Vinyl acetate	Ave	0.5075	0.5549		27.3	25.0	9.3	20.0
Chloroprene	Ave	0.4467	0.3923		22.0	25.0	-12.2	20.0
2,2-Dichloropropane	Ave	0.4445	0.4022		22.6	25.0	-9.5	20.0
cis-1,2-Dichloroethene	Ave	0.3332	0.3124		23.4	25.0	-6.2	20.0
2-Butanone	Ave	0.0215	0.0214		125	125	-0.3	20.0
Propionitrile	Ave	0.0211	0.0204		96.6	100	-3.4	20.0
Methacrylonitrile	Ave	0.0759	0.0696		22.9	25.0	-8.3	20.0
Bromochloromethane	Ave	0.1772	0.1679		23.7	25.0	-5.2	20.0
Tetrahydrofuran	Ave	0.0636	0.0625		344	350	-1.7	20.0
Chloroform	Ave	0.5897	0.5350		22.7	25.0	-9.3	20.0
1,1,1-Trichloroethane	Ave	0.4825	0.4097		21.2	25.0	-15.1	20.0
Cyclohexane	Ave	0.4826	0.4803		24.9	25.0	-0.5	20.0
1,1-Dichloropropene	Ave	0.4805	0.4410		22.9	25.0	-8.2	20.0
Carbon tetrachloride	Ave	0.4319	0.3738		21.6	25.0	-13.5	20.0
Isobutyl alcohol	Ave	0.0090	0.0097		1360	1250	8.8	20.0
Benzene	Ave	0.8792	0.8241		23.4	25.0	-6.3	20.0
1,2-Dichloroethane	Ave	0.2806	0.2387		21.3	25.0	-14.9	20.0
Trichloroethene	Ave	0.3924	0.3594		22.9	25.0	-8.4	20.0
Methylcyclohexane	Ave	0.4962	0.4930		24.8	25.0	-0.6	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Lab Sample ID: CCVIS 200-9400/2 Calibration Date: 11/10/2010 06:57  
 Instrument ID: L.i Calib Start Date: 10/04/2010 15:04  
 GC Column: DB-624 ID: 0.53 (mm) Calib End Date: 10/04/2010 17:45  
 Lab File ID: lfaag02.d Conc. Units: ug/Kg Heated Purge: (Y/N) N  
 EPA Sample No.: CCVIS

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.3536	0.3464		24.5	25.0	-2.0	20.0
Dibromomethane	Ave	0.2981	0.2851		23.9	25.0	-4.4	20.0
Methyl methacrylate	Ave	0.2690	0.2592		24.1	25.0	-3.6	20.0
1,4-Dioxane	Ave	0.0021	0.0023		1340	1250	7.2	20.0
Bromodichloromethane	Ave	0.5546	0.5168		23.3	25.0	-6.8	20.0
2-Chloroethyl vinyl ether	Ave	0.2044	0.2075		25.4	25.0	1.5	20.0
cis-1,3-Dichloropropene	Ave	0.5159	0.4919		23.8	25.0	-4.7	20.0
4-Methyl-2-pentanone	Ave	0.2661	0.2690		126	125	1.1	20.0
Toluene	Ave	0.8241	0.7706		23.4	25.0	-6.5	20.0
trans-1,3-Dichloropropene	Ave	0.5784	0.5517		23.8	25.0	-4.6	20.0
Ethyl methacrylate	Ave	0.4102	0.4035		24.6	25.0	-1.6	20.0
1,1,2-Trichloroethane	Ave	0.3582	0.3575		25.0	25.0	-0.2	20.0
Tetrachloroethene	Ave	0.4930	0.4418		22.4	25.0	-10.4	20.0
1,3-Dichloropropane	Ave	0.6630	0.6447		24.3	25.0	-2.8	20.0
2-Hexanone	Ave	0.2449	0.2460		126	125	0.5	20.0
Dibromochloromethane	Ave	0.6267	0.6042		24.1	25.0	-3.6	20.0
1,2-Dibromoethane	Ave	0.6074	0.5941		24.5	25.0	-2.2	20.0
Chlorobenzene	Ave	1.003	0.9592	0.3000	23.9	25.0	-4.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.4739	0.4554		24.0	25.0	-3.9	20.0
Ethylbenzene	Ave	1.659	1.582		23.8	25.0	-4.7	20.0
m&p-Xylene	Ave	0.5923	0.5720		48.3	50.0	-3.4	20.0
o-Xylene	Ave	0.5657	0.5460		24.1	25.0	-3.5	20.0
Styrene	Ave	0.9747	0.9447		24.2	25.0	-3.1	20.0
Bromoform	Ave	0.4108	0.4050	0.1000	24.6	25.0	-1.4	20.0
Isopropylbenzene	Ave	3.386	3.310		24.4	25.0	-2.2	20.0
Bromobenzene	Ave	0.9044	0.8830		24.4	25.0	-2.4	20.0
1,1,2,2-Tetrachloroethane	Ave	1.424	1.560	0.3000	27.4	25.0	9.6	20.0
1,2,3-Trichloropropane	Ave	0.3358	0.3274		24.4	25.0	-2.5	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2717	0.2673		24.6	25.0	-1.6	20.0
n-Propylbenzene	Ave	0.8123	0.8041		24.7	25.0	-1.0	20.0
2-Chlorotoluene	Ave	0.7566	0.7456		24.6	25.0	-1.5	20.0
1,3,5-Trimethylbenzene	Ave	2.332	2.346		25.2	25.0	0.6	20.0
4-Chlorotoluene	Ave	0.7487	0.7592		25.4	25.0	1.4	20.0
tert-Butylbenzene	Ave	2.541	2.504		24.6	25.0	-1.4	20.0
1,2,4-Trimethylbenzene	Ave	2.135	2.214		25.9	25.0	3.7	20.0
sec-Butylbenzene	Ave	3.636	3.715		25.5	25.0	2.2	20.0
1,3-Dichlorobenzene	Ave	1.511	1.513		25.0	25.0	0.1	20.0
4-Isopropyltoluene	Ave	2.649	2.689		25.4	25.0	1.5	20.0
1,4-Dichlorobenzene	Ave	1.538	1.563		25.4	25.0	1.6	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Lab Sample ID: CCVIS 200-9400/2 Calibration Date: 11/10/2010 06:57  
 Instrument ID: L.i Calib Start Date: 10/04/2010 15:04  
 GC Column: DB-624 ID: 0.53 (mm) Calib End Date: 10/04/2010 17:45  
 Lab File ID: lfaag02.d Conc. Units: ug/Kg Heated Purge: (Y/N) N  
 EPA Sample No.: CCVIS

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichlorobenzene	Ave	1.364	1.370		25.1	25.0	0.5	20.0
n-Butylbenzene	Ave	2.421	2.637		27.2	25.0	8.9	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.2697	0.2684		24.9	25.0	-0.5	20.0
1,2,4-Trichlorobenzene	Ave	0.7636	0.8467		27.7	25.0	10.9	20.0
Hexachlorobutadiene	Ave	0.5066	0.5119		25.3	25.0	1.0	20.0
Naphthalene	Ave	1.554	1.833		29.5	25.0	17.9	20.0
1,2,3-Trichlorobenzene	Ave	0.6696	0.7387		27.6	25.0	10.3	20.0
1,2-Dichloroethane-d4	Ave	0.2312	0.1982		21.4	25.0	-14.3	20.0
Toluene-d8	Ave	1.179	1.124		23.8	25.0	-4.7	20.0
Bromofluorobenzene	Ave	1.562	1.549		24.8	25.0	-0.9	20.0
1,2-Dichlorobenzene-d4	Ave	0.8881	0.8775		24.7	25.0	-1.2	20.0

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-9200/3-A  
 Matrix: Solid Lab File ID: lfaag07.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 09:59  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	10	U	10	5.0
74-87-3	Chloromethane	4.09	J	10	3.7
75-01-4	Vinyl chloride	10	U	10	5.0
74-83-9	Bromomethane	17.4		10	3.5
75-00-3	Chloroethane	10	U	10	6.0
75-69-4	Trichlorofluoromethane	10	U	10	5.0
75-35-4	1,1-Dichloroethene	10	U	10	2.1
76-13-1	Freon TF	10	U	10	2.8
67-64-1	Acetone	10	U	10	10
74-88-4	Methyl iodide	5.82	J	10	5.0
75-15-0	Carbon disulfide	10	U	10	1.9
79-20-9	Methyl acetate	10	U	10	5.0
75-09-2	Methylene Chloride	10	U	10	5.0
156-60-5	trans-1,2-Dichloroethene	10	U	10	5.0
1634-04-4	Methyl t-butyl ether	10	U	10	5.0
75-34-3	1,1-Dichloroethane	10	U	10	3.6
108-05-4	Vinyl acetate	10	U	10	5.0
594-20-7	2,2-Dichloropropane	10	U	10	4.6
156-59-2	cis-1,2-Dichloroethene	10	U	10	2.1
78-93-3	2-Butanone	10	U	10	11
74-97-5	Bromochloromethane	10	U	10	5.3
109-99-9	Tetrahydrofuran	100	U	100	50
67-66-3	Chloroform	10	U	10	3.3
71-55-6	1,1,1-Trichloroethane	10	U	10	3.6
110-82-7	Cyclohexane	10	U	10	3.5
563-58-6	1,1-Dichloropropene	10	U	10	2.2
56-23-5	Carbon tetrachloride	10	U	10	3.2
78-83-1	Isobutyl alcohol	500	U	500	250
71-43-2	Benzene	10	U	10	3.1
107-06-2	1,2-Dichloroethane	10	U	10	3.3
79-01-6	Trichloroethene	10	U	10	5.0
108-87-2	Methylcyclohexane	10	U	10	5.0
78-87-5	1,2-Dichloropropane	10	U	10	3.8
74-95-3	Dibromomethane	10	U	10	2.5
123-91-1	1,4-Dioxane	500	U	500	270
75-27-4	Bromodichloromethane	10	U	10	3.7



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-9200/3-A  
 Matrix: Solid Lab File ID: lfaag07.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 09:59  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	10	U	10	1.3
10061-01-5	cis-1,3-Dichloropropene	10	U	10	3.2
108-10-1	4-Methyl-2-pentanone	10	U	10	2.1
108-88-3	Toluene	10	U	10	5.0
10061-02-6	trans-1,3-Dichloropropene	10	U	10	5.0
79-00-5	1,1,2-Trichloroethane	10	U	10	4.2
127-18-4	Tetrachloroethene	10	U	10	5.0
142-28-9	1,3-Dichloropropane	10	U	10	3.3
591-78-6	2-Hexanone	10	U	10	10
124-48-1	Dibromochloromethane	10	U	10	3.7
106-93-4	1,2-Dibromoethane	10	U	10	5.0
108-90-7	Chlorobenzene	10	U	10	2.3
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	3.6
100-41-4	Ethylbenzene	10	U	10	5.0
179601-23-1	m&p-Xylene	10	U	10	5.0
95-47-6	o-Xylene	10	U	10	5.0
100-42-5	Styrene	10	U	10	5.0
75-25-2	Bromoform	10	U	10	3.9
98-82-8	Isopropylbenzene	10	U	10	5.0
108-86-1	Bromobenzene	10	U	10	3.7
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	3.7
96-18-4	1,2,3-Trichloropropane	10	U	10	5.4
103-65-1	n-Propylbenzene	10	U	10	5.0
95-49-8	2-Chlorotoluene	10	U	10	3.3
106-43-4	4-Chlorotoluene	10	U	10	3.4
108-67-8	1,3,5-Trimethylbenzene	10	U	10	3.2
98-06-6	tert-Butylbenzene	10	U	10	5.0
95-63-6	1,2,4-Trimethylbenzene	10	U	10	3.4
135-98-8	sec-Butylbenzene	10	U	10	5.0
541-73-1	1,3-Dichlorobenzene	10	U	10	2.5
99-87-6	4-Isopropyltoluene	10	U	10	1.8
106-46-7	1,4-Dichlorobenzene	10	U	10	2.3
95-50-1	1,2-Dichlorobenzene	10	U	10	2.8
104-51-8	n-Butylbenzene	10	U	10	5.0
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	10	4.6
120-82-1	1,2,4-Trichlorobenzene	10	U	10	1.6

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-9200/3-A  
 Matrix: Solid Lab File ID: lfaag07.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 09:59  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	10	U	10	5.0
91-20-3	Naphthalene	10	U	10	5.0
87-61-6	1,2,3-Trichlorobenzene	10	U	10	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	88		65-155
2037-26-5	Toluene-d8	101		80-115
460-00-4	Bromofluorobenzene	100		80-115
2199-69-1	1,2-Dichlorobenzene-d4	99		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9200/8-A  
 Matrix: Solid Lab File ID: lfaag04.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 08:22  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	247		10	5.0
74-87-3	Chloromethane	267		10	3.7
75-01-4	Vinyl chloride	257		10	5.0
74-83-9	Bromomethane	100		10	3.5
75-00-3	Chloroethane	113		10	6.0
75-69-4	Trichlorofluoromethane	124		10	5.0
75-35-4	1,1-Dichloroethene	105		10	2.1
76-13-1	Freon TF	115		10	2.8
67-64-1	Acetone	492		10	10
74-88-4	Methyl iodide	32.2		10	5.0
75-15-0	Carbon disulfide	118		10	1.9
79-20-9	Methyl acetate	210		10	5.0
75-09-2	Methylene Chloride	190		10	5.0
156-60-5	trans-1,2-Dichloroethene	210		10	5.0
1634-04-4	Methyl t-butyl ether	198		10	5.0
75-34-3	1,1-Dichloroethane	188		10	3.6
108-05-4	Vinyl acetate	229		10	5.0
594-20-7	2,2-Dichloropropane	204		10	4.6
156-59-2	cis-1,2-Dichloroethene	211		10	2.1
78-93-3	2-Butanone	1000		10	11
74-97-5	Bromochloromethane	181		10	5.3
109-99-9	Tetrahydrofuran	2930		100	50
67-66-3	Chloroform	198		10	3.3
71-55-6	1,1,1-Trichloroethane	197		10	3.6
110-82-7	Cyclohexane	226		10	3.5
563-58-6	1,1-Dichloropropene	217		10	2.2
56-23-5	Carbon tetrachloride	196		10	3.2
78-83-1	Isobutyl alcohol	1290		500	250
71-43-2	Benzene	217		10	3.1
107-06-2	1,2-Dichloroethane	193		10	3.3
79-01-6	Trichloroethene	218		10	5.0
108-87-2	Methylcyclohexane	228		10	5.0
78-87-5	1,2-Dichloropropane	230		10	3.8
74-95-3	Dibromomethane	199		10	2.5
123-91-1	1,4-Dioxane	10800		500	270
75-27-4	Bromodichloromethane	219		10	3.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9200/8-A  
 Matrix: Solid Lab File ID: lfaag04.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 08:22  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	253		10	1.3
10061-01-5	cis-1,3-Dichloropropene	224		10	3.2
108-10-1	4-Methyl-2-pentanone	1050		10	2.1
108-88-3	Toluene	229		10	5.0
10061-02-6	trans-1,3-Dichloropropene	227		10	5.0
79-00-5	1,1,2-Trichloroethane	244		10	4.2
127-18-4	Tetrachloroethene	225		10	5.0
142-28-9	1,3-Dichloropropane	234		10	3.3
591-78-6	2-Hexanone	1050		10	10
124-48-1	Dibromochloromethane	234		10	3.7
106-93-4	1,2-Dibromoethane	233		10	5.0
108-90-7	Chlorobenzene	236		10	2.3
630-20-6	1,1,1,2-Tetrachloroethane	237		10	3.6
100-41-4	Ethylbenzene	242		10	5.0
179601-23-1	m&p-Xylene	492		10	5.0
95-47-6	o-Xylene	243		10	5.0
100-42-5	Styrene	241		10	5.0
75-25-2	Bromoform	224		10	3.9
98-82-8	Isopropylbenzene	252		10	5.0
108-86-1	Bromobenzene	241		10	3.7
79-34-5	1,1,2,2-Tetrachloroethane	248		10	3.7
96-18-4	1,2,3-Trichloropropane	206		10	5.4
103-65-1	n-Propylbenzene	255		10	5.0
95-49-8	2-Chlorotoluene	251		10	3.3
106-43-4	4-Chlorotoluene	260		10	3.4
108-67-8	1,3,5-Trimethylbenzene	265		10	3.2
98-06-6	tert-Butylbenzene	264		10	5.0
95-63-6	1,2,4-Trimethylbenzene	280		10	3.4
135-98-8	sec-Butylbenzene	281		10	5.0
541-73-1	1,3-Dichlorobenzene	255		10	2.5
99-87-6	4-Isopropyltoluene	272		10	1.8
106-46-7	1,4-Dichlorobenzene	256		10	2.3
95-50-1	1,2-Dichlorobenzene	255		10	2.8
104-51-8	n-Butylbenzene	310		10	5.0
96-12-8	1,2-Dibromo-3-Chloropropane	165		10	4.6
120-82-1	1,2,4-Trichlorobenzene	283		10	1.6

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9200/8-A  
 Matrix: Solid Lab File ID: lfaag04.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 11/10/2010 08:22  
 Soil Aliquot Vol: 0.5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	295		10	5.0
91-20-3	Naphthalene	128		10	5.0
87-61-6	1,2,3-Trichlorobenzene	205		10	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	92		65-155
2037-26-5	Toluene-d8	100		80-115
460-00-4	Bromofluorobenzene	98		80-115
2199-69-1	1,2-Dichlorobenzene-d4	96		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9400/3  
 Matrix: Solid Lab File ID: lfaag03.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 11/10/2010 07:51  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	24.2		1.0	0.50
74-87-3	Chloromethane	26.7		1.0	0.37
75-01-4	Vinyl chloride	26.6		1.0	0.50
74-83-9	Bromomethane	26.5		1.0	0.35
75-00-3	Chloroethane	27.3		1.0	0.60
75-69-4	Trichlorofluoromethane	23.2		1.0	0.50
75-35-4	1,1-Dichloroethene	21.3		1.0	0.21
76-13-1	Freon TF	21.0		1.0	0.28
67-64-1	Acetone	120		1.0	1.0
74-88-4	Methyl iodide	24.3		1.0	0.50
75-15-0	Carbon disulfide	20.6		1.0	0.19
79-20-9	Methyl acetate	23.7		1.0	0.50
75-09-2	Methylene Chloride	22.9		1.0	0.50
156-60-5	trans-1,2-Dichloroethene	22.4		1.0	0.50
1634-04-4	Methyl t-butyl ether	21.9		1.0	0.50
75-34-3	1,1-Dichloroethane	22.4		1.0	0.36
108-05-4	Vinyl acetate	26.2		1.0	0.50
594-20-7	2,2-Dichloropropane	21.5		1.0	0.46
156-59-2	cis-1,2-Dichloroethene	22.6		1.0	0.21
78-93-3	2-Butanone	129		1.0	1.1
74-97-5	Bromochloromethane	22.9		1.0	0.53
109-99-9	Tetrahydrofuran	338		10	5.0
67-66-3	Chloroform	22.0		1.0	0.33
71-55-6	1,1,1-Trichloroethane	20.7		1.0	0.36
110-82-7	Cyclohexane	23.1		1.0	0.35
563-58-6	1,1-Dichloropropene	22.3		1.0	0.22
56-23-5	Carbon tetrachloride	20.9		1.0	0.32
78-83-1	Isobutyl alcohol	1430		50	25
71-43-2	Benzene	23.1		1.0	0.31
107-06-2	1,2-Dichloroethane	20.8		1.0	0.33
79-01-6	Trichloroethene	22.8		1.0	0.50
108-87-2	Methylcyclohexane	23.5		1.0	0.50
78-87-5	1,2-Dichloropropane	24.4		1.0	0.38
74-95-3	Dibromomethane	24.3		1.0	0.25
123-91-1	1,4-Dioxane	1440		50	27
75-27-4	Bromodichloromethane	24.0		1.0	0.37

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9400/3  
 Matrix: Solid Lab File ID: lfaag03.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 11/10/2010 07:51  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	25.9		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	24.4		1.0	0.32
108-10-1	4-Methyl-2-pentanone	130		1.0	0.21
108-88-3	Toluene	24.0		1.0	0.50
10061-02-6	trans-1,3-Dichloropropene	24.5		1.0	0.50
79-00-5	1,1,2-Trichloroethane	26.3		1.0	0.42
127-18-4	Tetrachloroethene	23.1		1.0	0.50
142-28-9	1,3-Dichloropropane	25.0		1.0	0.33
591-78-6	2-Hexanone	134		1.0	1.0
124-48-1	Dibromochloromethane	25.7		1.0	0.37
106-93-4	1,2-Dibromoethane	25.3		1.0	0.50
108-90-7	Chlorobenzene	24.7		1.0	0.23
630-20-6	1,1,1,2-Tetrachloroethane	25.1		1.0	0.36
100-41-4	Ethylbenzene	24.8		1.0	0.50
179601-23-1	m&p-Xylene	50.3		1.0	0.50
95-47-6	o-Xylene	25.3		1.0	0.50
100-42-5	Styrene	25.5		1.0	0.50
75-25-2	Bromoform	25.1		1.0	0.39
98-82-8	Isopropylbenzene	25.6		1.0	0.50
108-86-1	Bromobenzene	25.2		1.0	0.37
79-34-5	1,1,1,2-Tetrachloroethane	28.6		1.0	0.37
96-18-4	1,2,3-Trichloropropane	23.2		1.0	0.54
103-65-1	n-Propylbenzene	25.5		1.0	0.50
95-49-8	2-Chlorotoluene	25.9		1.0	0.33
106-43-4	4-Chlorotoluene	26.6		1.0	0.34
108-67-8	1,3,5-Trimethylbenzene	26.3		1.0	0.32
98-06-6	tert-Butylbenzene	26.0		1.0	0.50
95-63-6	1,2,4-Trimethylbenzene	27.5		1.0	0.34
135-98-8	sec-Butylbenzene	27.1		1.0	0.50
541-73-1	1,3-Dichlorobenzene	26.3		1.0	0.25
99-87-6	4-Isopropyltoluene	26.0		1.0	0.18
106-46-7	1,4-Dichlorobenzene	26.4		1.0	0.23
95-50-1	1,2-Dichlorobenzene	26.4		1.0	0.28
104-51-8	n-Butylbenzene	28.6		1.0	0.50
96-12-8	1,2-Dibromo-3-Chloropropane	26.3		1.0	0.46
120-82-1	1,2,4-Trichlorobenzene	28.4		1.0	0.16



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2345-1  
 SDG No.: MONTGO (200-2345)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-9400/3  
 Matrix: Solid Lab File ID: lfaag03.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 11/10/2010 07:51  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 9400 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	26.9		1.0	0.50
91-20-3	Naphthalene	31.5		1.0	0.50
87-61-6	1,2,3-Trichlorobenzene	29.2		1.0	0.25

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	91		65-155
2037-26-5	Toluene-d8	101		80-115
460-00-4	Bromofluorobenzene	99		80-115
2199-69-1	1,2-Dichlorobenzene-d4	98		45-145

# GC/MS VOA Worksheet

Batch Number: 200-9128  
 Method: 5035  
 Analyst: Jackson, Thomas

Date Open: Nov 05 2010 1:54PM  
 Batch End: Nov 05 2010 2:04PM

Lab ID	Client ID	Method Chain	Basis	Preservation Type	Tare Weight	Vial and Sample weight	Initial weight/volume of sample	Final weight/volume of sample
200-2345-A-1	MC-S-32380	5035, 8260B	T	NA	25.488 g	35.59 g	10.102 g	10 mL
200-2345-A-2	MC-S-32385	5035, 8260B	T	NA	25.648 g	34.75 g	9.102 g	10 mL
200-2345-A-3	MC-S-32394	5035, 8260B	T	NA	25.4 g	36.78 g	11.38 g	10 mL
200-2345-A-4	MC-S-MeOH BLANK	5035, 8260B	T	NA	18.93 g	28.93 g	10 g	10 mL

# GC/MS VOA Worksheet

Batch Number: 200-9128  
 Method: 5035  
 Analyst: Jackson, Thomas

Date Open: Nov 05 2010 1:54PM  
 Batch End: Nov 05 2010 2:04PM

Comments

Lab ID	Client ID	Method Chain	Basis	Analysis comment
200-2345-A-1	MC-S-32380	5035, 8260B	T	Initial Amount = Sample Weight from Client COC; Vial & Sample = TA actual weight; Tare Weight is calculated
200-2345-A-2	MC-S-32385	5035, 8260B	T	Initial Amount = Sample Weight from Client COC; Vial & Sample = TA actual weight; Tare Weight is calculated
200-2345-A-3	MC-S-32394	5035, 8260B	T	Initial Amount = Sample Weight from Client COC; Vial & Sample = TA actual weight; Tare Weight is calculated
200-2345-A-4	MC-S-MeOH BLANK	5035, 8260B	T	Initial Amount = Sample Weight from Client COC; Vial & Sample = TA actual weight; Tare Weight is calculated

Batch Comment: Argonne National Laboratory Soil in 10ml MeON in 20ml Vials

# GC/MS VOA Worksheet

Batch Number: 200-9200  
 Method: 5035  
 Analyst: Heald, John

Date Open: Nov 08 2010 10:25AM  
 Batch End:

Lab ID	Client ID	Method Chain	Basis	Initial weight/volume of sample	Final weight/volume of sample
MB-200-9200/1				10 g	10 mL
MB-200-9200/2				10 g	10 mL
MB-200-9200/3		5035, 8260B		10 g	10 mL
MB-200-9200/4				10 g	10 mL
MB-200-9200/5				10 g	10 mL
MB-200-9200/6				10 g	10 mL
LCS-200-9200/7				10 g	10 mL
LCS-200-9200/8		5035, 8260B		10 g	10 mL

## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica BurlingtonJob No.: 200-2345-1SDG No.: MONTGO (200-2345)Instrument ID: L.iStart Date: 10/04/2010 14:12Analysis Batch Number: 7468End Date: 10/05/2010 08:24

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 200-7468/1		10/04/2010 14:12	1	1fa01.d	DB-624 0.53 (mm)
VIBLK 200-7468/2		10/04/2010 14:32	1		DB-624 0.53 (mm)
IC 200-7468/3		10/04/2010 15:04	1	1fa03.d	DB-624 0.53 (mm)
IC 200-7468/4		10/04/2010 15:37	1	1fa04.d	DB-624 0.53 (mm)
IC 200-7468/5		10/04/2010 16:09	1	1fa05.d	DB-624 0.53 (mm)
ICIS 200-7468/6		10/04/2010 16:41	1	1fa06.d	DB-624 0.53 (mm)
IC 200-7468/7		10/04/2010 17:13	1	1fa07.d	DB-624 0.53 (mm)
IC 200-7468/8		10/04/2010 17:45	1	1fa08.d	DB-624 0.53 (mm)
VIBLK 200-7468/9		10/04/2010 18:18	1		DB-624 0.53 (mm)
VIBLK 200-7468/10		10/04/2010 18:50	1		DB-624 0.53 (mm)
ICV 200-7468/11		10/04/2010 19:22	1		DB-624 0.53 (mm)
VIBLK 200-7468/12		10/04/2010 19:55	1		DB-624 0.53 (mm)
VIBLK 200-7468/13		10/05/2010 08:24	1		DB-624 0.53 (mm)

## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica BurlingtonJob No.: 200-2345-1SDG No.: MONTGO (200-2345)Instrument ID: L.iStart Date: 10/05/2010 09:14Analysis Batch Number: 7497End Date: 10/05/2010 20:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 200-7497/1		10/05/2010 09:14	1	lfaa01.d	DB-624 0.53 (mm)
CCVIS 200-7497/2		10/05/2010 09:39	1		DB-624 0.53 (mm)
ICV 200-7497/3		10/05/2010 10:11	1	lfaa03.d	DB-624 0.53 (mm)
ZZZZZ		10/05/2010 10:43	1		DB-624 0.53 (mm)
VIBLK 200-7497/5		10/05/2010 11:16	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 11:48	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 12:31	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 13:03	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 13:36	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 14:08	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 14:40	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 15:13	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 15:45	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 16:18	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 16:50	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 17:23	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 17:55	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 18:28	1		DB-624 0.53 (mm)
VIBLK 200-7497/19		10/05/2010 19:00	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 19:33	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 20:05	1		DB-624 0.53 (mm)
ZZZZZ		10/05/2010 20:37	1		DB-624 0.53 (mm)

## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica BurlingtonJob No.: 200-2345-1SDG No.: MONTGO (200-2345)Instrument ID: L.iStart Date: 11/10/2010 06:43Analysis Batch Number: 9400End Date: 11/10/2010 17:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 200-9400/1		11/10/2010 06:43	1	lfaaf01.d	DB-624 0.53 (mm)
CCVIS 200-9400/2		11/10/2010 06:57	1	lfaag02.d	DB-624 0.53 (mm)
LCS 200-9400/3		11/10/2010 07:51	1	lfaag03.d	DB-624 0.53 (mm)
LCS 200-9200/8-A		11/10/2010 08:22	1	lfaag04.d	DB-624 0.53 (mm)
ZZZZZ		11/10/2010 08:55	1		DB-624 0.53 (mm)
ZZZZZ		11/10/2010 09:27	1		DB-624 0.53 (mm)
MB 200-9200/3-A		11/10/2010 09:59	1	lfaag07.d	DB-624 0.53 (mm)
ZZZZZ		11/10/2010 10:40	1		DB-624 0.53 (mm)
ZZZZZ		11/10/2010 11:12	1		DB-624 0.53 (mm)
ZZZZZ		11/10/2010 11:44	1		DB-624 0.53 (mm)
ZZZZZ		11/10/2010 12:16	1		DB-624 0.53 (mm)
ZZZZZ		11/10/2010 12:48	1		DB-624 0.53 (mm)
ZZZZZ		11/10/2010 13:20	1		DB-624 0.53 (mm)
ZZZZZ		11/10/2010 13:52	1		DB-624 0.53 (mm)
200-2345-1	MC-S-32380	11/10/2010 14:24	1	lfaag15.d	DB-624 0.53 (mm)
200-2345-2	MC-S-32385	11/10/2010 14:57	1	lfaag16.d	DB-624 0.53 (mm)
200-2345-3	MC-S-32394	11/10/2010 15:29	1	lfaag17.d	DB-624 0.53 (mm)
200-2345-4	MC-S-MeOH BLANK	11/10/2010 16:01	1	lfaag18.d	DB-624 0.53 (mm)
ZZZZZ		11/10/2010 16:33	2.9		DB-624 0.53 (mm)
ZZZZZ		11/10/2010 16:33	2.9		DB-624 0.53 (mm)
ZZZZZ		11/10/2010 17:05	2		DB-624 0.53 (mm)
ZZZZZ		11/10/2010 17:05	2		DB-624 0.53 (mm)



# **Shipping and Receiving Documents**

PRO FORMA INVOICE

UChicago Argonne, LLC operator of Argonne National Laboratory

\*00366405

9700 S. Cass Avenue, Lemont, Illinois 60439

PAID LIST

NO.: 00366405

SHIPPING ORDER

NOTE: WHEN RETURNING MATERIAL TO ANL, PLEASE REFERENCE THE AWARD / MR NUMBER SHOWN BELOW.

COMPANY NAME TESTAMERICA LABORATORIES, INC.		PHONE NO. (REQUIRED) (802) 660-1990 x		DATE: 11/03/2010	DATE REQUIRED AT DESTINATION 11/04/2010
ADDRESS LINE 1 30 COMMUNITY DR., STE 11			HOME <input type="checkbox"/>	REASON FOR SHIPMENT: Other (Explain) Samples	
ADDRESS LINE 2					
CITY SOUTH BURLINGTON	ST/PROV VT	ZIP CODE 05403-	COUNTRY UNITED STATES	AWARD TYPE <input type="radio"/> AMOS <input type="radio"/> PARIS <input checked="" type="radio"/> NONE	
ATTENTION Kirk Young		REFERENCE NO	COST CODE (REQUIRED) 8A727C5-167-424	PRJ: ACT:	AWARD NUMBER REQ NUMBER
BADGE 46153	NAME OF ANL CONTACT Alvarado, Jorge S.		BUILDING 203	EXTN. 2-5267	PROCUREMENT NAME PROCUREMENT RELEASE SIGNATURE
E-MAIL ADDRESS FOR TRACKING NO. (OPTIONAL) jalvarado@anl.gov			EXPORT REVIEW? NOT APPLICABLE	SIGNATURE OF EXPORT CONTROL (If Applicable)	
ANL-126C BADGE 41302	NAME OF ANL-126C SIGNATURE AUTHORITY Susan Benson		EXTN. 2-3720	SIGNATURE OF ANL-126C APPROVER Benson, Susan	
HIGH RISK PROPERTY <input type="radio"/> YES <input checked="" type="radio"/> NO	DPR BADGE	NAME OF DPR	PROPERTY NO IF APPLICABLE	SIGNATURE OF DPR (If Applicable)	
DOES SHIPMENT CONTAIN RECORDS? If Yes, Complete and Attach ANL-509 <input type="radio"/> YES <input checked="" type="radio"/> NO			VENDOR PICKUP <input checked="" type="radio"/> NO <input type="radio"/> At Location <input type="radio"/> At Shipping		
WAS MATERIAL IN A CONTROLLED AREA? <input type="radio"/> YES <input checked="" type="radio"/> NO		IF YES, NAME, EXTENT OF RADIATION IF YES, WHERE WAS ITEM USED (BLDG/ROOM) /			
SURVEY RESULTS TO BE COMPLETED BY HEALTH / PHYSICS			SURVEY DATE	HEALTH / PHYSICS APPROVED	

DOES THIS SHIPMENT CONTAIN ANY OF THE FOLLOWING HAZARDS?  
FAILURE TO DECLARE ANY HAZARD COULD RESULT IN CIVIL OR CRIMINAL PENALTIES BY THE U.S. GOVERNMENT

PHYSICAL FORM: Liquid		IF HAZARDOUS, MSDS#: 34191									
HAZARD	YES	NO	HAZARD	YES	NO	HAZARD	YES	NO	HAZARD	YES	NO
Explosives	<input type="radio"/>	<input checked="" type="radio"/>	Flammable Liquid	<input checked="" type="radio"/>	<input type="radio"/>	Dangerous-When-Wet Mat.	<input type="radio"/>	<input checked="" type="radio"/>	Infectious Substance	<input type="radio"/>	<input checked="" type="radio"/>
Flammable Compressed Gas	<input type="radio"/>	<input checked="" type="radio"/>	Combustible Liquid	<input type="radio"/>	<input checked="" type="radio"/>	Oxidizer	<input type="radio"/>	<input checked="" type="radio"/>	Diagnostic Specimens	<input type="radio"/>	<input checked="" type="radio"/>
Nonflammable Compressed Gas	<input type="radio"/>	<input checked="" type="radio"/>	Flammable Solids	<input type="radio"/>	<input checked="" type="radio"/>	Organic Peroxides	<input type="radio"/>	<input checked="" type="radio"/>	Corrosive Material	<input type="radio"/>	<input checked="" type="radio"/>
Toxic Gas	<input type="radio"/>	<input checked="" type="radio"/>	Spontaneously Combustible Material	<input type="radio"/>	<input checked="" type="radio"/>	Toxic	<input type="radio"/>	<input checked="" type="radio"/>	ORM-D	<input type="radio"/>	<input checked="" type="radio"/>
Nano Materials	<input type="radio"/>	<input checked="" type="radio"/>	Radiation Generating Device	<input type="radio"/>	<input checked="" type="radio"/>	Batteries	<input type="radio"/>	<input checked="" type="radio"/>	Misc.hazardous Material	<input type="radio"/>	<input checked="" type="radio"/>
Regulated Biological and/or Biohazardous Materials				<input type="radio"/>	<input checked="" type="radio"/>	Radioactive				<input type="radio"/>	<input checked="" type="radio"/>

TOTAL QTY OF HAZARDOUS MATERIAL 40.00 UNIT OF MEASURE Milliliter

CARRIER FDE PRIORITY	DEST RIS	VALUE FOR CUSTOMS .00	<input checked="" type="radio"/> PREPAID <input type="radio"/> COLLECT <input type="radio"/> 3rd PARTY	NO.OF PKGS. 1	TOTAL WEIGHT 2.5000	UOM Pounds
PKGD. BY 11/03/2010	PKGD. BY MMT	CARRIER'S B/L NUMBER:				
DATE SHIPPED 11/03/2010	SHIPPING DEPARTMENT AUTHORIZATION Blair, Charles					

NO. OF PKGS.	TYPE OF PKG.	CLASSIFICATION OF DESCRIPTION	WEIGHT
1	F - BOX	UN 1230. LABELS: GLASS, PLEASE HANDLE WITH CARE. ORIENTATION ARROWS. ABSORBENT PAPER, PLASTIC ZIPLOCK BAG AND VERMICULITE.	2.5000

AMDEL WITH CANAL

GLASS

\*\*THANK YOU\*\*

5 3379 ULINE 1 800 293 5510

**CHEM**  
Specialty Cleaned Containers  
23787-F Eichler St  
Hayward, CA 94545  
(415) 782-3906  
(800) 443-1689

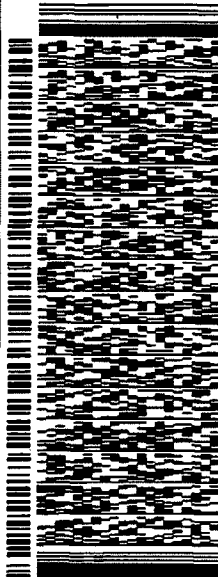
ORIGIN ID: ENLA (630) 252-2877  
CHARLES BLAIR  
ARGONNE NATIONAL LABORATORY  
9700 S. CASS AVENUE  
BLDG. 46  
LEMONT, IL 60439  
UNITED STATES US

SHIP DATE: 03NOV10  
ACTWGT: 2.5 LB MAN  
CAD: 001577B/CAFE2471  
DIMS: 12X8X5 IN  
BILL SENDER

TO **KIRK YOUNG**  
**TESTAMERICA LABORATORIES INC.**  
**30 COMMUNITY DR STE 11**

**SOUTH BURLINGTON VT 05403**

(802) 660-1880  
REF: 366405MB



FedEx  
Express  
**E**



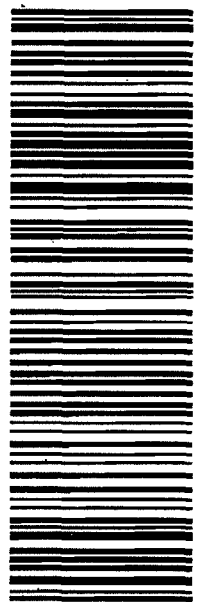
**STODY SEAL**  
DATE 11/03/10  
SIGNATURE *M. M. M. M. M.*  
RT 9176 1 D  
8323  
11.04

TRK# 7269 3170 8323  
0201

THU - 04 NOV AA  
PRIORITY OVERNIGHT

05403  
VT-US  
BTVA

**XH BTVA**



ENEF10CEE10043

## Login Sample Receipt Check List

Client: Argonne National Laboratory

Job Number: 200-2345-1  
SDG Number: MONTGO (200-2345)

**Login Number: 2345**  
**Creator: Marion, Greg T**  
**List Number: 1**

**List Source: TestAmerica Burlington**

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	no seal numbers
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	19.5°C IR GUN ID 96/CF= -1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	Collection times not listed on COC.
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	

## ANALYTICAL REPORT

Job Number: 200-2954-1

SDG Number: MONTGO (200-2954)

Job Description: Montgomery City (200-2954)

Contract Number: 8E-00302

For:

Argonne National Laboratory

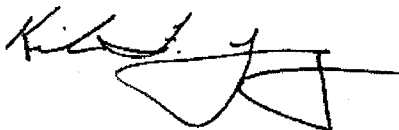
9700 South Cass Avenue

Building 203

Office B-149

Argonne, IL 60439

Attention: Mr. Clyde Dennis



Approved for release.  
Kirk F Young  
Project Manager I  
12/21/2010 3:03 PM

---

Kirk F Young

Project Manager I

kirk.young@testamericainc.com

12/21/2010

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

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## CASE NARRATIVE

**Client: Argonne National Laboratory**

**Project: Montgomery City (200-2954)**

**Report Number: 200-2954-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### Receipt

The samples were received on 12/15/2010. 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. Sample MC-S-32490 was listed on the chain-of-custody record, but was not received in the shipment. All other sample volumes were logged in for analysis.

### SW846 Method(s) 5035/8260B Volatile Organics (Medium Level Soil)

The samples were analyzed by the referenced method(s), 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 analysis associated with the samples in this sample set did exhibit an acceptable internal standard performance. With the exception of that for sample MC-S-32557, there was an acceptable recovery of the surrogate controls in each analysis. The analysis of sample MC-S-32557 did yield a high recovery of toluene-d<sub>8</sub> (116 percent). The upper control limit that has been established by the laboratory for the recovery of toluene-d<sub>8</sub> for this method of analysis is 115 percent. Two types of laboratory control sample analyses were performed in the analytical sequence. 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 bromomethane and methyl iodide, for which the recovery was at or below 50 percent. Additionally, certain later eluting compounds, specifically 1,2-dibromo-3-chloropropane and naphthalene, also exhibited low recovery performance. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. A trace concentration of bromomethane was identified in the analysis sample MC-MEOH BLANK. A relatively high concentration of bromomethane was identified in the analysis of the instrument blank associated with the analytical work. The derived concentration of bromomethane (11.5 ug/Kg) was above the established reporting limit of 10 ug/Kg.

Manual integration was employed in deriving certain of the analytical results. The values that have been derived from manual integration are qualified on the quantitation reports. Extracted ion current profiles for each manual integration are included in the data package, and further documented in the Sample Preparation section of this submittal.

4905

MATRIX: <i>SPIL - METHANOL</i>		ARGONNE NATIONAL LABORATORY				Shipping Container No.	
RECEIVING LAB: <i>TestAmerica</i>		CHAIN OF CUSTODY RECORD*				Shipping Info:	
PROJECT/SITE: <i>Montgomery City, MD</i>		ANALYSIS				ANL Field Contact (Name & Temporary Phone):	
SAMPLER(S) (Signature): <i>B Sedur</i>		Number of containers				REMARKS	
DATE OF COLLECTION		SAMPLE ID NUMBER(S)		Volume (mL)		Mass (g)	
<i>12/12/2010</i>	<i>MC-S-32451</i>	<i>(10A) B</i>	<i>1-20mL</i>	<i>10.0</i>	<i>9.191</i>		
	<i>MC-S-32519</i>	<i>(10A) R</i>		<i>10.0</i>	<i>13.220</i>		
	<i>MC-S-32590</i>	<i>(10A) R</i>		<i>10.0</i>	<i>11.137</i>		
	<i>MC-S-32448</i>	<i>(20A) B</i>		<i>12.0</i>	<i>12.475</i>		
	<i>MC-S-32557</i>	<i>(20A) B</i>		<i>10.0</i>	<i>9.604</i>		
	<i>MC-S-32468</i>	<i>(10A) BK</i>		<i>10.0</i>	<i>8.516</i>		
	<i>MC-S-32549</i>	<i>(20A) R</i>		<i>10.0</i>	<i>11.508</i>		
	<i>MC-S-32570</i>	<i>(20A) R</i>		<i>10.0</i>	<i>10.675</i>		
	<i>MC-S-32477</i>	<i>(20A) BK</i>		<i>10.0</i>	<i>11.479</i>		
	<i>MC-S-32490</i>	<i>25</i>		<i>10.0</i>	<i>12.142</i>		
	<i>MC-Media Blank</i>			<i>10.0</i>	<i>13.694</i>		
	<i>MC-S-32525</i>	<i>(10A) B</i>		<i>10.0</i>			

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Relinquished by (Signature)	Date	Time	Received by (Signature)
<i>TestAmerica</i>	<i>12/13/10</i>	<i>11:30</i>	<i>Kay Berman</i>	<i>12/15/10</i>	<i>10:20</i>	<i>Kay Berman</i>	<i>12/14/10</i>	<i>3:30</i>	<i>PM</i>
			<i>JL</i>						

\*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.

FOR LAB USE ONLY

<input checked="" type="checkbox"/>	Custody seal was intact when shipment received.
<input checked="" type="checkbox"/>	Sample containers were intact when received.
<input checked="" type="checkbox"/>	Shipment was at required temperature when received.
<input checked="" type="checkbox"/>	Sample labels, Tags and COC agree.

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



## SAMPLE SUMMARY

Client: Argonne National Laboratory

Job Number: 200-2954-1  
Sdg Number: MONTGO (200-2954)

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
200-2954-1	MC-S-32451	Solid	12/12/2010 0000	12/15/2010 1020
200-2954-2	MC-S-32519	Solid	12/12/2010 0000	12/15/2010 1020
200-2954-3	MC-S-32590	Solid	12/12/2010 0000	12/15/2010 1020
200-2954-4	MC-S-32448	Solid	12/12/2010 0000	12/15/2010 1020
200-2954-5	MC-S-32557	Solid	12/12/2010 0000	12/15/2010 1020
200-2954-6	MC-S-32463	Solid	12/12/2010 0000	12/15/2010 1020
200-2954-7	MC-S-32549	Solid	12/12/2010 0000	12/15/2010 1020
200-2954-8	MC-S-32570	Solid	12/12/2010 0000	12/15/2010 1020
200-2954-9	MC-S-32477	Solid	12/12/2010 0000	12/15/2010 1020
200-2954-10	MC-MEOH BLANK	Solid	12/12/2010 0000	12/15/2010 1020
200-2954-11	MC-S-32525	Solid	12/12/2010 0000	12/15/2010 1020

## METHOD SUMMARY

Client: Argonne National Laboratory

Job Number: 200-2954-1  
Sdg Number: MONTGO (200-2954)

Description	Lab Location	Method	Preparation Method
<b>Matrix: Solid</b>			
Volatile Organic Compounds (GC/MS)	TAL BUR	SW846 8260B	
Purge and Trap	TAL BUR		SW846 5035

### Lab References:

TAL BUR = TestAmerica Burlington

### Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

## METHOD / ANALYST SUMMARY

Client: Argonne National Laboratory

Job Number: 200-2954-1  
Sdg Number: MONTGO (200-2954)

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 8260B	Heald, John	JRH

## Quality Control Results

Client: Argonne National Laboratory

Job Number: 200-2954-1  
Sdg Number: MONTGO (200-2954)

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Prep Batch: 200-11160</b>					
200-2954-1	MC-S-32451	T	Solid	5035	
200-2954-2	MC-S-32519	T	Solid	5035	
200-2954-3	MC-S-32590	T	Solid	5035	
200-2954-4	MC-S-32448	T	Solid	5035	
200-2954-5	MC-S-32557	T	Solid	5035	
200-2954-6	MC-S-32463	T	Solid	5035	
200-2954-7	MC-S-32549	T	Solid	5035	
200-2954-8	MC-S-32570	T	Solid	5035	
200-2954-9	MC-S-32477	T	Solid	5035	
200-2954-10	MC-MEOH BLANK	T	Solid	5035	
200-2954-11	MC-S-32525	T	Solid	5035	
<b>Prep Batch: 200-11234</b>					
LCS 200-11234/6-A	Lab Control Sample	T	Solid	5035	
MB 200-11234/1-A	Method Blank	T	Solid	5035	
<b>Analysis Batch:200-11263</b>					
LCS 200-11263/3	Lab Control Sample	T	Solid	8260B	
LCS 200-11234/6-A	Lab Control Sample	T	Solid	8260B	200-11234
MB 200-11234/1-A	Method Blank	T	Solid	8260B	200-11234
200-2954-1	MC-S-32451	T	Solid	8260B	200-11160
200-2954-2	MC-S-32519	T	Solid	8260B	200-11160
200-2954-3	MC-S-32590	T	Solid	8260B	200-11160
200-2954-4	MC-S-32448	T	Solid	8260B	200-11160
200-2954-5	MC-S-32557	T	Solid	8260B	200-11160
200-2954-6	MC-S-32463	T	Solid	8260B	200-11160
200-2954-7	MC-S-32549	T	Solid	8260B	200-11160
200-2954-8	MC-S-32570	T	Solid	8260B	200-11160
200-2954-9	MC-S-32477	T	Solid	8260B	200-11160
200-2954-10	MC-MEOH BLANK	T	Solid	8260B	200-11160
200-2954-11	MC-S-32525	T	Solid	8260B	200-11160

**Report Basis**

T = Total



## DATA REPORTING QUALIFIERS

Client: Argonne National Laboratory

Job Number: 200-2954-1  
Sdg Number: MONTGO (200-2954)

<u>Lab Section</u>	<u>Qualifier</u>	<u>Description</u>
GC/MS VOA	B	Compound was found in the blank and sample.
	U	Indicates the analyte was analyzed for but not detected.
	*	Recovery or RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits

# Method 8260B

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Volatile Organic Compounds (GC/MS)  
by Method 8260B

FORM II  
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2954-1

SDG No.: MONTGO (200-2954)

Matrix: Solid

Level: Medium

GC Column (1): DB-624

ID: 0.53(mm)

Client Sample ID	Lab Sample ID	DCA #	TOL #	BFB #	DCZ #
MC-S-32451	200-2954-1	74	109	100	104
MC-S-32519	200-2954-2	85	106	102	105
MC-S-32590	200-2954-3	76	108	101	104
MC-S-32448	200-2954-4	80	112	105	109
MC-S-32557	200-2954-5	87	116 X	108	111
MC-S-32463	200-2954-6	81	104	102	103
MC-S-32549	200-2954-7	85	110	107	109
MC-S-32570	200-2954-8	73	111	104	105
MC-S-32477	200-2954-9	77	110	103	106
MC-MEOH BLANK	200-2954-10	78	100	98	97
MC-S-32525	200-2954-11	77	98	94	96
	MB 200-11234/1-A	81	106	104	105
	LCS 200-11234/6-A	88	107	102	106
	LCS 200-11263/3	84	109	101	106

QC LIMITS

DCA = 1,2-Dichloroethane-d4  
TOL = Toluene-d8  
BFB = Bromofluorobenzene  
DCZ = 1,2-Dichlorobenzene-d4

65-155  
80-115  
80-115  
45-145

# Column to be used to flag recovery values

FORM II 8260B

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2954-1

SDG No.: MONTGO (200-2954)

Matrix: Solid

Level: Medium

Lab File ID: lfmt04.d

Lab ID: LCS 200-11234/6-A

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dichlorodifluoromethane	250	211	84	30-180	
Chloromethane	250	237	95	55-150	
Vinyl chloride	250	247	99	65-145	
Bromomethane	250	112	45	65-145	*
Chloroethane	250	128	51	70-135	*
Trichlorofluoromethane	250	148	59	70-140	*
1,1-Dichloroethene	250	141	56	75-135	*
Freon TF	250	160	64	75-140	*
Acetone	1250	664	53	50-130	
Methyl iodide	250	61.1	24	70-150	*
Carbon disulfide	250	161	65	80-135	*
Methyl acetate	250	271	108	60-140	
Methylene Chloride	250	235	94	75-140	
trans-1,2-Dichloroethene	250	237	95	80-130	
Methyl t-butyl ether	250	213	85	85-130	
1,1-Dichloroethane	250	203	81	85-120	*
Vinyl acetate	250	234	94	70-135	
2,2-Dichloropropane	250	220	88	85-120	
cis-1,2-Dichloroethene	250	235	94	80-120	
2-Butanone	1250	999	80	70-135	
Bromochloromethane	250	186	75	75-125	
Tetrahydrofuran	3500	3080	88	75-125	
Chloroform	250	218	87	85-120	
1,1,1-Trichloroethane	250	216	86	80-115	
Cyclohexane	250	259	103	60-140	
1,1-Dichloropropene	250	240	96	85-120	
Carbon tetrachloride	250	211	85	80-115	
Isobutyl alcohol	12500	7990	64	70-135	*
Benzene	250	254	102	85-120	
1,2-Dichloroethane	250	203	81	75-120	
Trichloroethene	250	249	100	85-120	
Methylcyclohexane	250	271	108	60-140	
1,2-Dichloropropane	250	247	99	85-120	
Dibromomethane	250	205	82	80-120	
1,4-Dioxane	12500	11000	88	50-160	
Bromodichloromethane	250	222	89	80-115	
2-Chloroethyl vinyl ether	250	229	92	65-145	
cis-1,3-Dichloropropene	250	234	94	85-120	
4-Methyl-2-pentanone	1250	1070	86	65-135	
Toluene	250	265	106	75-125	
trans-1,3-Dichloropropene	250	231	93	85-120	
1,1,2-Trichloroethane	250	260	104	75-125	

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2954-1

SDG No.: MONTGO (200-2954)

Matrix: Solid

Level: Medium

Lab File ID: lfmt04.d

Lab ID: LCS 200-11234/6-A

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Tetrachloroethene	250	263	105	85-120	
1,3-Dichloropropane	250	247	99	85-120	
2-Hexanone	1250	1140	91	70-135	
Dibromochloromethane	250	238	95	80-120	
1,2-Dibromoethane	250	244	98	80-120	
Chlorobenzene	250	263	105	80-120	
1,1,1,2-Tetrachloroethane	250	248	99	80-115	
Ethylbenzene	250	263	105	80-120	
m&p-Xylene	500	540	108	80-120	
o-Xylene	250	270	108	85-120	
Styrene	250	263	105	80-125	
Bromoform	250	224	90	75-130	
Isopropylbenzene	250	269	108	85-120	
Bromobenzene	250	259	103	85-120	
1,1,2,2-Tetrachloroethane	250	251	100	75-125	
1,2,3-Trichloropropane	250	202	81	70-125	
n-Propylbenzene	250	275	110	85-120	
2-Chlorotoluene	250	266	106	85-120	
4-Chlorotoluene	250	273	109	85-120	
1,3,5-Trimethylbenzene	250	267	107	85-120	
tert-Butylbenzene	250	271	108	85-120	
1,2,4-Trimethylbenzene	250	270	108	85-120	
sec-Butylbenzene	250	288	115	85-120	
1,3-Dichlorobenzene	250	270	108	80-120	
4-Isopropyltoluene	250	273	109	85-120	
1,4-Dichlorobenzene	250	270	108	85-120	
1,2-Dichlorobenzene	250	267	107	85-120	
n-Butylbenzene	250	299	120	85-125	
1,2-Dibromo-3-Chloropropane	250	161	64	65-130	*
1,2,4-Trichlorobenzene	250	268	107	80-125	
Hexachlorobutadiene	250	302	121	65-150	
Naphthalene	250	132	53	80-125	*
1,2,3-Trichlorobenzene	250	192	77	70-125	

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2954-1

SDG No.: MONTGO (200-2954)

Matrix: Solid

Level: Medium

Lab File ID: 1fmt03.d

Lab ID: LCS 200-11263/3

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dichlorodifluoromethane	25.0	20.4	82	30-180	
Chloromethane	25.0	22.7	91	55-150	
Vinyl chloride	25.0	25.8	103	65-145	
Bromomethane	25.0	21.9	88	65-145	
Chloroethane	25.0	23.9	96	70-135	
Trichlorofluoromethane	25.0	21.3	85	70-140	
1,1-Dichloroethene	25.0	22.1	88	75-135	
Freon TF	25.0	22.8	91	75-140	
Acetone	125	102	82	50-130	
Methyl iodide	25.0	19.0	76	70-150	
Carbon disulfide	25.0	21.9	88	80-135	
Methyl acetate	25.0	26.7	107	60-140	
Methylene Chloride	25.0	24.9	99	75-140	
trans-1,2-Dichloroethene	25.0	23.9	96	80-130	
Methyl t-butyl ether	25.0	22.5	90	85-130	
1,1-Dichloroethane	25.0	23.3	93	85-120	
Vinyl acetate	25.0	25.4	102	70-135	
2,2-Dichloropropane	25.0	22.3	89	85-120	
cis-1,2-Dichloroethene	25.0	23.6	95	80-120	
2-Butanone	125	120	96	70-135	
Bromochloromethane	25.0	23.4	94	75-125	
Tetrahydrofuran	350	327	94	75-125	
Chloroform	25.0	22.3	89	85-120	
1,1,1-Trichloroethane	25.0	21.4	86	80-115	
Cyclohexane	25.0	25.0	100	60-140	
1,1-Dichloropropene	25.0	23.5	94	85-120	
Carbon tetrachloride	25.0	21.2	85	80-115	
Isobutyl alcohol	1250	1240	99	70-135	
Benzene	25.0	25.2	101	85-120	
1,2-Dichloroethane	25.0	21.0	84	75-120	
Trichloroethene	25.0	24.2	97	85-120	
Methylcyclohexane	25.0	25.8	103	60-140	
1,2-Dichloropropane	25.0	25.1	100	85-120	
Dibromomethane	25.0	23.4	94	80-120	
1,4-Dioxane	1250	1320	106	50-160	
Bromodichloromethane	25.0	23.0	92	80-115	
2-Chloroethyl vinyl ether	25.0	23.3	93	65-145	
cis-1,3-Dichloropropene	25.0	24.0	96	85-120	
4-Methyl-2-pentanone	125	122	98	65-135	
Toluene	25.0	26.6	106	75-125	
trans-1,3-Dichloropropene	25.0	23.7	95	85-120	
1,1,2-Trichloroethane	25.0	26.3	105	75-125	

# Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington

Job No.: 200-2954-1

SDG No.: MONTGO (200-2954)

Matrix: Solid

Level: Medium

Lab File ID: lfmt03.d

Lab ID: LCS 200-11263/3

Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	ICS CONCENTRATION (ug/Kg)	ICS % REC	QC LIMITS REC	#
Tetrachloroethene	25.0	25.8	103	85-120	
1,3-Dichloropropane	25.0	25.3	101	85-120	
2-Hexanone	125	131	105	70-135	
Dibromochloromethane	25.0	25.0	100	80-120	
1,2-Dibromoethane	25.0	25.2	101	80-120	
Chlorobenzene	25.0	26.1	104	80-120	
1,1,1,2-Tetrachloroethane	25.0	25.0	100	80-115	
Ethylbenzene	25.0	25.6	102	80-120	
m&p-Xylene	50.0	52.7	105	80-120	
o-Xylene	25.0	26.3	105	85-120	
Styrene	25.0	25.8	103	80-125	
Bromoform	25.0	24.3	97	75-130	
Isopropylbenzene	25.0	25.7	103	85-120	
Bromobenzene	25.0	25.4	102	85-120	
1,1,2,2-Tetrachloroethane	25.0	27.2	109	75-125	
1,2,3-Trichloropropane	25.0	21.7	87	70-125	
n-Propylbenzene	25.0	26.0	104	85-120	
2-Chlorotoluene	25.0	25.9	103	85-120	
4-Chlorotoluene	25.0	26.6	107	85-120	
1,3,5-Trimethylbenzene	25.0	25.6	103	85-120	
tert-Butylbenzene	25.0	26.0	104	85-120	
1,2,4-Trimethylbenzene	25.0	25.9	104	85-120	
sec-Butylbenzene	25.0	26.9	108	85-120	
1,3-Dichlorobenzene	25.0	26.3	105	80-120	
4-Isopropyltoluene	25.0	25.5	102	85-120	
1,4-Dichlorobenzene	25.0	26.7	107	85-120	
1,2-Dichlorobenzene	25.0	26.9	108	85-120	
n-Butylbenzene	25.0	27.0	108	85-125	
1,2-Dibromo-3-Chloropropane	25.0	23.3	93	65-130	
1,2,4-Trichlorobenzene	25.0	26.0	104	80-125	
Hexachlorobutadiene	25.0	26.2	105	65-150	
Naphthalene	25.0	28.6	114	80-125	
1,2,3-Trichlorobenzene	25.0	26.2	105	70-125	

# Column to be used to flag recovery and RPD values



FORM IV  
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Lab File ID: lfmt09.d Lab Sample ID: MB 200-11234/1-A  
 Matrix: Solid Heated Purge: (Y/N) N  
 Instrument ID: L.i Date Analyzed: 12/16/2010 13:32  
 GC Column: DB-624 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 200-11263/3	lfmt03.d	12/16/2010 10:14
	LCS 200-11234/6-A	lfmt04.d	12/16/2010 10:46
MC-S-32451	200-2954-1	lfmt10.d	12/16/2010 14:23
MC-S-32519	200-2954-2	lfmt11.d	12/16/2010 14:55
MC-S-32590	200-2954-3	lfmt12.d	12/16/2010 15:27
MC-S-32448	200-2954-4	lfmt13.d	12/16/2010 16:00
MC-S-32557	200-2954-5	lfmt14.d	12/16/2010 16:32
MC-S-32463	200-2954-6	lfmt15.d	12/16/2010 17:04
MC-S-32549	200-2954-7	lfmt16.d	12/16/2010 17:36
MC-S-32570	200-2954-8	lfmt17.d	12/16/2010 18:08
MC-S-32477	200-2954-9	lfmt18.d	12/16/2010 18:40
MC-MEOH BLANK	200-2954-10	lfmt19.d	12/16/2010 19:12
MC-S-32525	200-2954-11	lfmt20.d	12/16/2010 19:45

FORM V  
GC/MS VOA INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Lab File ID: lfm02.d BFB Injection Date: 11/20/2010  
 Instrument ID: L.i BFB Injection Time: 14:45  
 Analysis Batch No.: 9968

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	23.8
75	30.0 - 60.0 % of mass 95	48.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.4
173	Less than 2.0 % of mass 174	0.0 (0.0)1
174	50.0 - 120.00 % of mass 95	75.5
175	5.0 - 9.0 % of mass 174	6.4 (8.5)1
176	95.0 - 101.0 % of mass 174	72.9 (96.6)1
177	5.0 - 9.0 % of mass 176	5.2 (7.1)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 200-9968/4	lfm04.d	11/20/2010	15:36
	IC 200-9968/5	lfm05.d	11/20/2010	16:09
	IC 200-9968/6	lfm06.d	11/20/2010	16:41
	ICIS 200-9968/7	lfm07.d	11/20/2010	17:13
	IC 200-9968/8	lfm08.d	11/20/2010	17:45
	IC 200-9968/9	lfm09.d	11/20/2010	18:17
	ICV 200-9968/12	lfm12.d	11/20/2010	19:53

FORM V  
GC/MS VOA INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Lab File ID: lfmt01.d BFB Injection Date: 12/16/2010  
 Instrument ID: L.i BFB Injection Time: 09:22  
 Analysis Batch No.: 11263

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.7
75	30.0 - 60.0 % of mass 95	45.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.8
173	Less than 2.0 % of mass 174	0.0 (0.0)1
174	50.0 - 120.00 % of mass 95	76.0
175	5.0 - 9.0 % of mass 174	5.8 (7.6)1
176	95.0 - 101.0 % of mass 174	73.7 (97.0)1
177	5.0 - 9.0 % of mass 176	5.0 (6.8)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 200-11263/2	lfmt02.d	12/16/2010	09:42
	LCS 200-11263/3	lfmt03.d	12/16/2010	10:14
	LCS 200-11234/6-A	lfmt04.d	12/16/2010	10:46
	MB 200-11234/1-A	lfmt09.d	12/16/2010	13:32
MC-S-32451	200-2954-1	lfmt10.d	12/16/2010	14:23
MC-S-32519	200-2954-2	lfmt11.d	12/16/2010	14:55
MC-S-32590	200-2954-3	lfmt12.d	12/16/2010	15:27
MC-S-32448	200-2954-4	lfmt13.d	12/16/2010	16:00
MC-S-32557	200-2954-5	lfmt14.d	12/16/2010	16:32
MC-S-32463	200-2954-6	lfmt15.d	12/16/2010	17:04
MC-S-32549	200-2954-7	lfmt16.d	12/16/2010	17:36
MC-S-32570	200-2954-8	lfmt17.d	12/16/2010	18:08
MC-S-32477	200-2954-9	lfmt18.d	12/16/2010	18:40
MC-MEOH BLANK	200-2954-10	lfmt19.d	12/16/2010	19:12
MC-S-32525	200-2954-11	lfmt20.d	12/16/2010	19:45

FORM VIII  
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Sample No.: ICIS 200-9968/7 Date Analyzed: 11/20/2010 17:13  
 Instrument ID: L.i GC Column: DB-624 ID: 0.53 (mm)  
 Lab File ID (Standard): lfm07.d Heated Purge: (Y/N) N  
 Calibration ID: 3377

	FB		CBZ		DCB	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	1914600	9.84	1521264	15.66	888191	20.05
UPPER LIMIT	3829200	10.34	3042528	16.16	1776382	20.55
LOWER LIMIT	957300	9.34	760632	15.16	444096	19.55
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 200-9968/12	1990975	9.84	1581424	15.65	903144	20.04

FB = Fluorobenzene  
 CBZ = Chlorobenzene-d5  
 DCB = 1,4-Dichlorobenzene-d4  
 Area Limit = 50%-200% of internal standard area  
 RT Limit = ± 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII  
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Sample No.: CCVIS 200-11263/2 Date Analyzed: 12/16/2010 09:42  
 Instrument ID: L.i GC Column: DB-624 ID: 0.53(mm)  
 Lab File ID (Standard): lfmt02.d Heated Purge: (Y/N) N  
 Calibration ID: 3377

	FB		CBZ		DCB		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	2656449	9.85	2015665	15.65	1180078	20.05	
UPPER LIMIT	5312898	10.35	4031330	16.15	2360156	20.55	
LOWER LIMIT	1328225	9.35	1007833	15.15	590039	19.55	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 200-11263/3		2669786	9.83	1999487	15.65	1153477	20.05
LCS 200-11234/6-A		2578351	9.80	1957661	15.65	1127826	20.06
MB 200-11234/1-A		2541450	9.81	1930264	15.64	1062567	20.06
200-2954-1	MC-S-32451	2609054	9.81	1913349	15.66	1087775	20.07
200-2954-2	MC-S-32519	2486388	9.80	1941751	15.65	1112972	20.06
200-2954-3	MC-S-32590	2501756	9.81	1868765	15.65	1054244	20.06
200-2954-4	MC-S-32448	2580768	9.81	1924709	15.64	1075021	20.06
200-2954-5	MC-S-32557	2502452	9.81	1869648	15.66	1055645	20.06
200-2954-6	MC-S-32463	2630046	9.80	2051265	15.65	1131429	20.05
200-2954-7	MC-S-32549	2733045	9.81	2152704	15.64	1202145	20.06
200-2954-8	MC-S-32570	2731762	9.81	2089822	15.64	1159229	20.05
200-2954-9	MC-S-32477	2731448	9.80	2055792	15.65	1149724	20.05
200-2954-10	MC-MEOH BLANK	2808799	9.80	2151052	15.65	1195923	20.06
200-2954-11	MC-S-32525	2632700	9.80	2027624	15.64	1130500	20.06

FB = Fluorobenzene  
 CBZ = Chlorobenzene-d5  
 DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area  
 RT Limit = ± 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32451 Lab Sample ID: 200-2954-1  
 Matrix: Solid Lab File ID: lfmt10.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 9.191(g) Date Analyzed: 12/16/2010 14:23  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	11	U	11	5.4
74-87-3	Chloromethane	11	U	11	4.0
75-01-4	Vinyl chloride	11	U	11	5.4
74-83-9	Bromomethane	11	* B	11	3.8
75-00-3	Chloroethane	11	U *	11	6.5
75-69-4	Trichlorofluoromethane	11	U *	11	5.4
75-35-4	1,1-Dichloroethene	11	U *	11	2.3
76-13-1	Freon TF	11	U *	11	3.0
67-64-1	Acetone	54	U	54	11
74-88-4	Methyl iodide	11	U *	11	5.4
75-15-0	Carbon disulfide	11	U *	11	2.1
79-20-9	Methyl acetate	11	U	11	5.4
75-09-2	Methylene Chloride	11	U	11	5.4
156-60-5	trans-1,2-Dichloroethene	11	U	11	5.4
1634-04-4	Methyl t-butyl ether	11	U	11	5.4
75-34-3	1,1-Dichloroethane	11	U *	11	3.9
108-05-4	Vinyl acetate	11	U	11	5.4
594-20-7	2,2-Dichloropropane	11	U	11	5.0
156-59-2	cis-1,2-Dichloroethene	11	U	11	2.3
78-93-3	2-Butanone	54	U	54	12
74-97-5	Bromochloromethane	11	U	11	5.8
109-99-9	Tetrahydrofuran	150	U	150	54
67-66-3	Chloroform	11	U	11	3.6
71-55-6	1,1,1-Trichloroethane	11	U	11	3.9
110-82-7	Cyclohexane	11	U	11	3.8
563-58-6	1,1-Dichloropropene	11	U	11	2.4
56-23-5	Carbon tetrachloride	11	U	11	3.5
78-83-1	Isobutyl alcohol	540	U *	540	270
71-43-2	Benzene	11	U	11	3.4
107-06-2	1,2-Dichloroethane	11	U	11	3.6
79-01-6	Trichloroethene	11	U	11	5.4
108-87-2	Methylcyclohexane	11	U	11	5.4
78-87-5	1,2-Dichloropropane	11	U	11	4.1
74-95-3	Dibromomethane	11	U	11	2.7
123-91-1	1,4-Dioxane	540	U	540	290
75-27-4	Bromodichloromethane	11	U	11	4.0

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32451 Lab Sample ID: 200-2954-1  
 Matrix: Solid Lab File ID: lfmt10.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 9.191(g) Date Analyzed: 12/16/2010 14:23  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	11	U	11	1.4
10061-01-5	cis-1,3-Dichloropropene	11	U	11	3.5
108-10-1	4-Methyl-2-pentanone	54	U	54	2.3
108-88-3	Toluene	11	U	11	5.4
10061-02-6	trans-1,3-Dichloropropene	11	U	11	5.4
79-00-5	1,1,2-Trichloroethane	11	U	11	4.6
127-18-4	Tetrachloroethene	11	U	11	5.4
142-28-9	1,3-Dichloropropane	11	U	11	3.6
591-78-6	2-Hexanone	54	U	54	11
124-48-1	Dibromochloromethane	11	U	11	4.0
106-93-4	1,2-Dibromoethane	11	U	11	5.4
108-90-7	Chlorobenzene	11	U	11	2.5
630-20-6	1,1,1,2-Tetrachloroethane	11	U	11	3.9
100-41-4	Ethylbenzene	11	U	11	5.4
179601-23-1	m&p-Xylene	11	U	11	5.4
95-47-6	o-Xylene	11	U	11	5.4
100-42-5	Styrene	11	U	11	5.4
75-25-2	Bromoform	11	U	11	4.2
98-82-8	Isopropylbenzene	11	U	11	5.4
108-86-1	Bromobenzene	11	U	11	4.0
79-34-5	1,1,2,2-Tetrachloroethane	11	U	11	4.0
96-18-4	1,2,3-Trichloropropane	11	U	11	5.9
103-65-1	n-Propylbenzene	11	U	11	5.4
95-49-8	2-Chlorotoluene	11	U	11	3.6
106-43-4	4-Chlorotoluene	11	U	11	3.7
108-67-8	1,3,5-Trimethylbenzene	11	U	11	3.5
98-06-6	tert-Butylbenzene	11	U	11	5.4
95-63-6	1,2,4-Trimethylbenzene	11	U	11	3.7
135-98-8	sec-Butylbenzene	11	U	11	5.4
541-73-1	1,3-Dichlorobenzene	11	U	11	2.7
99-87-6	4-Isopropyltoluene	11	U	11	2.0
106-46-7	1,4-Dichlorobenzene	11	U	11	2.5
95-50-1	1,2-Dichlorobenzene	11	U	11	3.0
104-51-8	n-Butylbenzene	11	U	11	5.4
96-12-8	1,2-Dibromo-3-Chloropropane	11	U *	11	5.0
120-82-1	1,2,4-Trichlorobenzene	11	U	11	1.7



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32451 Lab Sample ID: 200-2954-1  
 Matrix: Solid Lab File ID: lfmt10.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 9.191(g) Date Analyzed: 12/16/2010 14:23  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	11	U	11	5.4
91-20-3	Naphthalene	11	U *	11	5.4
87-61-6	1,2,3-Trichlorobenzene	11	U	11	2.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	74		65-155
2037-26-5	Toluene-d8	109		80-115
460-00-4	Bromofluorobenzene	100		80-115
2199-69-1	1,2-Dichlorobenzene-d4	104		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32519 Lab Sample ID: 200-2954-2  
 Matrix: Solid Lab File ID: lfmt11.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 13.22(g) Date Analyzed: 12/16/2010 14:55  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	7.6	U	7.6	3.8
74-87-3	Chloromethane	7.6	U	7.6	2.8
75-01-4	Vinyl chloride	7.6	U	7.6	3.8
74-83-9	Bromomethane	5.7	J * B	7.6	2.6
75-00-3	Chloroethane	7.6	U *	7.6	4.5
75-69-4	Trichlorofluoromethane	7.6	U *	7.6	3.8
75-35-4	1,1-Dichloroethene	7.6	U *	7.6	1.6
76-13-1	Freon TF	7.6	U *	7.6	2.1
67-64-1	Acetone	38	U	38	7.6
74-88-4	Methyl iodide	7.6	U *	7.6	3.8
75-15-0	Carbon disulfide	7.6	U *	7.6	1.4
79-20-9	Methyl acetate	7.6	U	7.6	3.8
75-09-2	Methylene Chloride	7.6	U	7.6	3.8
156-60-5	trans-1,2-Dichloroethene	7.6	U	7.6	3.8
1634-04-4	Methyl t-butyl ether	7.6	U	7.6	3.8
75-34-3	1,1-Dichloroethane	7.6	U *	7.6	2.7
108-05-4	Vinyl acetate	7.6	U	7.6	3.8
594-20-7	2,2-Dichloropropane	7.6	U	7.6	3.5
156-59-2	cis-1,2-Dichloroethene	7.6	U	7.6	1.6
78-93-3	2-Butanone	38	U	38	8.3
74-97-5	Bromochloromethane	7.6	U	7.6	4.0
109-99-9	Tetrahydrofuran	110	U	110	38
67-66-3	Chloroform	7.6	U	7.6	2.5
71-55-6	1,1,1-Trichloroethane	7.6	U	7.6	2.7
110-82-7	Cyclohexane	7.6	U	7.6	2.6
563-58-6	1,1-Dichloropropene	7.6	U	7.6	1.7
56-23-5	Carbon tetrachloride	7.6	U	7.6	2.4
78-83-1	Isobutyl alcohol	380	U *	380	190
71-43-2	Benzene	7.6	U	7.6	2.3
107-06-2	1,2-Dichloroethane	7.6	U	7.6	2.5
79-01-6	Trichloroethene	7.6	U	7.6	3.8
108-87-2	Methylcyclohexane	7.6	U	7.6	3.8
78-87-5	1,2-Dichloropropane	7.6	U	7.6	2.9
74-95-3	Dibromomethane	7.6	U	7.6	1.9
123-91-1	1,4-Dioxane	380	U	380	200
75-27-4	Bromodichloromethane	7.6	U	7.6	2.8

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32519 Lab Sample ID: 200-2954-2  
 Matrix: Solid Lab File ID: lfmt11.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 13.22(g) Date Analyzed: 12/16/2010 14:55  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	7.6	U	7.6	0.98
10061-01-5	cis-1,3-Dichloropropene	7.6	U	7.6	2.4
108-10-1	4-Methyl-2-pentanone	38	U	38	1.6
108-88-3	Toluene	7.6	U	7.6	3.8
10061-02-6	trans-1,3-Dichloropropene	7.6	U	7.6	3.8
79-00-5	1,1,2-Trichloroethane	7.6	U	7.6	3.2
127-18-4	Tetrachloroethene	7.6	U	7.6	3.8
142-28-9	1,3-Dichloropropane	7.6	U	7.6	2.5
591-78-6	2-Hexanone	38	U	38	7.6
124-48-1	Dibromochloromethane	7.6	U	7.6	2.8
106-93-4	1,2-Dibromoethane	7.6	U	7.6	3.8
108-90-7	Chlorobenzene	7.6	U	7.6	1.7
630-20-6	1,1,1,2-Tetrachloroethane	7.6	U	7.6	2.7
100-41-4	Ethylbenzene	7.6	U	7.6	3.8
179601-23-1	m&p-Xylene	7.6	U	7.6	3.8
95-47-6	o-Xylene	7.6	U	7.6	3.8
100-42-5	Styrene	7.6	U	7.6	3.8
75-25-2	Bromoform	7.6	U	7.6	3.0
98-82-8	Isopropylbenzene	7.6	U	7.6	3.8
108-86-1	Bromobenzene	7.6	U	7.6	2.8
79-34-5	1,1,2,2-Tetrachloroethane	7.6	U	7.6	2.8
96-18-4	1,2,3-Trichloropropane	7.6	U	7.6	4.1
103-65-1	n-Propylbenzene	7.6	U	7.6	3.8
95-49-8	2-Chlorotoluene	7.6	U	7.6	2.5
106-43-4	4-Chlorotoluene	7.6	U	7.6	2.6
108-67-8	1,3,5-Trimethylbenzene	7.6	U	7.6	2.4
98-06-6	tert-Butylbenzene	7.6	U	7.6	3.8
95-63-6	1,2,4-Trimethylbenzene	7.6	U	7.6	2.6
135-98-8	sec-Butylbenzene	7.6	U	7.6	3.8
541-73-1	1,3-Dichlorobenzene	7.6	U	7.6	1.9
99-87-6	4-Isopropyltoluene	7.6	U	7.6	1.4
106-46-7	1,4-Dichlorobenzene	7.6	U	7.6	1.7
95-50-1	1,2-Dichlorobenzene	7.6	U	7.6	2.1
104-51-8	n-Butylbenzene	7.6	U	7.6	3.8
96-12-8	1,2-Dibromo-3-Chloropropane	7.6	U *	7.6	3.5
120-82-1	1,2,4-Trichlorobenzene	7.6	U	7.6	1.2

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32519 Lab Sample ID: 200-2954-2  
 Matrix: Solid Lab File ID: lfmt11.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 13.22(g) Date Analyzed: 12/16/2010 14:55  
 Soil Aliquot Vol.: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	7.6	U	7.6	3.8
91-20-3	Naphthalene	7.6	U *	7.6	3.8
87-61-6	1,2,3-Trichlorobenzene	7.6	U	7.6	1.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	85		65-155
2037-26-5	Toluene-d8	106		80-115
460-00-4	Bromofluorobenzene	102		80-115
2199-69-1	1,2-Dichlorobenzene-d4	105		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32590 Lab Sample ID: 200-2954-3  
 Matrix: Solid Lab File ID: lfmt12.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 11.139(g) Date Analyzed: 12/16/2010 15:27  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	9.0	U	9.0	4.5
74-87-3	Chloromethane	9.0	U	9.0	3.3
75-01-4	Vinyl chloride	9.0	U	9.0	4.5
74-83-9	Bromomethane	5.9	J * B	9.0	3.1
75-00-3	Chloroethane	9.0	U *	9.0	5.4
75-69-4	Trichlorofluoromethane	9.0	U *	9.0	4.5
75-35-4	1,1-Dichloroethene	9.0	U *	9.0	1.9
76-13-1	Freon TF	9.0	U *	9.0	2.5
67-64-1	Acetone	45	U	45	9.0
74-88-4	Methyl iodide	9.0	U *	9.0	4.5
75-15-0	Carbon disulfide	9.0	U *	9.0	1.7
79-20-9	Methyl acetate	9.0	U	9.0	4.5
75-09-2	Methylene Chloride	9.0	U	9.0	4.5
156-60-5	trans-1,2-Dichloroethene	9.0	U	9.0	4.5
1634-04-4	Methyl t-butyl ether	9.0	U	9.0	4.5
75-34-3	1,1-Dichloroethane	9.0	U *	9.0	3.2
108-05-4	Vinyl acetate	9.0	U	9.0	4.5
594-20-7	2,2-Dichloropropane	9.0	U	9.0	4.1
156-59-2	cis-1,2-Dichloroethene	9.0	U	9.0	1.9
78-93-3	2-Butanone	45	U	45	9.9
74-97-5	Bromochloromethane	9.0	U	9.0	4.8
109-99-9	Tetrahydrofuran	130	U	130	45
67-66-3	Chloroform	9.0	U	9.0	3.0
71-55-6	1,1,1-Trichloroethane	12		9.0	3.2
110-82-7	Cyclohexane	9.0	U	9.0	3.1
563-58-6	1,1-Dichloropropene	9.0	U	9.0	2.0
56-23-5	Carbon tetrachloride	9.0	U	9.0	2.9
78-83-1	Isobutyl alcohol	450	U *	450	220
71-43-2	Benzene	9.0	U	9.0	2.8
107-06-2	1,2-Dichloroethane	9.0	U	9.0	3.0
79-01-6	Trichloroethene	9.0	U	9.0	4.5
108-87-2	Methylcyclohexane	9.0	U	9.0	4.5
78-87-5	1,2-Dichloropropane	9.0	U	9.0	3.4
74-95-3	Dibromomethane	9.0	U	9.0	2.2
123-91-1	1,4-Dioxane	450	U	450	240
75-27-4	Bromodichloromethane	9.0	U	9.0	3.3

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32590 Lab Sample ID: 200-2954-3  
 Matrix: Solid Lab File ID: lfmt12.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 11.139(g) Date Analyzed: 12/16/2010 15:27  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	9.0	U	9.0	1.2
10061-01-5	cis-1,3-Dichloropropene	9.0	U	9.0	2.9
108-10-1	4-Methyl-2-pentanone	45	U	45	1.9
108-88-3	Toluene	9.0	U	9.0	4.5
10061-02-6	trans-1,3-Dichloropropene	9.0	U	9.0	4.5
79-00-5	1,1,2-Trichloroethane	9.0	U	9.0	3.8
127-18-4	Tetrachloroethene	9.0	U	9.0	4.5
142-28-9	1,3-Dichloropropane	9.0	U	9.0	3.0
591-78-6	2-Hexanone	45	U	45	9.0
124-48-1	Dibromochloromethane	9.0	U	9.0	3.3
106-93-4	1,2-Dibromoethane	9.0	U	9.0	4.5
108-90-7	Chlorobenzene	9.0	U	9.0	2.1
630-20-6	1,1,1,2-Tetrachloroethane	9.0	U	9.0	3.2
100-41-4	Ethylbenzene	9.0	U	9.0	4.5
179601-23-1	m&p-Xylene	9.0	U	9.0	4.5
95-47-6	o-Xylene	9.0	U	9.0	4.5
100-42-5	Styrene	9.0	U	9.0	4.5
75-25-2	Bromoform	9.0	U	9.0	3.5
98-82-8	Isopropylbenzene	9.0	U	9.0	4.5
108-86-1	Bromobenzene	9.0	U	9.0	3.3
79-34-5	1,1,2,2-Tetrachloroethane	9.0	U	9.0	3.3
96-18-4	1,2,3-Trichloropropane	9.0	U	9.0	4.8
103-65-1	n-Propylbenzene	9.0	U	9.0	4.5
95-49-8	2-Chlorotoluene	9.0	U	9.0	3.0
106-43-4	4-Chlorotoluene	9.0	U	9.0	3.1
108-67-8	1,3,5-Trimethylbenzene	9.0	U	9.0	2.9
98-06-6	tert-Butylbenzene	9.0	U	9.0	4.5
95-63-6	1,2,4-Trimethylbenzene	9.0	U	9.0	3.1
135-98-8	sec-Butylbenzene	9.0	U	9.0	4.5
541-73-1	1,3-Dichlorobenzene	9.0	U	9.0	2.2
99-87-6	4-Isopropyltoluene	9.0	U	9.0	1.6
106-46-7	1,4-Dichlorobenzene	9.0	U	9.0	2.1
95-50-1	1,2-Dichlorobenzene	9.0	U	9.0	2.5
104-51-8	n-Butylbenzene	9.0	U	9.0	4.5
96-12-8	1,2-Dibromo-3-Chloropropane	9.0	U *	9.0	4.1
120-82-1	1,2,4-Trichlorobenzene	9.0	U	9.0	1.4

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32590 Lab Sample ID: 200-2954-3  
 Matrix: Solid Lab File ID: lfmt12.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 11.139(g) Date Analyzed: 12/16/2010 15:27  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	9.0	U	9.0	4.5
91-20-3	Naphthalene	9.0	U *	9.0	4.5
87-61-6	1,2,3-Trichlorobenzene	9.0	U	9.0	2.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	76		65-155
2037-26-5	Toluene-d8	108		80-115
460-00-4	Bromofluorobenzene	101		80-115
2199-69-1	1,2-Dichlorobenzene-d4	104		45-145



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Burlington</u>	Job No.: <u>200-2954-1</u>
SDG No.: <u>MONTGO (200-2954)</u>	
Client Sample ID: <u>MC-S-32448</u>	Lab Sample ID: <u>200-2954-4</u>
Matrix: <u>Solid</u>	Lab File ID: <u>lfmt13.d</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>12/12/2010 00:00</u>
Sample wt/vol: <u>12.475(g)</u>	Date Analyzed: <u>12/16/2010 16:00</u>
Soil Aliquot Vol: <u>500 (uL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>10(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.53(mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>11263</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	8.0	U	8.0	4.0
74-87-3	Chloromethane	8.0	U	8.0	3.0
75-01-4	Vinyl chloride	8.0	U	8.0	4.0
74-83-9	Bromomethane	5.5	J * B	8.0	2.8
75-00-3	Chloroethane	8.0	U *	8.0	4.8
75-69-4	Trichlorofluoromethane	8.0	U *	8.0	4.0
75-35-4	1,1-Dichloroethene	8.0	U *	8.0	1.7
76-13-1	Freon TF	8.0	U *	8.0	2.2
67-64-1	Acetone	40	U	40	8.0
74-88-4	Methyl iodide	8.0	U *	8.0	4.0
75-15-0	Carbon disulfide	8.0	U *	8.0	1.5
79-20-9	Methyl acetate	8.0	U	8.0	4.0
75-09-2	Methylene Chloride	8.0	U	8.0	4.0
156-60-5	trans-1,2-Dichloroethene	8.0	U	8.0	4.0
1634-04-4	Methyl t-butyl ether	8.0	U	8.0	4.0
75-34-3	1,1-Dichloroethane	8.0	U *	8.0	2.9
108-05-4	Vinyl acetate	8.0	U	8.0	4.0
594-20-7	2,2-Dichloropropane	8.0	U	8.0	3.7
156-59-2	cis-1,2-Dichloroethene	8.0	U	8.0	1.7
78-93-3	2-Butanone	40	U	40	8.8
74-97-5	Bromochloromethane	8.0	U	8.0	4.2
109-99-9	Tetrahydrofuran	110	U	110	40
67-66-3	Chloroform	8.0	U	8.0	2.6
71-55-6	1,1,1-Trichloroethane	8.0	U	8.0	2.9
110-82-7	Cyclohexane	8.0	U	8.0	2.8
563-58-6	1,1-Dichloropropene	8.0	U	8.0	1.8
56-23-5	Carbon tetrachloride	8.0	U	8.0	2.6
78-83-1	Isobutyl alcohol	400	U *	400	200
71-43-2	Benzene	8.0	U	8.0	2.5
107-06-2	1,2-Dichloroethane	8.0	U	8.0	2.6
79-01-6	Trichloroethene	8.0	U	8.0	4.0
108-87-2	Methylcyclohexane	8.0	U	8.0	4.0
78-87-5	1,2-Dichloropropane	8.0	U	8.0	3.0
74-95-3	Dibromomethane	8.0	U	8.0	2.0
123-91-1	1,4-Dioxane	400	U	400	220
75-27-4	Bromodichloromethane	8.0	U	8.0	3.0

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Burlington</u>	Job No.: <u>200-2954-1</u>
SDG No.: <u>MONTGO (200-2954)</u>	
Client Sample ID: <u>MC-S-32448</u>	Lab Sample ID: <u>200-2954-4</u>
Matrix: <u>Solid</u>	Lab File ID: <u>lfmt13.d</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>12/12/2010 00:00</u>
Sample wt/vol: <u>12.475(g)</u>	Date Analyzed: <u>12/16/2010 16:00</u>
Soil Aliquot Vol: <u>500 (uL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>10(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>11263</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	8.0	U	8.0	1.0
10061-01-5	cis-1,3-Dichloropropene	8.0	U	8.0	2.6
108-10-1	4-Methyl-2-pentanone	40	U	40	1.7
108-88-3	Toluene	8.0	U	8.0	4.0
10061-02-6	trans-1,3-Dichloropropene	8.0	U	8.0	4.0
79-00-5	1,1,2-Trichloroethane	8.0	U	8.0	3.4
127-18-4	Tetrachloroethene	8.0	U	8.0	4.0
142-28-9	1,3-Dichloropropane	8.0	U	8.0	2.6
591-78-6	2-Hexanone	40	U	40	8.0
124-48-1	Dibromochloromethane	8.0	U	8.0	3.0
106-93-4	1,2-Dibromoethane	8.0	U	8.0	4.0
108-90-7	Chlorobenzene	8.0	U	8.0	1.8
630-20-6	1,1,1,2-Tetrachloroethane	8.0	U	8.0	2.9
100-41-4	Ethylbenzene	8.0	U	8.0	4.0
179601-23-1	m&p-Xylene	8.0	U	8.0	4.0
95-47-6	o-Xylene	8.0	U	8.0	4.0
100-42-5	Styrene	8.0	U	8.0	4.0
75-25-2	Bromoform	8.0	U	8.0	3.1
98-82-8	Isopropylbenzene	8.0	U	8.0	4.0
108-86-1	Bromobenzene	8.0	U	8.0	3.0
79-34-5	1,1,2,2-Tetrachloroethane	8.0	U	8.0	3.0
96-18-4	1,2,3-Trichloropropane	8.0	U	8.0	4.3
103-65-1	n-Propylbenzene	8.0	U	8.0	4.0
95-49-8	2-Chlorotoluene	8.0	U	8.0	2.6
106-43-4	4-Chlorotoluene	8.0	U	8.0	2.7
108-67-8	1,3,5-Trimethylbenzene	8.0	U	8.0	2.6
98-06-6	tert-Butylbenzene	8.0	U	8.0	4.0
95-63-6	1,2,4-Trimethylbenzene	8.0	U	8.0	2.7
135-98-8	sec-Butylbenzene	8.0	U	8.0	4.0
541-73-1	1,3-Dichlorobenzene	8.0	U	8.0	2.0
99-87-6	4-Isopropyltoluene	8.0	U	8.0	1.4
106-46-7	1,4-Dichlorobenzene	8.0	U	8.0	1.8
95-50-1	1,2-Dichlorobenzene	8.0	U	8.0	2.2
104-51-8	n-Butylbenzene	8.0	U	8.0	4.0
96-12-8	1,2-Dibromo-3-Chloropropane	8.0	U *	8.0	3.7
120-82-1	1,2,4-Trichlorobenzene	8.0	U	8.0	1.3

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32448 Lab Sample ID: 200-2954-4  
 Matrix: Solid Lab File ID: lfmt13.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 12.475(g) Date Analyzed: 12/16/2010 16:00  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	8.0	U	8.0	4.0
91-20-3	Naphthalene	8.0	U *	8.0	4.0
87-61-6	1,2,3-Trichlorobenzene	8.0	U	8.0	2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	80		65-155
2037-26-5	Toluene-d8	112		80-115
460-00-4	Bromofluorobenzene	105		80-115
2199-69-1	1,2-Dichlorobenzene-d4	109		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32557 Lab Sample ID: 200-2954-5  
 Matrix: Solid Lab File ID: lfmt14.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 9.604(g) Date Analyzed: 12/16/2010 16:32  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	10	U	10	5.2
74-87-3	Chloromethane	10	U	10	3.9
75-01-4	Vinyl chloride	10	U	10	5.2
74-83-9	Bromomethane	8.5	J * B	10	3.6
75-00-3	Chloroethane	10	U *	10	6.2
75-69-4	Trichlorofluoromethane	10	U *	10	5.2
75-35-4	1,1-Dichloroethene	10	U *	10	2.2
76-13-1	Freon TF	10	U *	10	2.9
67-64-1	Acetone	52	U	52	10
74-88-4	Methyl iodide	10	U *	10	5.2
75-15-0	Carbon disulfide	10	U *	10	2.0
79-20-9	Methyl acetate	10	U	10	5.2
75-09-2	Methylene Chloride	10	U	10	5.2
156-60-5	trans-1,2-Dichloroethene	10	U	10	5.2
1634-04-4	Methyl t-butyl ether	10	U	10	5.2
75-34-3	1,1-Dichloroethane	10	U *	10	3.7
108-05-4	Vinyl acetate	10	U	10	5.2
594-20-7	2,2-Dichloropropane	10	U	10	4.8
156-59-2	cis-1,2-Dichloroethene	10	U	10	2.2
78-93-3	2-Butanone	52	U	52	11
74-97-5	Bromochloromethane	10	U	10	5.5
109-99-9	Tetrahydrofuran	150	U	150	52
67-66-3	Chloroform	5.5	J	10	3.4
71-55-6	1,1,1-Trichloroethane	10	U	10	3.7
110-82-7	Cyclohexane	10	U	10	3.6
563-58-6	1,1-Dichloropropene	10	U	10	2.3
56-23-5	Carbon tetrachloride	620		10	3.3
78-83-1	Isobutyl alcohol	520	U *	520	260
71-43-2	Benzene	10	U	10	3.2
107-06-2	1,2-Dichloroethane	10	U	10	3.4
79-01-6	Trichloroethene	10	U	10	5.2
108-87-2	Methylcyclohexane	10	U	10	5.2
78-87-5	1,2-Dichloropropane	10	U	10	4.0
74-95-3	Dibromomethane	10	U	10	2.6
123-91-1	1,4-Dioxane	520	U	520	280
75-27-4	Bromodichloromethane	10	U	10	3.9

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32557 Lab Sample ID: 200-2954-5  
 Matrix: Solid Lab File ID: lfmt14.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 9.604(g) Date Analyzed: 12/16/2010 16:32  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	10	U	10	1.4
10061-01-5	cis-1,3-Dichloropropene	10	U	10	3.3
108-10-1	4-Methyl-2-pentanone	52	U	52	2.2
108-88-3	Toluene	10	U	10	5.2
10061-02-6	trans-1,3-Dichloropropene	10	U	10	5.2
79-00-5	1,1,2-Trichloroethane	10	U	10	4.4
127-18-4	Tetrachloroethene	10	U	10	5.2
142-28-9	1,3-Dichloropropane	10	U	10	3.4
591-78-6	2-Hexanone	52	U	52	10
124-48-1	Dibromochloromethane	10	U	10	3.9
106-93-4	1,2-Dibromoethane	10	U	10	5.2
108-90-7	Chlorobenzene	10	U	10	2.4
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	3.7
100-41-4	Ethylbenzene	10	U	10	5.2
179601-23-1	m&p-Xylene	10	U	10	5.2
95-47-6	o-Xylene	10	U	10	5.2
100-42-5	Styrene	10	U	10	5.2
75-25-2	Bromoform	10	U	10	4.1
98-82-8	Isopropylbenzene	10	U	10	5.2
108-86-1	Bromobenzene	10	U	10	3.9
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	3.9
96-18-4	1,2,3-Trichloropropane	10	U	10	5.6
103-65-1	n-Propylbenzene	10	U	10	5.2
95-49-8	2-Chlorotoluene	10	U	10	3.4
106-43-4	4-Chlorotoluene	10	U	10	3.5
108-67-8	1,3,5-Trimethylbenzene	10	U	10	3.3
98-06-6	tert-Butylbenzene	10	U	10	5.2
95-63-6	1,2,4-Trimethylbenzene	10	U	10	3.5
135-98-8	sec-Butylbenzene	10	U	10	5.2
541-73-1	1,3-Dichlorobenzene	10	U	10	2.6
99-87-6	4-Isopropyltoluene	10	U	10	1.9
106-46-7	1,4-Dichlorobenzene	10	U	10	2.4
95-50-1	1,2-Dichlorobenzene	10	U	10	2.9
104-51-8	n-Butylbenzene	10	U	10	5.2
96-12-8	1,2-Dibromo-3-Chloropropane	10	U *	10	4.8
120-82-1	1,2,4-Trichlorobenzene	10	U	10	1.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32557 Lab Sample ID: 200-2954-5  
 Matrix: Solid Lab File ID: lfmt14.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 9.604(g) Date Analyzed: 12/16/2010 16:32  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	10	U	10	5.2
91-20-3	Naphthalene	10	U *	10	5.2
87-61-6	1,2,3-Trichlorobenzene	10	U	10	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	87		65-155
2037-26-5	Toluene-d8	116	X	80-115
460-00-4	Bromofluorobenzene	108		80-115
2199-69-1	1,2-Dichlorobenzene-d4	111		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32463 Lab Sample ID: 200-2954-6  
 Matrix: Solid Lab File ID: lfmt15.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 8.516(g) Date Analyzed: 12/16/2010 17:04  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	12	U	12	5.9
74-87-3	Chloromethane	12	U	12	4.3
75-01-4	Vinyl chloride	12	U	12	5.9
74-83-9	Bromomethane	10	J * B	12	4.1
75-00-3	Chloroethane	12	U *	12	7.0
75-69-4	Trichlorofluoromethane	12	U *	12	5.9
75-35-4	1,1-Dichloroethene	12	U *	12	2.5
76-13-1	Freon TF	12	U *	12	3.3
67-64-1	Acetone	59	U	59	12
74-88-4	Methyl iodide	12	U *	12	5.9
75-15-0	Carbon disulfide	12	U *	12	2.2
79-20-9	Methyl acetate	12	U	12	5.9
75-09-2	Methylene Chloride	12	U	12	5.9
156-60-5	trans-1,2-Dichloroethene	12	U	12	5.9
1634-04-4	Methyl t-butyl ether	12	U	12	5.9
75-34-3	1,1-Dichloroethane	12	U *	12	4.2
108-05-4	Vinyl acetate	12	U	12	5.9
594-20-7	2,2-Dichloropropane	12	U	12	5.4
156-59-2	cis-1,2-Dichloroethene	12	U	12	2.5
78-93-3	2-Butanone	59	U	59	13
74-97-5	Bromochloromethane	12	U	12	6.2
109-99-9	Tetrahydrofuran	160	U	160	59
67-66-3	Chloroform	12	U	12	3.9
71-55-6	1,1,1-Trichloroethane	12	U	12	4.2
110-82-7	Cyclohexane	12	U	12	4.1
563-58-6	1,1-Dichloropropene	12	U	12	2.6
56-23-5	Carbon tetrachloride	12	U	12	3.8
78-83-1	Isobutyl alcohol	590	U *	590	290
71-43-2	Benzene	12	U	12	3.6
107-06-2	1,2-Dichloroethane	12	U	12	3.9
79-01-6	Trichloroethene	12	U	12	5.9
108-87-2	Methylcyclohexane,	12	U	12	5.9
78-87-5	1,2-Dichloropropane	12	U	12	4.5
74-95-3	Dibromomethane	12	U	12	2.9
123-91-1	1,4-Dioxane	590	U	590	320
75-27-4	Bromodichloromethane	12	U	12	4.3



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32463 Lab Sample ID: 200-2954-6  
 Matrix: Solid Lab File ID: lfmt15.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 8.516(g) Date Analyzed: 12/16/2010 17:04  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	12	U	12	1.5
10061-01-5	cis-1,3-Dichloropropene	12	U	12	3.8
108-10-1	4-Methyl-2-pentanone	59	U	59	2.5
108-88-3	Toluene	12	U	12	5.9
10061-02-6	trans-1,3-Dichloropropene	12	U	12	5.9
79-00-5	1,1,2-Trichloroethane	12	U	12	4.9
127-18-4	Tetrachloroethene	12	U	12	5.9
142-28-9	1,3-Dichloropropane	12	U	12	3.9
591-78-6	2-Hexanone	59	U	59	12
124-48-1	Dibromochloromethane	12	U	12	4.3
106-93-4	1,2-Dibromoethane	12	U	12	5.9
108-90-7	Chlorobenzene	12	U	12	2.7
630-20-6	1,1,1,2-Tetrachloroethane	12	U	12	4.2
100-41-4	Ethylbenzene	12	U	12	5.9
179601-23-1	m&p-Xylene	12	U	12	5.9
95-47-6	o-Xylene	12	U	12	5.9
100-42-5	Styrene	12	U	12	5.9
75-25-2	Bromoform	12	U	12	4.6
98-82-8	Isopropylbenzene	12	U	12	5.9
108-86-1	Bromobenzene	12	U	12	4.3
79-34-5	1,1,2,2-Tetrachloroethane	12	U	12	4.3
96-18-4	1,2,3-Trichloropropane	12	U	12	6.3
103-65-1	n-Propylbenzene	12	U	12	5.9
95-49-8	2-Chlorotoluene	12	U	12	3.9
106-43-4	4-Chlorotoluene	12	U	12	4.0
108-67-8	1,3,5-Trimethylbenzene	12	U	12	3.8
98-06-6	tert-Butylbenzene	12	U	12	5.9
95-63-6	1,2,4-Trimethylbenzene	12	U	12	4.0
135-98-8	sec-Butylbenzene	12	U	12	5.9
541-73-1	1,3-Dichlorobenzene	12	U	12	2.9
99-87-6	4-Isopropyltoluene	12	U	12	2.1
106-46-7	1,4-Dichlorobenzene	12	U	12	2.7
95-50-1	1,2-Dichlorobenzene	12	U	12	3.3
104-51-8	n-Butylbenzene	12	U	12	5.9
96-12-8	1,2-Dibromo-3-Chloropropane	12	U *	12	5.4
120-82-1	1,2,4-Trichlorobenzene	12	U	12	1.9

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32463 Lab Sample ID: 200-2954-6  
 Matrix: Solid Lab File ID: lfmt15.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 8.516(g) Date Analyzed: 12/16/2010 17:04  
 Soil Aliquot Vol.: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	12	U	12	5.9
91-20-3	Naphthalene	12	U *	12	5.9
87-61-6	1,2,3-Trichlorobenzene	12	U	12	2.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	81		65-155
2037-26-5	Toluene-d8	104		80-115
460-00-4	Bromofluorobenzene	102		80-115
2199-69-1	1,2-Dichlorobenzene-d4	103		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington

Job No.: 200-2954-1

SDG No.: MONTGO (200-2954)

Client Sample ID: MC-S-32549

Lab Sample ID: 200-2954-7

Matrix: Solid

Lab File ID: lfmt16.d

Analysis Method: 8260B

Date Collected: 12/12/2010 00:00

Sample wt/vol: 11.308(g)

Date Analyzed: 12/16/2010 17:36

Soil Aliquot Vol: 500 (uL)

Dilution Factor: 1

Soil Extract Vol.: 10 (mL)

GC Column: DB-624 ID: 0.53 (mm)

% Moisture: \_\_\_\_\_

Level: (low/med) Medium

Analysis Batch No.: 11263

Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	8.8	U	8.8	4.4
74-87-3	Chloromethane	8.8	U	8.8	3.3
75-01-4	Vinyl chloride	8.8	U	8.8	4.4
74-83-9	Bromomethane	5.2	J * B	8.8	3.1
75-00-3	Chloroethane	8.8	U *	8.8	5.3
75-69-4	Trichlorofluoromethane	8.8	U *	8.8	4.4
75-35-4	1,1-Dichloroethene	8.8	U *	8.8	1.9
76-13-1	Freon TF	8.8	U *	8.8	2.5
67-64-1	Acetone	44	U	44	8.8
74-88-4	Methyl iodide	8.8	U *	8.8	4.4
75-15-0	Carbon disulfide	8.8	U *	8.8	1.7
79-20-9	Methyl acetate	8.8	U	8.8	4.4
75-09-2	Methylene Chloride	8.8	U	8.8	4.4
156-60-5	trans-1,2-Dichloroethene	8.8	U	8.8	4.4
1634-04-4	Methyl t-butyl ether	8.8	U	8.8	4.4
75-34-3	1,1-Dichloroethane	8.8	U *	8.8	3.2
108-05-4	Vinyl acetate	8.8	U	8.8	4.4
594-20-7	2,2-Dichloropropane	8.8	U	8.8	4.1
156-59-2	cis-1,2-Dichloroethene	8.8	U	8.8	1.9
78-93-3	2-Butanone	44	U	44	9.7
74-97-5	Bromochloromethane	8.8	U	8.8	4.7
109-99-9	Tetrahydrofuran	120	U	120	44
67-66-3	Chloroform	2.9	J	8.8	2.9
71-55-6	1,1,1-Trichloroethane	9.6		8.8	3.2
110-82-7	Cyclohexane	8.8	U	8.8	3.1
563-58-6	1,1-Dichloropropene	8.8	U	8.8	1.9
56-23-5	Carbon tetrachloride	63		8.8	2.8
78-83-1	Isobutyl alcohol	440	U *	440	220
71-43-2	Benzene	8.8	U	8.8	2.7
107-06-2	1,2-Dichloroethane	8.8	U	8.8	2.9
79-01-6	Trichloroethene	8.8	U	8.8	4.4
108-87-2	Methylcyclohexane	8.8	U	8.8	4.4
78-87-5	1,2-Dichloropropane	8.8	U	8.8	3.4
74-95-3	Dibromomethane	8.8	U	8.8	2.2
123-91-1	1,4-Dioxane	440	U	440	240
75-27-4	Bromodichloromethane	8.8	U	8.8	3.3

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32549 Lab Sample ID: 200-2954-7  
 Matrix: Solid Lab File ID: lfmt16.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 11.308(g) Date Analyzed: 12/16/2010 17:36  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	8.8	U	8.8	1.1
10061-01-5	cis-1,3-Dichloropropene	8.8	U	8.8	2.8
108-10-1	4-Methyl-2-pentanone	44	U	44	1.9
108-88-3	Toluene	8.8	U	8.8	4.4
10061-02-6	trans-1,3-Dichloropropene	8.8	U	8.8	4.4
79-00-5	1,1,2-Trichloroethane	8.8	U	8.8	3.7
127-18-4	Tetrachloroethene	8.8	U	8.8	4.4
142-28-9	1,3-Dichloropropane	8.8	U	8.8	2.9
591-78-6	2-Hexanone	44	U	44	8.8
124-48-1	Dibromochloromethane	8.8	U	8.8	3.3
106-93-4	1,2-Dibromoethane	8.8	U	8.8	4.4
108-90-7	Chlorobenzene	8.8	U	8.8	2.0
630-20-6	1,1,1,2-Tetrachloroethane	8.8	U	8.8	3.2
100-41-4	Ethylbenzene	8.8	U	8.8	4.4
179601-23-1	m&p-Xylene	8.8	U	8.8	4.4
95-47-6	o-Xylene	8.8	U	8.8	4.4
100-42-5	Styrene	8.8	U	8.8	4.4
75-25-2	Bromoform	8.8	U	8.8	3.4
98-82-8	Isopropylbenzene	8.8	U	8.8	4.4
108-86-1	Bromobenzene	8.8	U	8.8	3.3
79-34-5	1,1,2,2-Tetrachloroethane	8.8	U	8.8	3.3
96-18-4	1,2,3-Trichloropropane	8.8	U	8.8	4.8
103-65-1	n-Propylbenzene	8.8	U	8.8	4.4
95-49-8	2-Chlorotoluene	8.8	U	8.8	2.9
106-43-4	4-Chlorotoluene	8.8	U	8.8	3.0
108-67-8	1,3,5-Trimethylbenzene	8.8	U	8.8	2.8
98-06-6	tert-Butylbenzene	8.8	U	8.8	4.4
95-63-6	1,2,4-Trimethylbenzene	8.8	U	8.8	3.0
135-98-8	sec-Butylbenzene	8.8	U	8.8	4.4
541-73-1	1,3-Dichlorobenzene	8.8	U	8.8	2.2
99-87-6	4-Isopropyltoluene	8.8	U	8.8	1.6
106-46-7	1,4-Dichlorobenzene	8.8	U	8.8	2.0
95-50-1	1,2-Dichlorobenzene	8.8	U	8.8	2.5
104-51-8	n-Butylbenzene	8.8	U	8.8	4.4
96-12-8	1,2-Dibromo-3-Chloropropane	8.8	U *	8.8	4.1
120-82-1	1,2,4-Trichlorobenzene	8.8	U	8.8	1.4

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32549 Lab Sample ID: 200-2954-7  
 Matrix: Solid Lab File ID: lfmt16.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 11.308(g) Date Analyzed: 12/16/2010 17:36  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	8.8	U	8.8	4.4
91-20-3	Naphthalene	8.8	U *	8.8	4.4
87-61-6	1,2,3-Trichlorobenzene	8.8	U	8.8	2.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	85		65-155
2037-26-5	Toluene-d8	110		80-115
460-00-4	Bromofluorobenzene	107		80-115
2199-69-1	1,2-Dichlorobenzene-d4	109		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Burlington</u>	Job No.: <u>200-2954-1</u>
SDG No.: <u>MONTGO (200-2954)</u>	
Client Sample ID: <u>MC-S-32570</u>	Lab Sample ID: <u>200-2954-8</u>
Matrix: <u>Solid</u>	Lab File ID: <u>lfmt17.d</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>12/12/2010 00:00</u>
Sample wt/vol: <u>10.675(g)</u>	Date Analyzed: <u>12/16/2010 18:08</u>
Soil Aliquot Vol: <u>500 (uL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>10(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.53(mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>11263</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	9.4	U	9.4	4.7
74-87-3	Chloromethane	9.4	U	9.4	3.5
75-01-4	Vinyl chloride	9.4	U	9.4	4.7
74-83-9	Bromomethane	4.2	J * B	9.4	3.3
75-00-3	Chloroethane	9.4	U *	9.4	5.6
75-69-4	Trichlorofluoromethane	9.4	U *	9.4	4.7
75-35-4	1,1-Dichloroethene	9.4	U *	9.4	2.0
76-13-1	Freon TF	9.4	U *	9.4	2.6
67-64-1	Acetone	47	U	47	9.4
74-88-4	Methyl iodide	9.4	U *	9.4	4.7
75-15-0	Carbon disulfide	9.4	U *	9.4	1.8
79-20-9	Methyl acetate	9.4	U	9.4	4.7
75-09-2	Methylene Chloride	9.4	U	9.4	4.7
156-60-5	trans-1,2-Dichloroethene	9.4	U	9.4	4.7
1634-04-4	Methyl t-butyl ether	9.4	U	9.4	4.7
75-34-3	1,1-Dichloroethane	9.4	U *	9.4	3.4
108-05-4	Vinyl acetate	9.4	U	9.4	4.7
594-20-7	2,2-Dichloropropane	9.4	U	9.4	4.3
156-59-2	cis-1,2-Dichloroethene	9.4	U	9.4	2.0
78-93-3	2-Butanone	47	U	47	10
74-97-5	Bromochloromethane	9.4	U	9.4	5.0
109-99-9	Tetrahydrofuran	130	U	130	47
67-66-3	Chloroform	5.7	J	9.4	3.1
71-55-6	1,1,1-Trichloroethane	9.7		9.4	3.4
110-82-7	Cyclohexane	9.4	U	9.4	3.3
563-58-6	1,1-Dichloropropene	9.4	U	9.4	2.1
56-23-5	Carbon tetrachloride	190		9.4	3.0
78-83-1	Isobutyl alcohol	470	U *	470	230
71-43-2	Benzene	9.4	U	9.4	2.9
107-06-2	1,2-Dichloroethane	9.4	U	9.4	3.1
79-01-6	Trichloroethene	9.4	U	9.4	4.7
108-87-2	Methylcyclohexane	9.4	U	9.4	4.7
78-87-5	1,2-Dichloropropane	9.4	U	9.4	3.6
74-95-3	Dibromomethane	9.4	U	9.4	2.3
123-91-1	1,4-Dioxane	470	U	470	250
75-27-4	Bromodichloromethane	9.4	U	9.4	3.5

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32570 Lab Sample ID: 200-2954-8  
 Matrix: Solid Lab File ID: lfmt17.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 10.675(g) Date Analyzed: 12/16/2010 18:08  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	9.4	U	9.4	1.2
10061-01-5	cis-1,3-Dichloropropene	9.4	U	9.4	3.0
108-10-1	4-Methyl-2-pentanone	47	U	47	2.0
108-88-3	Toluene	9.4	U	9.4	4.7
10061-02-6	trans-1,3-Dichloropropene	9.4	U	9.4	4.7
79-00-5	1,1,2-Trichloroethane	9.4	U	9.4	3.9
127-18-4	Tetrachloroethene	9.4	U	9.4	4.7
142-28-9	1,3-Dichloropropane	9.4	U	9.4	3.1
591-78-6	2-Hexanone	47	U	47	9.4
124-48-1	Dibromochloromethane	9.4	U	9.4	3.5
106-93-4	1,2-Dibromoethane	9.4	U	9.4	4.7
108-90-7	Chlorobenzene	9.4	U	9.4	2.2
630-20-6	1,1,1,2-Tetrachloroethane	9.4	U	9.4	3.4
100-41-4	Ethylbenzene	9.4	U	9.4	4.7
179601-23-1	m&p-Xylene	9.4	U	9.4	4.7
95-47-6	o-Xylene	9.4	U	9.4	4.7
100-42-5	Styrene	9.4	U	9.4	4.7
75-25-2	Bromoform	9.4	U	9.4	3.7
98-82-8	Isopropylbenzene	9.4	U	9.4	4.7
108-86-1	Bromobenzene	9.4	U	9.4	3.5
79-34-5	1,1,2,2-Tetrachloroethane	9.4	U	9.4	3.5
96-18-4	1,2,3-Trichloropropane	9.4	U	9.4	5.1
103-65-1	n-Propylbenzene	9.4	U	9.4	4.7
95-49-8	2-Chlorotoluene	9.4	U	9.4	3.1
106-43-4	4-Chlorotoluene	9.4	U	9.4	3.2
108-67-8	1,3,5-Trimethylbenzene	9.4	U	9.4	3.0
98-06-6	tert-Butylbenzene	9.4	U	9.4	4.7
95-63-6	1,2,4-Trimethylbenzene	9.4	U	9.4	3.2
135-98-8	sec-Butylbenzene	9.4	U	9.4	4.7
541-73-1	1,3-Dichlorobenzene	9.4	U	9.4	2.3
99-87-6	4-Isopropyltoluene	9.4	U	9.4	1.7
106-46-7	1,4-Dichlorobenzene	9.4	U	9.4	2.2
95-50-1	1,2-Dichlorobenzene	9.4	U	9.4	2.6
104-51-8	n-Butylbenzene	9.4	U	9.4	4.7
96-12-8	1,2-Dibromo-3-Chloropropane	9.4	U *	9.4	4.3
120-82-1	1,2,4-Trichlorobenzene	9.4	U	9.4	1.5



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32570 Lab Sample ID: 200-2954-8  
 Matrix: Solid Lab File ID: lfmt17.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 10.675(g) Date Analyzed: 12/16/2010 18:08  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	9.4	U	9.4	4.7
91-20-3	Naphthalene	9.4	U *	9.4	4.7
87-61-6	1,2,3-Trichlorobenzene	9.4	U	9.4	2.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	73		65-155
2037-26-5	Toluene-d8	111		80-115
460-00-4	Bromofluorobenzene	104		80-115
2199-69-1	1,2-Dichlorobenzene-d4	105		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Burlington</u>	Job No.: <u>200-2954-1</u>
SDG No.: <u>MONTGO (200-2954)</u>	
Client Sample ID: <u>MC-S-32477</u>	Lab Sample ID: <u>200-2954-9</u>
Matrix: <u>Solid</u>	Lab File ID: <u>lfmt18.d</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>12/12/2010 00:00</u>
Sample wt/vol: <u>11.479(g)</u>	Date Analyzed: <u>12/16/2010 18:40</u>
Soil Aliquot Vol: <u>500 (uL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>10(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.53(mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>11263</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	8.7	U	8.7	4.4
74-87-3	Chloromethane	8.7	U	8.7	3.2
75-01-4	Vinyl chloride	8.7	U	8.7	4.4
74-83-9	Bromomethane	4.5	J * B	8.7	3.0
75-00-3	Chloroethane	8.7	U *	8.7	5.2
75-69-4	Trichlorofluoromethane	8.7	U *	8.7	4.4
75-35-4	1,1-Dichloroethene	8.7	U *	8.7	1.8
76-13-1	Freon TF	8.7	U *	8.7	2.4
67-64-1	Acetone	44	U	44	8.7
74-88-4	Methyl iodide	8.7	U *	8.7	4.4
75-15-0	Carbon disulfide	8.7	U *	8.7	1.7
79-20-9	Methyl acetate	8.7	U	8.7	4.4
75-09-2	Methylene Chloride	8.7	U	8.7	4.4
156-60-5	trans-1,2-Dichloroethene	8.7	U	8.7	4.4
1634-04-4	Methyl t-butyl ether	8.7	U	8.7	4.4
75-34-3	1,1-Dichloroethane	8.7	U *	8.7	3.1
108-05-4	Vinyl acetate	8.7	U	8.7	4.4
594-20-7	2,2-Dichloropropane	8.7	U	8.7	4.0
156-59-2	cis-1,2-Dichloroethene	8.7	U	8.7	1.8
78-93-3	2-Butanone	44	U	44	9.6
74-97-5	Bromochloromethane	8.7	U	8.7	4.6
109-99-9	Tetrahydrofuran	120	U	120	44
67-66-3	Chloroform	8.7	U	8.7	2.9
71-55-6	1,1,1-Trichloroethane	8.7	U	8.7	3.1
110-82-7	Cyclohexane	8.7	U	8.7	3.0
563-58-6	1,1-Dichloropropene	8.7	U	8.7	1.9
56-23-5	Carbon tetrachloride	8.7	U	8.7	2.8
78-83-1	Isobutyl alcohol	440	U *	440	220
71-43-2	Benzene	8.7	U	8.7	2.7
107-06-2	1,2-Dichloroethane	8.7	U	8.7	2.9
79-01-6	Trichloroethene	8.7	U	8.7	4.4
108-87-2	Methylcyclohexane	8.7	U	8.7	4.4
78-87-5	1,2-Dichloropropane	8.7	U	8.7	3.3
74-95-3	Dibromomethane	8.7	U	8.7	2.2
123-91-1	1,4-Dioxane	440	U	440	240
75-27-4	Bromodichloromethane	8.7	U	8.7	3.2

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington

Job No.: 200-2954-1

SDG No.: MONTGO (200-2954)

Client Sample ID: MC-S-32477

Lab Sample ID: 200-2954-9

Matrix: Solid

Lab File ID: lfmt18.d

Analysis Method: 8260B

Date Collected: 12/12/2010 00:00

Sample wt/vol: 11.479(g)

Date Analyzed: 12/16/2010 18:40

Soil Aliquot Vol: 500 (uL)

Dilution Factor: 1

Soil Extract Vol.: 10(mL)

GC Column: DB-624 ID: 0.53(mm)

% Moisture: \_\_\_\_\_

Level: (low/med) Medium

Analysis Batch No.: 11263

Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	8.7	U	8.7	1.1
10061-01-5	cis-1,3-Dichloropropene	8.7	U	8.7	2.8
108-10-1	4-Methyl-2-pentanone	44	U	44	1.8
108-88-3	Toluene	8.7	U	8.7	4.4
10061-02-6	trans-1,3-Dichloropropene	8.7	U	8.7	4.4
79-00-5	1,1,2-Trichloroethane	8.7	U	8.7	3.7
127-18-4	Tetrachloroethene	8.7	U	8.7	4.4
142-28-9	1,3-Dichloropropane	8.7	U	8.7	2.9
591-78-6	2-Hexanone	44	U	44	8.7
124-48-1	Dibromochloromethane	8.7	U	8.7	3.2
106-93-4	1,2-Dibromoethane	8.7	U	8.7	4.4
108-90-7	Chlorobenzene	8.7	U	8.7	2.0
630-20-6	1,1,1,2-Tetrachloroethane	8.7	U	8.7	3.1
100-41-4	Ethylbenzene	8.7	U	8.7	4.4
179601-23-1	m&p-Xylene	8.7	U	8.7	4.4
95-47-6	o-Xylene	8.7	U	8.7	4.4
100-42-5	Styrene	8.7	U	8.7	4.4
75-25-2	Bromoform	8.7	U	8.7	3.4
98-82-8	Isopropylbenzene	8.7	U	8.7	4.4
108-86-1	Bromobenzene	8.7	U	8.7	3.2
79-34-5	1,1,2,2-Tetrachloroethane	8.7	U	8.7	3.2
96-18-4	1,2,3-Trichloropropane	8.7	U	8.7	4.7
103-65-1	n-Propylbenzene	8.7	U	8.7	4.4
95-49-8	2-Chlorotoluene	8.7	U	8.7	2.9
106-43-4	4-Chlorotoluene	8.7	U	8.7	3.0
108-67-8	1,3,5-Trimethylbenzene	8.7	U	8.7	2.8
98-06-6	tert-Butylbenzene	8.7	U	8.7	4.4
95-63-6	1,2,4-Trimethylbenzene	8.7	U	8.7	3.0
135-98-8	sec-Butylbenzene	8.7	U	8.7	4.4
541-73-1	1,3-Dichlorobenzene	8.7	U	8.7	2.2
99-87-6	4-Isopropyltoluene	8.7	U	8.7	1.6
106-46-7	1,4-Dichlorobenzene	8.7	U	8.7	2.0
95-50-1	1,2-Dichlorobenzene	8.7	U	8.7	2.4
104-51-8	n-Butylbenzene	8.7	U	8.7	4.4
96-12-8	1,2-Dibromo-3-Chloropropane	8.7	U *	8.7	4.0
120-82-1	1,2,4-Trichlorobenzene	8.7	U	8.7	1.4

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32477 Lab Sample ID: 200-2954-9  
 Matrix: Solid Lab File ID: lfmt18.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 11.479(g) Date Analyzed: 12/16/2010 18:40  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	8.7	U	8.7	4.4
91-20-3	Naphthalene	8.7	U *	8.7	4.4
87-61-6	1,2,3-Trichlorobenzene	8.7	U	8.7	2.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	77		65-155
2037-26-5	Toluene-d8	110		80-115
460-00-4	Bromofluorobenzene	103		80-115
2199-69-1	1,2-Dichlorobenzene-d4	106		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Burlington</u>	Job No.: <u>200-2954-1</u>
SDG No.: <u>MONTGO (200-2954)</u>	
Client Sample ID: <u>MC-MEOH BLANK</u>	Lab Sample ID: <u>200-2954-10</u>
Matrix: <u>Solid</u>	Lab File ID: <u>lfmt19.d</u>
Analysis Method: <u>8260B</u>	Date Collected: <u>12/12/2010 00:00</u>
Sample wt/vol: <u>10(g)</u>	Date Analyzed: <u>12/16/2010 19:12</u>
Soil Aliquot Vol: <u>500 (uL)</u>	Dilution Factor: <u>1</u>
Soil Extract Vol.: <u>10(mL)</u>	GC Column: <u>DB-624</u> ID: <u>0.53 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Medium</u>
Analysis Batch No.: <u>11263</u>	Units: <u>ug/Kg</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	10	U	10	5.0
74-87-3	Chloromethane	10	U	10	3.7
75-01-4	Vinyl chloride	10	U	10	5.0
74-83-9	Bromomethane	5.7	J * B	10	3.5
75-00-3	Chloroethane	10	U *	10	6.0
75-69-4	Trichlorofluoromethane	10	U *	10	5.0
75-35-4	1,1-Dichloroethene	10	U *	10	2.1
76-13-1	Freon TF	10	U *	10	2.8
67-64-1	Acetone	50	U	50	10
74-88-4	Methyl iodide	10	U *	10	5.0
75-15-0	Carbon disulfide	10	U *	10	1.9
79-20-9	Methyl acetate	10	U	10	5.0
75-09-2	Methylene Chloride	10	U	10	5.0
156-60-5	trans-1,2-Dichloroethene	10	U	10	5.0
1634-04-4	Methyl t-butyl ether	10	U	10	5.0
75-34-3	1,1-Dichloroethane	10	U *	10	3.6
108-05-4	Vinyl acetate	10	U	10	5.0
594-20-7	2,2-Dichloropropane	10	U	10	4.6
156-59-2	cis-1,2-Dichloroethene	10	U	10	2.1
78-93-3	2-Butanone	50	U	50	11
74-97-5	Bromochloromethane	10	U	10	5.3
109-99-9	Tetrahydrofuran	140	U	140	50
67-66-3	Chloroform	10	U	10	3.3
71-55-6	1,1,1-Trichloroethane	10	U	10	3.6
110-82-7	Cyclohexane	10	U	10	3.5
563-58-6	1,1-Dichloropropene	10	U	10	2.2
56-23-5	Carbon tetrachloride	10	U	10	3.2
78-83-1	Isobutyl alcohol	500	U *	500	250
71-43-2	Benzene	10	U	10	3.1
107-06-2	1,2-Dichloroethane	10	U	10	3.3
79-01-6	Trichloroethene	10	U	10	5.0
108-87-2	Methylcyclohexane	10	U	10	5.0
78-87-5	1,2-Dichloropropane	10	U	10	3.8
74-95-3	Dibromomethane	10	U	10	2.5
123-91-1	1,4-Dioxane	500	U	500	270
75-27-4	Bromodichloromethane	10	U	10	3.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-MEOH BLANK Lab Sample ID: 200-2954-10  
 Matrix: Solid Lab File ID: lfmt19.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 10(g) Date Analyzed: 12/16/2010 19:12  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	10	U	10	1.3
10061-01-5	cis-1,3-Dichloropropene	10	U	10	3.2
108-10-1	4-Methyl-2-pentanone	50	U	50	2.1
108-88-3	Toluene	10	U	10	5.0
10061-02-6	trans-1,3-Dichloropropene	10	U	10	5.0
79-00-5	1,1,2-Trichloroethane	10	U	10	4.2
127-18-4	Tetrachloroethene	10	U	10	5.0
142-28-9	1,3-Dichloropropane	10	U	10	3.3
591-78-6	2-Hexanone	50	U	50	10
124-48-1	Dibromochloromethane	10	U	10	3.7
106-93-4	1,2-Dibromoethane	10	U	10	5.0
108-90-7	Chlorobenzene	10	U	10	2.3
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	3.6
100-41-4	Ethylbenzene	10	U	10	5.0
179601-23-1	m&p-Xylene	10	U	10	5.0
95-47-6	o-Xylene	10	U	10	5.0
100-42-5	Styrene	10	U	10	5.0
75-25-2	Bromoform	10	U	10	3.9
98-82-8	Isopropylbenzene	10	U	10	5.0
108-86-1	Bromobenzene	10	U	10	3.7
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	3.7
96-18-4	1,2,3-Trichloropropane	10	U	10	5.4
103-65-1	n-Propylbenzene	10	U	10	5.0
95-49-8	2-Chlorotoluene	10	U	10	3.3
106-43-4	4-Chlorotoluene	10	U	10	3.4
108-67-8	1,3,5-Trimethylbenzene	10	U	10	3.2
98-06-6	tert-Butylbenzene	10	U	10	5.0
95-63-6	1,2,4-Trimethylbenzene	10	U	10	3.4
135-98-8	sec-Butylbenzene	10	U	10	5.0
541-73-1	1,3-Dichlorobenzene	10	U	10	2.5
99-87-6	4-Isopropyltoluene	10	U	10	1.8
106-46-7	1,4-Dichlorobenzene	10	U	10	2.3
95-50-1	1,2-Dichlorobenzene	10	U	10	2.8
104-51-8	n-Butylbenzene	10	U	10	5.0
96-12-8	1,2-Dibromo-3-Chloropropane	10	U *	10	4.6
120-82-1	1,2,4-Trichlorobenzene	10	U	10	1.6

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-MEOH BLANK Lab Sample ID: 200-2954-10  
 Matrix: Solid Lab File ID: lfmt19.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 10(g) Date Analyzed: 12/16/2010 19:12  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	10	U	10	5.0
91-20-3	Naphthalene	10	U *	10	5.0
87-61-6	1,2,3-Trichlorobenzene	10	U	10	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	78		65-155
2037-26-5	Toluene-d8	100		80-115
460-00-4	Bromofluorobenzene	98		80-115
2199-69-1	1,2-Dichlorobenzene-d4	97		45-145



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32525 Lab Sample ID: 200-2954-11  
 Matrix: Solid Lab File ID: lfmt20.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 13.694(g) Date Analyzed: 12/16/2010 19:45  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	7.3	U	7.3	3.7
74-87-3	Chloromethane	7.3	U	7.3	2.7
75-01-4	Vinyl chloride	7.3	U	7.3	3.7
74-83-9	Bromomethane	4.3	J * B	7.3	2.6
75-00-3	Chloroethane	7.3	U *	7.3	4.4
75-69-4	Trichlorofluoromethane	7.3	U *	7.3	3.7
75-35-4	1,1-Dichloroethene	7.3	U *	7.3	1.5
76-13-1	Freon TF	7.3	U *	7.3	2.0
67-64-1	Acetone	37	U	37	7.3
74-88-4	Methyl iodide	7.3	U *	7.3	3.7
75-15-0	Carbon disulfide	7.3	U *	7.3	1.4
79-20-9	Methyl acetate	7.3	U	7.3	3.7
75-09-2	Methylene Chloride	7.3	U	7.3	3.7
156-60-5	trans-1,2-Dichloroethene	7.3	U	7.3	3.7
1634-04-4	Methyl t-butyl ether	7.3	U	7.3	3.7
75-34-3	1,1-Dichloroethane	7.3	U *	7.3	2.6
108-05-4	Vinyl acetate	7.3	U	7.3	3.7
594-20-7	2,2-Dichloropropane	7.3	U	7.3	3.4
156-59-2	cis-1,2-Dichloroethene	7.3	U	7.3	1.5
78-93-3	2-Butanone	37	U	37	8.0
74-97-5	Bromochloromethane	7.3	U	7.3	3.9
109-99-9	Tetrahydrofuran	100	U	100	37
67-66-3	Chloroform	7.3	U	7.3	2.4
71-55-6	1,1,1-Trichloroethane	8.1		7.3	2.6
110-82-7	Cyclohexane	7.3	U	7.3	2.6
563-58-6	1,1-Dichloropropene	7.3	U	7.3	1.6
56-23-5	Carbon tetrachloride	58		7.3	2.3
78-83-1	Isobutyl alcohol	370	U *	370	180
71-43-2	Benzene	7.3	U	7.3	2.3
107-06-2	1,2-Dichloroethane	7.3	U	7.3	2.4
79-01-6	Trichloroethene	7.3	U	7.3	3.7
108-87-2	Methylcyclohexane	7.3	U	7.3	3.7
78-87-5	1,2-Dichloropropane	7.3	U	7.3	2.8
74-95-3	Dibromomethane	7.3	U	7.3	1.8
123-91-1	1,4-Dioxane	370	U	370	200
75-27-4	Bromodichloromethane	7.3	U	7.3	2.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32525 Lab Sample ID: 200-2954-11  
 Matrix: Solid Lab File ID: lfmt20.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 13.694(g) Date Analyzed: 12/16/2010 19:45  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	7.3	U	7.3	0.95
10061-01-5	cis-1,3-Dichloropropene	7.3	U	7.3	2.3
108-10-1	4-Methyl-2-pentanone	37	U	37	1.5
108-88-3	Toluene	7.3	U	7.3	3.7
10061-02-6	trans-1,3-Dichloropropene	7.3	U	7.3	3.7
79-00-5	1,1,2-Trichloroethane	7.3	U	7.3	3.1
127-18-4	Tetrachloroethene	7.3	U	7.3	3.7
142-28-9	1,3-Dichloropropane	7.3	U	7.3	2.4
591-78-6	2-Hexanone	37	U	37	7.3
124-48-1	Dibromochloromethane	7.3	U	7.3	2.7
106-93-4	1,2-Dibromoethane	7.3	U	7.3	3.7
108-90-7	Chlorobenzene	7.3	U	7.3	1.7
630-20-6	1,1,1,2-Tetrachloroethane	7.3	U	7.3	2.6
100-41-4	Ethylbenzene	7.3	U	7.3	3.7
179601-23-1	m&p-Xylene	7.3	U	7.3	3.7
95-47-6	o-Xylene	7.3	U	7.3	3.7
100-42-5	Styrene	7.3	U	7.3	3.7
75-25-2	Bromoform	7.3	U	7.3	2.8
98-82-8	Isopropylbenzene	7.3	U	7.3	3.7
108-86-1	Bromobenzene	7.3	U	7.3	2.7
79-34-5	1,1,2,2-Tetrachloroethane	7.3	U	7.3	2.7
96-18-4	1,2,3-Trichloropropane	7.3	U	7.3	3.9
103-65-1	n-Propylbenzene	7.3	U	7.3	3.7
95-49-8	2-Chlorotoluene	7.3	U	7.3	2.4
106-43-4	4-Chlorotoluene	7.3	U	7.3	2.5
108-67-8	1,3,5-Trimethylbenzene	7.3	U	7.3	2.3
98-06-6	tert-Butylbenzene	7.3	U	7.3	3.7
95-63-6	1,2,4-Trimethylbenzene	7.3	U	7.3	2.5
135-98-8	sec-Butylbenzene	7.3	U	7.3	3.7
541-73-1	1,3-Dichlorobenzene	7.3	U	7.3	1.8
99-87-6	4-Isopropyltoluene	7.3	U	7.3	1.3
106-46-7	1,4-Dichlorobenzene	7.3	U	7.3	1.7
95-50-1	1,2-Dichlorobenzene	7.3	U	7.3	2.0
104-51-8	n-Butylbenzene	7.3	U	7.3	3.7
96-12-8	1,2-Dibromo-3-Chloropropane	7.3	U *	7.3	3.4
120-82-1	1,2,4-Trichlorobenzene	7.3	U	7.3	1.2

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: MC-S-32525 Lab Sample ID: 200-2954-11  
 Matrix: Solid Lab File ID: lfmt20.d  
 Analysis Method: 8260B Date Collected: 12/12/2010 00:00  
 Sample wt/vol: 13.694(g) Date Analyzed: 12/16/2010 19:45  
 Soil Aliquot Vol.: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	7.3	U	7.3	3.7
91-20-3	Naphthalene	7.3	U *	7.3	3.7
87-61-6	1,2,3-Trichlorobenzene	7.3	U	7.3	1.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	77		65-155
2037-26-5	Toluene-d8	98		80-115
460-00-4	Bromofluorobenzene	94		80-115
2199-69-1	1,2-Dichlorobenzene-d4	96		45-145

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 200-2954-1 Analy Batch No.: 9968  
 SDG No.: MONTGO (200-2954) GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 11/20/2010 15:36 Calibration End Date: 11/20/2010 18:17 Calibration ID: 3377

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 200-9968/4	1fm04.d
Level 2	IC 200-9968/5	1fm05.d
Level 3	IC 200-9968/6	1fm06.d
Level 4	ICIS 200-9968/7	1fm07.d
Level 5	IC 200-9968/8	1fm08.d
Level 6	IC 200-9968/9	1fm09.d

ANALYTE	RRF						CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R <sup>2</sup> OR COD	#	MIN R <sup>2</sup> OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6		B	M1	M2								
Freon 123a	0	0	0	0	0	0	Ave							15.0				
Dichlorodifluoromethane	0.5938 0.5737	0.5649	0.5171	0.5892	0.5811	0.5700	Ave					4.9		15.0				
Chloromethane	0.3301 0.3145	0.2607	0.2348	0.2790	0.2934	0.2854	Ave				0.1000	12.3		15.0				
Vinyl chloride	0.3348 0.3091	0.2959	0.2789	0.3132	0.3119	0.3073	Ave					6.1		15.0				
Bromomethane	0.2448 0.2066	0.1976	0.1915	0.2143	0.2150	0.2116	Ave					8.8		15.0				
Chloroethane	0.2227 0.1628	0.1844	0.1646	0.1837	0.1816	0.1833	Ave					11.8		15.0				
Trichlorofluoromethane	0.7297 0.6553	0.6502	0.5969	0.6739	0.6611	0.6612	Ave					6.5		15.0				
Acrolein	0.0284 0.0261	0.0277	0.0234	0.0258	0.0264	0.0263	Ave					6.6		15.0				
1,1-Dichloroethene	0.3459 0.2924	0.2919	0.2768	0.2900	0.2884	0.2976	Ave					8.2		15.0				
Freon TF	0.5876 0.6088	0.6247	0.5650	0.6160	0.6010	0.6005	Ave					3.6		15.0				
Acetone	0.0700 0.0533	0.0508	0.0500	0.0503	0.0524	0.0545	Ave					14.2		15.0				
Methyl iodide	0.5313 0.5045	0.4737	0.4697	0.5791	0.5538	0.5187	Ave					8.5		15.0				
Carbon disulfide	0.8948 0.7407	0.7764	0.6958	0.7381	0.7293	0.7625	Ave					9.1		15.0				
Allyl chloride	0.6107 0.5310	0.5502	0.4921	0.5364	0.5268	0.5412	Ave					7.2		15.0				
Methyl acetate	0.0367 0.0393	0.0388	0.0337	0.0365	0.0380	0.0372	Ave					5.5		15.0				

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 200-2954-1 Analytical Batch No.: 9968  
 SDG No.: MONTGO (200-2954) GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 11/20/2010 15:36 Calibration End Date: 11/20/2010 18:17 Calibration ID: 3377

ANALYTE	RRF						CURVE TYPE			COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2											
Methylene Chloride	0.3023 0.2704	0.2693	0.2489	0.2715	0.2674	Ave		0.2716			6.3	15.0								
tert-Butyl alcohol	0.0190 0.0183	0.0198	0.0148	0.0180	0.0180	Ave		0.0180			9.5	15.0								
Acrylonitrile	0.0846 0.0656	0.0526	0.0610	0.0603	0.0620	Ave		0.0643			16.8 *	15.0								
trans-1,2-Dichloroethene	0.3494 0.3156	0.3260	0.2893	0.3147	0.3074	Ave		0.3171			6.3	15.0								
Methyl t-butyl ether	0.6451 0.6320	0.6364	0.5760	0.6300	0.6194	Ave		0.6232			3.9	15.0								
1,1-Dichloroethane	0.6989 0.6478	0.6347	0.6045	0.6457	0.6343	Ave		0.6443			0.1000	15.0								
Vinyl acetate	0.7268 0.5805	0.6649	0.5820	0.6791	0.6214	Ave		0.6425			9.1	15.0								
Chloroprene	0.5551 0.5556	0.5242	0.4985	0.5491	0.5414	Ave		0.5373			4.2	15.0								
2,2-Dichloropropane	0.5642 0.5073	0.5379	0.4958	0.5235	0.5055	Ave		0.5224			4.8	15.0								
cis-1,2-Dichloroethene	0.3810 0.3315	0.3371	0.3010	0.3256	0.3268	Ave		0.3338			7.9	15.0								
2-Butanone	0.0226 0.0201	0.0208	0.0191	0.0205	0.0199	Ave		0.0205			5.8	15.0								
Propionitrile	0.0254 0.0221	0.0246	0.0195	0.0223	0.0214	Ave		0.0226			9.6	15.0								
Methacrylonitrile	0.0657 0.0727	0.0672	0.0634	0.0707	0.0678	Ave		0.0679			5.0	15.0								
Bromochloromethane	0.2347 0.1901	0.2030	0.1862	0.1994	0.1972	Ave		0.2017			8.6	15.0								
Tetrahydrofuran	0.0794 0.0741	0.0739	0.0678	0.0729	0.0722	Ave		0.0734			5.1	15.0								
Chloroform	0.6809 0.6559	0.6418	0.5952	0.6510	0.6412	Ave		0.6443			4.4	15.0								
1,1,1-Trichloroethane	0.5896 0.5717	0.5709	0.5251	0.5732	0.5639	Ave		0.5657			3.8	15.0								
Cyclohexane	0.5872 0.5414	0.5491	0.4976	0.5425	0.5309	Ave		0.5415			5.3	15.0								
1,1-Dichloropropene	0.5488 0.5189	0.5201	0.4800	0.5177	0.5110	Ave		0.5161			4.3	15.0								
Carbon tetrachloride	0.5230 0.5529	0.5504	0.5065	0.5530	0.5401	Ave		0.5376			3.6	15.0								

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 200-2954-1 Analy Batch No.: 9968  
 SDG No.: MONTGO (200-2954) GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 11/20/2010 15:36 Calibration End Date: 11/20/2010 18:17 Calibration ID: 3377

ANALYTE	RRF						CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	B		M1	M2								
Isobutyl alcohol	0.0105 0.0102	0.0100	0.0095	0.0099	0.0098	Ave		0.0100				3.5	15.0				
Benzene	0.8707 0.8719	0.8512	0.7931	0.8630	0.8535	Ave		0.8506				3.5	15.0				
1,2-Dichloroethane	0.3912 0.3784	0.3699	0.3423	0.3789	0.3743	Ave		0.3725				4.4	15.0				
Trichloroethene	0.3905 0.4138	0.4012	0.3675	0.4019	0.4022	Ave		0.3962				4.0	15.0				
Methylcyclohexane	0.4737 0.5090	0.4924	0.4520	0.5070	0.5006	Ave		0.4891				4.5	15.0				
1,2-Dichloropropane	0.4122 0.3748	0.3852	0.3495	0.3768	0.3683	Ave		0.3778				5.5	15.0				
Dibromomethane	0.3567 0.3152	0.3184	0.2854	0.3159	0.3093	Ave		0.3168				7.3	15.0				
Methyl methacrylate	0.2939 0.2540	0.2510	0.2263	0.2494	0.2489	Ave		0.2539				8.7	15.0				
1,4-Dioxane	0.0023 0.0021	0.0021	0.0018	0.0020	0.0019	Ave		0.0020				7.4	15.0				
Bromodichloromethane	0.6421 0.6384	0.6183	0.5643	0.6338	0.6284	Ave		0.6209				4.7	15.0				
2-Chloroethyl vinyl ether	0.2538 0.2198	0.2152	0.1922	0.2147	0.2149	Ave		0.2184				9.1	15.0				
cis-1,3-Dichloropropene	0.5888 0.5392	0.5454	0.4880	0.5309	0.5260	Ave		0.5364				6.1	15.0				
4-Methyl-2-pentanone	0.3483 0.3246	0.3160	0.2972	0.3204	0.3221	Ave		0.3214				5.1	15.0				
Toluene	0.7871 0.7593	0.7634	0.6917	0.7537	0.7417	Ave		0.7495				4.3	15.0				
trans-1,3-Dichloropropene	0.6838 0.5897	0.5905	0.5541	0.5903	0.5764	Ave		0.5975				7.5	15.0				
Ethyl methacrylate	0.4442 0.4246	0.4354	0.3828	0.4227	0.4163	Ave		0.4210				5.0	15.0				
1,1,2-Trichloroethane	0.3560 0.3347	0.3343	0.3063	0.3337	0.3264	Ave		0.3319				4.8	15.0				
Tetrachloroethene	0.5788 0.6296	0.6171	0.5627	0.6202	0.6149	Ave		0.6039				4.4	15.0				
1,3-Dichloropropane	0.6557 0.6330	0.6252	0.5765	0.6322	0.6218	Ave		0.6241				4.2	15.0				
2-Hexanone	0.2797 0.2741	0.2641	0.2532	0.2722	0.2705	Ave		0.2690				3.4	15.0				

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington

Job No.: 200-2954-1

Analy Batch No.: 9968

SDG No.: MONTGO (200-2954)

Instrument ID: L.i

GC Column: DB-624

ID: 0.53 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 11/20/2010 15:36

Calibration End Date: 11/20/2010 18:17

Calibration ID: 3377

ANALYTE	RRF						CURVE TYPE	COEFFICIENT			MIN RRF	%RSD #	MAX %RSD	R <sup>2</sup> OR COD	#	MIN R <sup>2</sup> OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	B		M1	M2							
Dibromochloromethane	0.6886 0.6979	0.6955	0.6327	0.6921	0.6846		Ave	0.6819			3.6	15.0				
1,2-Dibromoethane	0.6513 0.5945	0.5890	0.5362	0.5959	0.5810		Ave	0.5913			6.2	15.0				
Chlorobenzene	1.0020 0.9698	0.9456	0.8804	0.9610	0.9500		Ave	0.9515		0.3000	4.2	15.0				
1,1,1,2-Tetrachloroethane	0.5262 0.5151	0.5056	0.4654	0.5129	0.5020		Ave	0.5045			4.2	15.0				
Ethylbenzene	1.6185 1.5823	1.5800	1.4163	1.5604	1.5394		Ave	1.5495			4.5	15.0				
m&p-Xylene	0.5666 0.5739	0.5721	0.5127	0.5651	0.5626		Ave	0.5588			4.1	15.0				
o-Xylene	0.5444 0.5363	0.5357	0.4916	0.5384	0.5273		Ave	0.5289			3.6	15.0				
Styrene	0.9728 0.9329	0.9146	0.8352	0.9171	0.9046		Ave	0.9129			4.9	15.0				
Bromoform	0.5220 0.5509	0.5226	0.4840	0.5396	0.5344		Ave	0.5256		0.1000	4.4	15.0				
Isopropylbenzene	2.8390 2.8173	2.8264	2.5313	2.7541	2.7367		Ave	2.7508			4.2	15.0				
cis-1,4-Dichloro-2-butene	0.3131 0.2975	0.3274	0.2627	0.2877	0.2864		Ave	0.2958			7.6					
Bromobenzene	0.9568 0.8960	0.8831	0.7927	0.8700	0.8714		Ave	0.8783			6.0	15.0				
1,1,2,2-Tetrachloroethane	1.1808 1.0860	1.1063	0.9992	1.0871	1.0651		Ave	1.0874		0.3000	5.4	15.0				
1,2,3-Trichloropropane	0.3270 0.2734	0.2843	0.2554	0.2736	0.2675		Ave	0.2802			8.8	15.0				
trans-1,4-Dichloro-2-butene	0.3526 0.2606	0.2906	0.2410	0.2571	0.2526		Ave	0.2758			14.9	15.0				
n-Propylbenzene	0.6672 0.7107	0.7125	0.6408	0.6960	0.6870		Ave	0.6857			4.0	15.0				
2-Chlorotoluene	0.7064 0.6469	0.6613	0.5882	0.6322	0.6289		Ave	0.6440			6.1	15.0				
1,3,5-Trimethylbenzene	2.0839 2.0745	2.0638	1.8478	2.0242	2.0080		Ave	2.0170			4.4	15.0				
4-Chlorotoluene	0.6879 0.6546	0.6421	0.5841	0.6429	0.6395		Ave	0.6418			5.2	15.0				
tert-Butylbenzene	2.3473 2.3132	2.3184	2.0859	2.2761	2.2514		Ave	2.2654			4.2	15.0				

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.



FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington

Job No.: 200-2954-1

Analy Batch No.: 9968

SDG No.: MONTGO (200-2954)

Instrument ID: L.i GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/20/2010 15:36 Calibration End Date: 11/20/2010 18:17 Calibration ID: 3377

ANALYTE	RRF						CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	B		M1	M2									
1,2,4-Trimethylbenzene	2.0883 2.0324	1.9471	1.8035	1.9659	1.9692	Ave	1.9677			4.9	15.0							
sec-Butylbenzene	3.0525 3.1741	3.1114	2.7991	3.0892	3.0688	Ave	3.0492			4.3	15.0							
1,3-Dichlorobenzene	1.4511 1.4099	1.3980	1.2424	1.3669	1.3700	Ave	1.3731			5.2	15.0							
4-Isopropyltoluene	2.4801 2.5851	2.5061	2.2709	2.5098	2.5068	Ave	2.4764			4.3	15.0							
1,4-Dichlorobenzene	1.5898 1.4873	1.4417	1.3124	1.4376	1.4317	Ave	1.4501			6.2	15.0							
n-Butylbenzene	2.0121 2.4183	2.2558	2.0377	2.3029	2.3407	Ave	2.2279			7.5	15.0							
1,2-Dichlorobenzene	1.3554 1.2969	1.2512	1.1627	1.2365	1.2474	Ave	1.2584			5.1	15.0							
1,2-Dibromo-3-Chloropropane	0.2711 0.2446	0.2413	0.2190	0.2346	0.2363	Ave	0.2411			7.1	15.0							
1,2,4-Trichlorobenzene	0.9845 1.0678	0.9294	0.8524	0.9717	1.0103	Ave	0.9693			7.6	15.0							
Hexachlorobutadiene	0.6170 0.7398	0.6758	0.6232	0.6934	0.7075	Ave	0.6761			7.1	15.0							
Naphthalene	1.4876 1.5188	1.3135	1.1827	1.3819	1.4346	Ave	1.3865			8.9	15.0							
1,2,3-Trichlorobenzene	0.8943 0.9126	0.8438	0.7477	0.8677	0.8648	Ave	0.8552			6.8	15.0							
1,2-Dichloroethane-d4	0.3382 0.3207	0.3099	0.2759	0.3203	0.2942	Ave	0.3099			7.1	15.0							
Toluene-d8	1.1732 1.1051	1.1083	0.9981	1.0746	1.0762	Ave	1.0892			5.3	15.0							
Bromofluorobenzene	1.3927 1.2576	1.2648	1.1238	1.2283	1.2230	Ave	1.2484			7.0	15.0							
1,2-Dichlorobenzene-d4	0.8974 0.8606	0.8393	0.7580	0.8319	0.8355	Ave	0.8371			5.5	15.0							

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.



FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-2954-1 Analy Batch No.: 9968

SDG No.: MONTGO (200-2954) GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: L.i Calibration Start Date: 11/20/2010 15:36 Calibration End Date: 11/20/2010 18:17 Calibration ID: 3377

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		
tert-Butyl alcohol	FB	Ave	74644 2833017	153353	209443	688427	1408583	50.0 2000	100	200	500	1000		
Acrylonitrile	FB	Ave	6634 506848	20329	43013	115514	242285	1.00 100	5.00	10.0	25.0	50.0		
trans-1,2-Dichloroethene	FB	Ave	27389 2439421	126070	204092	602458	1201999	1.00 100	5.00	10.0	25.0	50.0		
Methyl t-butyl ether	FB	Ave	50563 4884803	246120	406331	1206233	2422007	1.00 100	5.00	10.0	25.0	50.0		
1,1-Dichloroethane	FB	Ave	54781 5007118	245482	428404	1236327	2480140	1.00 100	5.00	10.0	25.0	50.0		
Vinyl acetate	FB	Ave	56971 4487056	257151	410523	1300234	2429651	1.00 100	5.00	10.0	25.0	50.0		
Chloroprene	FB	Ave	43512 4294133	202727	351614	1051247	2116850	1.00 100	5.00	10.0	25.0	50.0		
2,2-Dichloropropane	FB	Ave	4221 3921089	208019	349766	1002210	1976540	1.00 100	5.00	10.0	25.0	50.0		
cis-1,2-Dichloroethene	FB	Ave	29864 2562046	130359	212305	623318	1277922	1.00 100	5.00	10.0	25.0	50.0		
2-Butanone	FB	Ave	8864 775306	40179	67518	196250	388496	5.00 500	25.0	50.0	125	250		
Propionitrile	FB	Ave	7979 682215	37984	55108	171024	334235	4.00 400	20.0	40.0	100	200		
Methacrylonitrile	FB	Ave	5150 562071	25977	44707	135363	265046	1.00 100	5.00	10.0	25.0	50.0		
Bromochloromethane	FB	Ave	18396 1469044	78498	131326	381688	770949	1.00 100	5.00	10.0	25.0	50.0		
Tetrahydrofuran	FB	Ave	87108 8022364	400332	669494	1954076	3955126	14.0 1400	70.0	140	350	700		
Chloroform	FB	Ave	53370 5069202	248232	419839	1246456	2507300	1.00 100	5.00	10.0	25.0	50.0		
1,1,1-Trichloroethane	FB	Ave	46214 4418541	220797	370379	1097479	2204901	1.00 100	5.00	10.0	25.0	50.0		
Cyclohexane	FB	Ave	46023 4184859	212369	351026	1038735	2075877	1.00 100	5.00	10.0	25.0	50.0		
1,1-Dichloropropene	FB	Ave	43015 4010509	201140	338620	991122	1998270	1.00 100	5.00	10.0	25.0	50.0		
Carbon tetrachloride	FB	Ave	40990 4273599	212864	357306	1058844	2111782	1.00 100	5.00	10.0	25.0	50.0		
Isobutyl alcohol	FB	Ave	41198 3926380	193142	334452	944299	1922742	50.0 5000	250	500	1250	2500		
Benzene	FB	Ave	68249 6738905	329184	559455	1652365	3337426	1.00 100	5.00	10.0	25.0	50.0		

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-2954-1 Analy Batch No.: 9968

SDG No.: MONTGO (200-2954) GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) N

Instrument ID: L.i Calibration Start Date: 11/20/2010 15:36 Calibration End Date: 11/20/2010 18:17 Calibration ID: 3377

Calibration Start Date: 11/20/2010 15:36 Calibration End Date: 11/20/2010 18:17 Calibration ID: 3377

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
1,2-Dichloroethane	FB	Ave	30661 2924642	143044	241493	725401	1463688	1.00 100	5.00	10.0	25.0	50.0	50.0	
Trichloroethene	FB	Ave	30612 3197977	155176	259220	769513	1572765	1.00 100	5.00	10.0	25.0	50.0	50.0	
Methylcyclohexane	FB	Ave	37126 3934517	190423	318836	970617	1957507	1.00 100	5.00	10.0	25.0	50.0	50.0	
1,2-Dichloropropane	FB	Ave	32311 2896650	148976	246509	721363	1439975	1.00 100	5.00	10.0	25.0	50.0	50.0	
Dibromomethane	FB	Ave	27959 2435922	123125	201344	604851	1209543	1.00 100	5.00	10.0	25.0	50.0	50.0	
Methyl methacrylate	CBZ	Ave	18326 1555154	77170	126373	379417	776385	1.00 100	5.00	10.0	25.0	50.0	50.0	
1,4-Dioxane	FB	Ave	8931 796970	40048	64808	189835	377562	50.0 5000	250	500	1250	2500	2500	
Bromodichloromethane	FB	Ave	50332 4934283	239140	398068	1213441	2457151	1.00 100	5.00	10.0	25.0	50.0	50.0	
2-Chloroethyl vinyl ether	FB	Ave	19897 1698925	83212	135584	411030	840237	1.00 100	5.00	10.0	25.0	50.0	50.0	
cis-1,3-Dichloropropene	FB	Ave	46150 4167912	210934	344250	1016387	2056792	1.00 100	5.00	10.0	25.0	50.0	50.0	
4-Methyl-2-pentanone	FB	Ave	136487 12543996	611138	1048081	3067324	6298131	5.00 500	25.0	50.0	125	250	250	
Toluene	CBZ	Ave	49076 4648945	234706	386241	1146566	2314103	1.00 100	5.00	10.0	25.0	50.0	50.0	
trans-1,3-Dichloropropene	CBZ	Ave	42636 3610407	181542	309379	898004	1798194	1.00 100	5.00	10.0	25.0	50.0	50.0	
Ethyl methacrylate	FB	Ave	34819 3281603	168405	270000	809272	1627649	1.00 100	5.00	10.0	25.0	50.0	50.0	
1,1,2-Trichloroethane	CBZ	Ave	22199 2049507	102777	171051	507587	1018182	1.00 100	5.00	10.0	25.0	50.0	50.0	
Tetrachloroethene	CBZ	Ave	36086 3855223	189736	314202	943461	1918468	1.00 100	5.00	10.0	25.0	50.0	50.0	
1,3-Dichloropropane	CBZ	Ave	40881 3876084	192205	321897	961805	1940003	1.00 100	5.00	10.0	25.0	50.0	50.0	
2-Hexanone	CBZ	Ave	87187 8392836	405936	706910	2070569	4220159	5.00 500	25.0	50.0	125	250	250	
Dibromochloromethane	CBZ	Ave	42936 4272881	213834	353285	1052877	2135798	1.00 100	5.00	10.0	25.0	50.0	50.0	
1,2-Dibromoethane	CBZ	Ave	40609 3639921	181095	299419	906476	1812511	1.00 100	5.00	10.0	25.0	50.0	50.0	
Chlorobenzene	CBZ	Ave	62471 5938282	290722	491594	1461993	2963805	1.00 100	5.00	10.0	25.0	50.0	50.0	

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-2954-1 Analy Batch No.: 9968  
 SDG No.: MONTGO (200-2954) GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 11/20/2010 15:36 Calibration End Date: 11/20/2010 18:17 Calibration ID: 3377

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		
1,1,1,2-Tetrachloroethane	CBZ	Ave	32809 3153922	155435	259852	780290	1565994	1.00 100	5.00	10.0	25.0	50.0		
Ethylbenzene	CBZ	Ave	100914 9688365	485772	790828	2373725	4802490	1.00 100	5.00	10.0	25.0	50.0		
m&p-Xylene	CBZ	Ave	70652 7028188	351799	572570	1719321	3510647	2.00 200	10.0	20.0	50.0	100		
o-Xylene	CBZ	Ave	33940 3283731	164703	274481	819084	1644939	1.00 100	5.00	10.0	25.0	50.0		
Styrene	CBZ	Ave	60656 5711855	281192	466394	1395116	2822119	1.00 100	5.00	10.0	25.0	50.0		
Bromoform	CBZ	Ave	32544 3372996	160664	270266	820928	1667252	1.00 100	5.00	10.0	25.0	50.0		
Isopropylbenzene	DCB	Ave	100094 9884494	493061	812980	2446127	4918085	1.00 100	5.00	10.0	25.0	50.0		
cis-1,4-Dichloro-2-butene	DCB	Ave	11040 1043611	57109	84375	255573	514722	1.00 100	5.00	10.0	25.0	50.0		
Bromobenzene	DCB	Ave	33735 3143497	154048	254603	772746	1565937	1.00 100	5.00	10.0	25.0	50.0		
1,1,2,2-Tetrachloroethane	DCB	Ave	41630 3810299	192987	320920	965560	1914160	1.00 100	5.00	10.0	25.0	50.0		
1,2,3-Trichloropropane	DCB	Ave	11529 959212	49594	82038	243049	480760	1.00 100	5.00	10.0	25.0	50.0		
trans-1,4-Dichloro-2-butene	DCB	Ave	12431 914408	50701	77412	228392	453875	1.00 100	5.00	10.0	25.0	50.0		
n-Propylbenzene	DCB	Ave	23523 2493411	124294	205803	618203	1234581	1.00 100	5.00	10.0	25.0	50.0		
2-Chlorotoluene	DCB	Ave	24905 2269713	115365	188924	561542	1130179	1.00 100	5.00	10.0	25.0	50.0		
1,3,5-Trimethylbenzene	DCB	Ave	73473 7278234	360024	593462	1797841	3608574	1.00 100	5.00	10.0	25.0	50.0		
4-Chlorotoluene	DCB	Ave	24255 2296545	112011	187595	570983	1149220	1.00 100	5.00	10.0	25.0	50.0		
tert-Butylbenzene	DCB	Ave	82760 8115721	404452	669844	2021615	4046037	1.00 100	5.00	10.0	25.0	50.0		
1,2,4-Trimethylbenzene	DCB	Ave	73627 7130573	339673	579238	1746094	3538960	1.00 100	5.00	10.0	25.0	50.0		
sec-Butylbenzene	DCB	Ave	107622 11136539	542785	898986	2743788	5515029	1.00 100	5.00	10.0	25.0	50.0		
1,3-Dichlorobenzene	DCB	Ave	51163 4946675	243883	399016	1214098	2462045	1.00 100	5.00	10.0	25.0	50.0		
4-Isopropyltoluene	DCB	Ave	87441 9069778	437181	729350	2229149	4504941	1.00 100	5.00	10.0	25.0	50.0		

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-2954-1 Analytical Batch No.: 9968

SDG No.: MONTGO (200-2954)

Instrument ID: L.i GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/20/2010 15:36 Calibration End Date: 11/20/2010 18:17 Calibration ID: 3377

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		
1,4-Dichlorobenzene	DCB	Ave	56053 5218331	251498	421515	1276863	2572864	1.00 100	5.00	10.0	25.0	50.0		
n-Butylbenzene	DCB	Ave	70942 8484511	393523	654445	2045427	4206504	1.00 100	5.00	10.0	25.0	50.0		
1,2-Dichlorobenzene	DCB	Ave	47789 4550026	218272	373434	1098230	2241789	1.00 100	5.00	10.0	25.0	50.0		
1,2-Dibromo-3-Chloropropane	DCB	Ave	9557 858043	42095	70337	208383	424607	1.00 100	5.00	10.0	25.0	50.0		
1,2,4-Trichlorobenzene	DCB	Ave	34709 3746311	162129	273778	863060	1815533	1.00 100	5.00	10.0	25.0	50.0		
Hexachlorobutadiene	DCB	Ave	21754 2595754	117885	200145	615864	1271372	1.00 100	5.00	10.0	25.0	50.0		
Naphthalene	DCB	Ave	52447 5328747	229133	379856	1227355	2578212	1.00 100	5.00	10.0	25.0	50.0		
1,2,3-Trichlorobenzene	DCB	Ave	31529 3201722	147206	240135	770723	1554228	1.00 100	5.00	10.0	25.0	50.0		
1,2-Dichloroethane-d4	FB	Ave	26506 2479081	119842	194635	613335	1150239	1.00 100	5.00	10.0	25.0	50.0		
Toluene-d8	CBZ	Ave	73150 6766210	340731	557316	1634731	3357557	1.00 100	5.00	10.0	25.0	50.0		
Bromofluorobenzene	DCB	Ave	49103 4412426	220639	360950	1090968	2197903	1.00 100	5.00	10.0	25.0	50.0		
1,2-Dichlorobenzene-d4	DCB	Ave	31638 3019421	146415	243451	738891	1501503	1.00 100	5.00	10.0	25.0	50.0		

Curve Type Legend:  
Ave = Average ISTD

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington

Job No.: 200-2954-1

SDG No.: MONTGO (200-2954)

Lab Sample ID: ICV 200-9968/12

Calibration Date: 11/20/2010 19:53

Instrument ID: L.i

Calib Start Date: 11/20/2010 15:36

GC Column: DB-624

ID: 0.53 (mm)

Calib End Date: 11/20/2010 18:17

Lab File ID: lfm12.d

Conc. Units: ug/Kg

Heated Purge: (Y/N) N

EPA Sample No.: ICV

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5700	0.5713		25.1	25.0	0.2	25.0
Chloromethane	Ave	0.2854	0.2670	0.1000	23.4	25.0	-6.4	25.0
Vinyl chloride	Ave	0.3073	0.3142		25.6	25.0	2.3	25.0
Bromomethane	Ave	0.2116	0.2030		24.0	25.0	-4.1	25.0
Chloroethane	Ave	0.1833	0.1846		25.2	25.0	0.7	25.0
Trichlorofluoromethane	Ave	0.6612	0.6329		23.9	25.0	-4.3	25.0
Acrolein	Ave	0.0263	0.0213		101	125	-18.8	25.0
1,1-Dichloroethene	Ave	0.2976	0.2718		22.8	25.0	-8.7	25.0
Freon TF	Ave	0.6005	0.5718		23.8	25.0	-4.8	25.0
Acetone	Ave	0.0545	0.0495		114	125	-9.1	25.0
Methyl iodide	Ave	0.5187	0.5812		28.0	25.0	12.0	25.0
Carbon disulfide	Ave	0.7625	0.6845		22.4	25.0	-10.2	25.0
Allyl chloride	Ave	0.5412	0.5153		23.8	25.0	-4.8	25.0
Methyl acetate	Ave	0.0372	0.0407		27.4	25.0	9.5	25.0
Methylene Chloride	Ave	0.2716	0.2769		25.5	25.0	1.9	25.0
tert-Butyl alcohol	Ave	0.0180	0.0173		482	500	-3.7	25.0
Acrylonitrile	Ave	0.0643	0.0612		23.8	25.0	-4.9	25.0
trans-1,2-Dichloroethene	Ave	0.3171	0.3062		24.1	25.0	-3.4	25.0
Methyl t-butyl ether	Ave	0.6232	0.6246		25.1	25.0	0.2	25.0
1,1-Dichloroethane	Ave	0.6443	0.6297	0.1000	24.4	25.0	-2.3	25.0
Vinyl acetate	Ave	0.6425	0.5059		19.7	25.0	-21.3	25.0
Chloroprene	Ave	0.5373	0.4746		22.1	25.0	-11.7	25.0
2,2-Dichloropropane	Ave	0.5224	0.4640		22.2	25.0	-11.2	25.0
cis-1,2-Dichloroethene	Ave	0.3338	0.3236		24.2	25.0	-3.1	25.0
2-Butanone	Ave	0.0205	0.0207		126	125	0.8	25.0
Propionitrile	Ave	0.0226	0.0201		89.0	100	-11.0	25.0
Methacrylonitrile	Ave	0.0679	0.0706		26.0	25.0	4.0	25.0
Bromochloromethane	Ave	0.2017	0.2013		24.9	25.0	-0.2	25.0
Tetrahydrofuran	Ave	0.0734	0.0702		335	350	-4.4	25.0
Chloroform	Ave	0.6443	0.6260		24.3	25.0	-2.9	25.0
1,1,1-Trichloroethane	Ave	0.5657	0.5617		24.8	25.0	-0.7	25.0
Cyclohexane	Ave	0.5415	0.5403		24.9	25.0	-0.2	25.0
1,1-Dichloropropene	Ave	0.5161	0.5123		24.8	25.0	-0.7	25.0
Carbon tetrachloride	Ave	0.5376	0.5359		24.9	25.0	-0.3	25.0
Isobutyl alcohol	Ave	0.0100	0.0100		1250	1250	0.3	25.0
Benzene	Ave	0.8506	0.8650		25.4	25.0	1.7	25.0
1,2-Dichloroethane	Ave	0.3725	0.3730		25.0	25.0	0.1	25.0
Trichloroethene	Ave	0.3962	0.4176		26.3	25.0	5.4	25.0
Methylcyclohexane	Ave	0.4891	0.5004		25.6	25.0	2.3	25.0



FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington

Job No.: 200-2954-1

SDG No.: MONTGO (200-2954)

Lab Sample ID: ICV 200-9968/12

Calibration Date: 11/20/2010 19:53

Instrument ID: L.i

Calib Start Date: 11/20/2010 15:36

GC Column: DB-624 ID: 0.53(mm)

Calib End Date: 11/20/2010 18:17

Lab File ID: lfm12.d

Conc. Units: ug/Kg Heated Purge: (Y/N) N

EPA Sample No.: ICV

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.3778	0.3757		24.9	25.0	-0.6	25.0
Dibromomethane	Ave	0.3168	0.3146		24.8	25.0	-0.7	25.0
Methyl methacrylate	Ave	0.2539	0.2471		24.3	25.0	-2.7	25.0
1,4-Dioxane	Ave	0.0020	0.0019		1150	1250	-8.2	25.0
Bromodichloromethane	Ave	0.6209	0.6287		25.3	25.0	1.3	25.0
2-Chloroethyl vinyl ether	Ave	0.2184	0.2151		24.6	25.0	-1.5	25.0
cis-1,3-Dichloropropene	Ave	0.5364	0.5274		24.6	25.0	-1.7	25.0
4-Methyl-2-pentanone	Ave	0.3214	0.3356		131	125	4.4	25.0
Toluene	Ave	0.7495	0.7536		25.1	25.0	0.5	25.0
trans-1,3-Dichloropropene	Ave	0.5975	0.5771		24.1	25.0	-3.4	25.0
Ethyl methacrylate	Ave	0.4210	0.4268		25.3	25.0	1.4	25.0
1,1,2-Trichloroethane	Ave	0.3319	0.3379		25.5	25.0	1.8	25.0
Tetrachloroethene	Ave	0.6039	0.6270		26.0	25.0	3.8	25.0
1,3-Dichloropropane	Ave	0.6241	0.6372		25.5	25.0	2.1	25.0
2-Hexanone	Ave	0.2690	0.2876		134	125	6.9	25.0
Dibromochloromethane	Ave	0.6819	0.7253		26.6	25.0	6.4	25.0
1,2-Dibromoethane	Ave	0.5913	0.6033		25.5	25.0	2.0	25.0
Chlorobenzene	Ave	0.9515	0.9666	0.3000	25.4	25.0	1.6	25.0
1,1,1,2-Tetrachloroethane	Ave	0.5045	0.5171		25.6	25.0	2.5	25.0
Ethylbenzene	Ave	1.549	1.566		25.3	25.0	1.1	25.0
m&p-Xylene	Ave	0.5588	0.5689		50.9	50.0	1.8	25.0
o-Xylene	Ave	0.5289	0.5384		25.4	25.0	1.8	25.0
Styrene	Ave	0.9129	0.9227		25.3	25.0	1.1	25.0
Bromoform	Ave	0.5256	0.5371	0.1000	25.5	25.0	2.2	25.0
Isopropylbenzene	Ave	2.751	2.808		25.5	25.0	2.1	25.0
Bromobenzene	Ave	0.8783	0.8911		25.4	25.0	1.4	25.0
1,1,2,2-Tetrachloroethane	Ave	1.087	1.086	0.3000	25.0	25.0	-0.2	25.0
1,2,3-Trichloropropane	Ave	0.2802	0.2549		22.7	25.0	-9.0	25.0
trans-1,4-Dichloro-2-butene	Ave	0.2758	0.2538		23.0	25.0	-8.0	25.0
n-Propylbenzene	Ave	0.6857	0.6982		25.5	25.0	1.8	25.0
2-Chlorotoluene	Ave	0.6440	0.6523		25.3	25.0	1.3	25.0
1,3,5-Trimethylbenzene	Ave	2.017	2.041		25.3	25.0	1.2	25.0
4-Chlorotoluene	Ave	0.6418	0.6520		25.4	25.0	1.6	25.0
tert-Butylbenzene	Ave	2.265	2.316		25.6	25.0	2.2	25.0
1,2,4-Trimethylbenzene	Ave	1.968	2.022		25.7	25.0	2.8	25.0
sec-Butylbenzene	Ave	3.049	3.145		25.8	25.0	3.1	25.0
1,3-Dichlorobenzene	Ave	1.373	1.393		25.4	25.0	1.5	25.0
4-Isopropyltoluene	Ave	2.476	2.481		25.0	25.0	0.2	25.0
1,4-Dichlorobenzene	Ave	1.450	1.468		25.3	25.0	1.2	25.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Lab Sample ID: ICV 200-9968/12 Calibration Date: 11/20/2010 19:53  
 Instrument ID: L.i Calib Start Date: 11/20/2010 15:36  
 GC Column: DB-624 ID: 0.53(mm) Calib End Date: 11/20/2010 18:17  
 Lab File ID: lfm12.d Conc. Units: ug/Kg Heated Purge: (Y/N) N  
 EPA Sample No.: ICV

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichlorobenzene	Ave	1.258	1.285		25.5	25.0	2.1	25.0
n-Butylbenzene	Ave	2.228	2.325		26.1	25.0	4.4	25.0
1,2-Dibromo-3-Chloropropane	Ave	0.2411	0.2382		24.7	25.0	-1.2	25.0
1,2,4-Trichlorobenzene	Ave	0.9693	0.9933		25.6	25.0	2.5	25.0
Hexachlorobutadiene	Ave	0.6761	0.7074		26.2	25.0	4.6	25.0
Naphthalene	Ave	1.387	1.423		25.7	25.0	2.6	25.0
1,2,3-Trichlorobenzene	Ave	0.8552	0.8729		25.5	25.0	2.1	25.0
1,2-Dichloroethane-d4	Ave	0.3099	0.3236		26.1	25.0	4.4	25.0
Toluene-d8	Ave	1.089	1.116		25.6	25.0	2.4	25.0
Bromofluorobenzene	Ave	1.248	1.281		25.6	25.0	2.6	25.0
1,2-Dichlorobenzene-d4	Ave	0.8371	0.8758		26.2	25.0	4.6	25.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington

Job No.: 200-2954-1

SDG No.: MONTGO (200-2954)

Lab Sample ID: CCVIS 200-11263/2

Calibration Date: 12/16/2010 09:42

Instrument ID: L.i

Calib Start Date: 11/20/2010 15:36

GC Column: DB-624 ID: 0.53(mm)

Calib End Date: 11/20/2010 18:17

Lab File ID: lfmt02.d

Conc. Units: ug/Kg Heated Purge: (Y/N) N

EPA Sample No.: CCVIS

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5700	0.5760		25.3	25.0	1.1	20.0
Chloromethane	Ave	0.2854	0.2949	0.1000	25.8	25.0	3.3	20.0
Vinyl chloride	Ave	0.3073	0.3306		26.9	25.0	7.6	20.0
Bromomethane	Ave	0.2116	0.2041		24.1	25.0	-3.6	20.0
Chloroethane	Ave	0.1833	0.1982		27.0	25.0	8.1	20.0
Trichlorofluoromethane	Ave	0.6612	0.6198		23.4	25.0	-6.3	20.0
Acrolein	Ave	0.0263	0.0339		161	125	29.0*	20.0
1,1-Dichloroethene	Ave	0.2976	0.2840		23.9	25.0	-4.6	20.0
Freon TF	Ave	0.6005	0.5871		24.4	25.0	-2.2	20.0
Acetone	Ave	0.0545	0.0513		118	125	-5.8	20.0
Methyl iodide	Ave	0.5187	0.4786		23.1	25.0	-7.7	20.0
Carbon disulfide	Ave	0.7625	0.7211		23.6	25.0	-5.4	20.0
Allyl chloride	Ave	0.5412	0.5319		24.6	25.0	-1.7	20.0
Methyl acetate	Ave	0.0372	0.0359		24.2	25.0	-3.4	20.0
Methylene Chloride	Ave	0.2716	0.2751		25.3	25.0	1.3	20.0
tert-Butyl alcohol	Ave	0.0180	0.0196		545	500	9.0	20.0
Acrylonitrile	Ave	0.0643	0.0631		24.5	25.0	-1.9	20.0
trans-1,2-Dichloroethene	Ave	0.3171	0.3088		24.3	25.0	-2.6	20.0
Methyl t-butyl ether	Ave	0.6232	0.5818		23.3	25.0	-6.6	20.0
1,1-Dichloroethane	Ave	0.6443	0.6197	0.1000	24.0	25.0	-3.8	20.0
Vinyl acetate	Ave	0.6425	0.7113		27.7	25.0	10.7	20.0
Chloroprene	Ave	0.5373	0.4917		22.9	25.0	-8.5	20.0
2,2-Dichloropropane	Ave	0.5224	0.4908		23.5	25.0	-6.0	20.0
cis-1,2-Dichloroethene	Ave	0.3338	0.3261		24.4	25.0	-2.3	20.0
2-Butanone	Ave	0.0205	0.0211		128	125	2.8	20.0
Propionitrile	Ave	0.0226	0.0215		95.1	100	-4.9	20.0
Methacrylonitrile	Ave	0.0679	0.0706		26.0	25.0	3.9	20.0
Bromochloromethane	Ave	0.2017	0.1929		23.9	25.0	-4.4	20.0
Tetrahydrofuran	Ave	0.0734	0.0736		351	350	0.2	20.0
Chloroform	Ave	0.6443	0.6004		23.3	25.0	-6.8	20.0
1,1,1-Trichloroethane	Ave	0.5657	0.4963		21.9	25.0	-12.3	20.0
Cyclohexane	Ave	0.5415	0.5383		24.9	25.0	-0.6	20.0
1,1-Dichloropropene	Ave	0.5161	0.4936		23.9	25.0	-4.4	20.0
Carbon tetrachloride	Ave	0.5376	0.4684		21.8	25.0	-12.9	20.0
Isobutyl alcohol	Ave	0.0100	0.0099		1240	1250	-0.5	20.0
Benzene	Ave	0.8506	0.8692		25.5	25.0	2.2	20.0
1,2-Dichloroethane	Ave	0.3725	0.3235		21.7	25.0	-13.2	20.0
Trichloroethene	Ave	0.3962	0.3845		24.3	25.0	-2.9	20.0
Methylcyclohexane	Ave	0.4891	0.5062		25.9	25.0	3.5	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington

Job No.: 200-2954-1

SDG No.: MONTGO (200-2954)

Lab Sample ID: CCVIS 200-11263/2

Calibration Date: 12/16/2010 09:42

Instrument ID: L.i

Calib Start Date: 11/20/2010 15:36

GC Column: DB-624 ID: 0.53(mm)

Calib End Date: 11/20/2010 18:17

Lab File ID: lfmt02.d

Conc. Units: ug/Kg Heated Purge: (Y/N) N

EPA Sample No.: CCVIS

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.3778	0.3732		24.7	25.0	-1.2	20.0
Dibromomethane	Ave	0.3168	0.3000		23.7	25.0	-5.3	20.0
Methyl methacrylate	Ave	0.2539	0.2560		25.2	25.0	0.8	20.0
1,4-Dioxane	Ave	0.0020	0.0021		1260	1250	1.1	20.0
Bromodichloromethane	Ave	0.6209	0.5744		23.1	25.0	-7.5	20.0
2-Chloroethyl vinyl ether	Ave	0.2184	0.2233		25.6	25.0	2.2	20.0
cis-1,3-Dichloropropene	Ave	0.5364	0.5165		24.1	25.0	-3.7	20.0
4-Methyl-2-pentanone	Ave	0.3214	0.3246		126	125	1.0	20.0
Toluene	Ave	0.7495	0.7817		26.1	25.0	4.3	20.0
trans-1,3-Dichloropropene	Ave	0.5975	0.5691		23.8	25.0	-4.7	20.0
Ethyl methacrylate	Ave	0.4210	0.4086		24.3	25.0	-2.9	20.0
1,1,2-Trichloroethane	Ave	0.3319	0.3401		25.6	25.0	2.5	20.0
Tetrachloroethene	Ave	0.6039	0.6136		25.4	25.0	1.6	20.0
1,3-Dichloropropane	Ave	0.6241	0.6345		25.4	25.0	1.7	20.0
2-Hexanone	Ave	0.2690	0.2852		133	125	6.0	20.0
Dibromochloromethane	Ave	0.6819	0.6544		24.0	25.0	-4.0	20.0
1,2-Dibromoethane	Ave	0.5913	0.5916		25.0	25.0	0.0	20.0
Chlorobenzene	Ave	0.9515	0.9742	0.3000	25.6	25.0	2.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.5045	0.4967		24.6	25.0	-1.6	20.0
Ethylbenzene	Ave	1.549	1.562		25.2	25.0	0.8	20.0
m&p-Xylene	Ave	0.5588	0.5840		52.3	50.0	4.5	20.0
o-Xylene	Ave	0.5289	0.5500		26.0	25.0	4.0	20.0
Styrene	Ave	0.9129	0.9410		25.8	25.0	3.1	20.0
Bromoform	Ave	0.5256	0.5070	0.1000	24.1	25.0	-3.5	20.0
Isopropylbenzene	Ave	2.751	2.739		24.9	25.0	-0.4	20.0
Bromobenzene	Ave	0.8783	0.8696		24.8	25.0	-1.0	20.0
1,1,2,2-Tetrachloroethane	Ave	1.087	1.133	0.3000	26.0	25.0	4.2	20.0
1,2,3-Trichloropropane	Ave	0.2802	0.2619		23.4	25.0	-6.5	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2758	0.2405		21.8	25.0	-12.8	20.0
n-Propylbenzene	Ave	0.6857	0.7031		25.6	25.0	2.5	20.0
2-Chlorotoluene	Ave	0.6440	0.6466		25.1	25.0	0.4	20.0
1,3,5-Trimethylbenzene	Ave	2.017	1.994		24.7	25.0	-1.1	20.0
4-Chlorotoluene	Ave	0.6418	0.6530		25.4	25.0	1.7	20.0
tert-Butylbenzene	Ave	2.265	2.256		24.9	25.0	-0.4	20.0
1,2,4-Trimethylbenzene	Ave	1.968	1.955		24.8	25.0	-0.6	20.0
sec-Butylbenzene	Ave	3.049	3.140		25.7	25.0	3.0	20.0
1,3-Dichlorobenzene	Ave	1.373	1.390		25.3	25.0	1.2	20.0
4-Isopropyltoluene	Ave	2.476	2.511		25.3	25.0	1.4	20.0
1,4-Dichlorobenzene	Ave	1.450	1.474		25.4	25.0	1.6	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Lab Sample ID: CCVIS 200-11263/2 Calibration Date: 12/16/2010 09:42  
 Instrument ID: L.i Calib Start Date: 11/20/2010 15:36  
 GC Column: DB-624 ID: 0.53 (mm) Calib End Date: 11/20/2010 18:17  
 Lab File ID: lfmt02.d Conc. Units: ug/Kg Heated Purge: (Y/N) N  
 EPA Sample No.: CCVIS

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichlorobenzene	Ave	1.258	1.275		25.3	25.0	1.3	20.0
n-Butylbenzene	Ave	2.228	2.343		26.3	25.0	5.1	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.2411	0.2115		21.9	25.0	-12.3	20.0
1,2,4-Trichlorobenzene	Ave	0.9693	0.9773		25.2	25.0	0.8	20.0
Hexachlorobutadiene	Ave	0.6761	0.6705		24.8	25.0	-0.8	20.0
Naphthalene	Ave	1.387	1.491		26.9	25.0	7.6	20.0
1,2,3-Trichlorobenzene	Ave	0.8552	0.8500		24.8	25.0	-0.6	20.0
1,2-Dichloroethane-d4	Ave	0.3099	0.2556		20.6	25.0	-17.5	20.0
Toluene-d8	Ave	1.089	1.117		25.6	25.0	2.6	20.0
Bromofluorobenzene	Ave	1.248	1.216		24.3	25.0	-2.6	20.0
1,2-Dichlorobenzene-d4	Ave	0.8371	0.8586		25.6	25.0	2.6	20.0

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-11234/1-A  
 Matrix: Solid Lab File ID: lfmt09.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 12/16/2010 13:32  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	10	U	10	5.0
74-87-3	Chloromethane	10	U	10	3.7
75-01-4	Vinyl chloride	10	U	10	5.0
74-83-9	Bromomethane	11.5		10	3.5
75-00-3	Chloroethane	10	U	10	6.0
75-69-4	Trichlorofluoromethane	10	U	10	5.0
75-35-4	1,1-Dichloroethene	10	U	10	2.1
76-13-1	Freon TF	10	U	10	2.8
67-64-1	Acetone	50	U	50	10
74-88-4	Methyl iodide	10	U	10	5.0
75-15-0	Carbon disulfide	10	U	10	1.9
79-20-9	Methyl acetate	10	U	10	5.0
75-09-2	Methylene Chloride	10	U	10	5.0
156-60-5	trans-1,2-Dichloroethene	10	U	10	5.0
1634-04-4	Methyl t-butyl ether	10	U	10	5.0
75-34-3	1,1-Dichloroethane	10	U	10	3.6
108-05-4	Vinyl acetate	10	U	10	5.0
594-20-7	2,2-Dichloropropane	10	U	10	4.6
156-59-2	cis-1,2-Dichloroethene	10	U	10	2.1
78-93-3	2-Butanone	50	U	50	11
74-97-5	Bromochloromethane	10	U	10	5.3
109-99-9	Tetrahydrofuran	140	U	140	50
67-66-3	Chloroform	10	U	10	3.3
71-55-6	1,1,1-Trichloroethane	10	U	10	3.6
110-82-7	Cyclohexane	10	U	10	3.5
563-58-6	1,1-Dichloropropene	10	U	10	2.2
56-23-5	Carbon tetrachloride	10	U	10	3.2
78-83-1	Isobutyl alcohol	500	U	500	250
71-43-2	Benzene	10	U	10	3.1
107-06-2	1,2-Dichloroethane	10	U	10	3.3
79-01-6	Trichloroethene	10	U	10	5.0
108-87-2	Methylcyclohexane	10	U	10	5.0
78-87-5	1,2-Dichloropropane	10	U	10	3.8
74-95-3	Dibromomethane	10	U	10	2.5
123-91-1	1,4-Dioxane	500	U	500	270
75-27-4	Bromodichloromethane	10	U	10	3.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-11234/1-A  
 Matrix: Solid Lab File ID: lfmt09.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 12/16/2010 13:32  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	10	U	10	1.3
10061-01-5	cis-1,3-Dichloropropene	10	U	10	3.2
108-10-1	4-Methyl-2-pentanone	50	U	50	2.1
108-88-3	Toluene	10	U	10	5.0
10061-02-6	trans-1,3-Dichloropropene	10	U	10	5.0
79-00-5	1,1,2-Trichloroethane	10	U	10	4.2
127-18-4	Tetrachloroethene	10	U	10	5.0
142-28-9	1,3-Dichloropropane	10	U	10	3.3
591-78-6	2-Hexanone	50	U	50	10
124-48-1	Dibromochloromethane	10	U	10	3.7
106-93-4	1,2-Dibromoethane	10	U	10	5.0
108-90-7	Chlorobenzene	10	U	10	2.3
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	3.6
100-41-4	Ethylbenzene	10	U	10	5.0
179601-23-1	m&p-Xylene	10	U	10	5.0
95-47-6	o-Xylene	10	U	10	5.0
100-42-5	Styrene	10	U	10	5.0
75-25-2	Bromoform	10	U	10	3.9
98-82-8	Isopropylbenzene	10	U	10	5.0
108-86-1	Bromobenzene	10	U	10	3.7
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	3.7
96-18-4	1,2,3-Trichloropropane	10	U	10	5.4
103-65-1	n-Propylbenzene	10	U	10	5.0
95-49-8	2-Chlorotoluene	10	U	10	3.3
106-43-4	4-Chlorotoluene	10	U	10	3.4
108-67-8	1,3,5-Trimethylbenzene	10	U	10	3.2
98-06-6	tert-Butylbenzene	10	U	10	5.0
95-63-6	1,2,4-Trimethylbenzene	10	U	10	3.4
135-98-8	sec-Butylbenzene	10	U	10	5.0
541-73-1	1,3-Dichlorobenzene	10	U	10	2.5
99-87-6	4-Isopropyltoluene	10	U	10	1.8
106-46-7	1,4-Dichlorobenzene	10	U	10	2.3
95-50-1	1,2-Dichlorobenzene	10	U	10	2.8
104-51-8	n-Butylbenzene	10	U	10	5.0
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	10	4.6
120-82-1	1,2,4-Trichlorobenzene	10	U	10	1.6



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-11234/1-A  
 Matrix: Solid Lab File ID: lfmt09.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 12/16/2010 13:32  
 Soil Aliquot Vol.: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	10	U	10	5.0
91-20-3	Naphthalene	10	U	10	5.0
87-61-6	1,2,3-Trichlorobenzene	10	U	10	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	81		65-155
2037-26-5	Toluene-d8	106		80-115
460-00-4	Bromofluorobenzene	104		80-115
2199-69-1	1,2-Dichlorobenzene-d4	105		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-11234/6-A  
 Matrix: Solid Lab File ID: lfmt04.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 12/16/2010 10:46  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	211		10	5.0
74-87-3	Chloromethane	237		10	3.7
75-01-4	Vinyl chloride	247		10	5.0
74-83-9	Bromomethane	112		10	3.5
75-00-3	Chloroethane	128		10	6.0
75-69-4	Trichlorofluoromethane	148		10	5.0
75-35-4	1,1-Dichloroethene	141		10	2.1
76-13-1	Freon TF	160		10	2.8
67-64-1	Acetone	664		50	10
74-88-4	Methyl iodide	61.1		10	5.0
75-15-0	Carbon disulfide	161		10	1.9
79-20-9	Methyl acetate	271		10	5.0
75-09-2	Methylene Chloride	235		10	5.0
156-60-5	trans-1,2-Dichloroethene	237		10	5.0
1634-04-4	Methyl t-butyl ether	213		10	5.0
75-34-3	1,1-Dichloroethane	203		10	3.6
108-05-4	Vinyl acetate	234		10	5.0
594-20-7	2,2-Dichloropropane	220		10	4.6
156-59-2	cis-1,2-Dichloroethene	235		10	2.1
78-93-3	2-Butanone	999		50	11
74-97-5	Bromochloromethane	186		10	5.3
109-99-9	Tetrahydrofuran	3080		140	50
67-66-3	Chloroform	218		10	3.3
71-55-6	1,1,1-Trichloroethane	216		10	3.6
110-82-7	Cyclohexane	259		10	3.5
563-58-6	1,1-Dichloropropene	240		10	2.2
56-23-5	Carbon tetrachloride	211		10	3.2
78-83-1	Isobutyl alcohol	7990		500	250
71-43-2	Benzene	254		10	3.1
107-06-2	1,2-Dichloroethane	203		10	3.3
79-01-6	Trichloroethene	249		10	5.0
108-87-2	Methylcyclohexane	271		10	5.0
78-87-5	1,2-Dichloropropane	247		10	3.8
74-95-3	Dibromomethane	205		10	2.5
123-91-1	1,4-Dioxane	11000		500	270
75-27-4	Bromodichloromethane	222		10	3.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-11234/6-A  
 Matrix: Solid Lab File ID: lfmt04.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 12/16/2010 10:46  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	229		10	1.3
10061-01-5	cis-1,3-Dichloropropene	234		10	3.2
108-10-1	4-Methyl-2-pentanone	1070		50	2.1
108-88-3	Toluene	265		10	5.0
10061-02-6	trans-1,3-Dichloropropene	231		10	5.0
79-00-5	1,1,2-Trichloroethane	260		10	4.2
127-18-4	Tetrachloroethene	263		10	5.0
142-28-9	1,3-Dichloropropane	247		10	3.3
591-78-6	2-Hexanone	1140		50	10
124-48-1	Dibromochloromethane	238		10	3.7
106-93-4	1,2-Dibromoethane	244		10	5.0
108-90-7	Chlorobenzene	263		10	2.3
630-20-6	1,1,1,2-Tetrachloroethane	248		10	3.6
100-41-4	Ethylbenzene	263		10	5.0
179601-23-1	m&p-Xylene	540		10	5.0
95-47-6	o-Xylene	270		10	5.0
100-42-5	Styrene	263		10	5.0
75-25-2	Bromoform	224		10	3.9
98-82-8	Isopropylbenzene	269		10	5.0
108-86-1	Bromobenzene	259		10	3.7
79-34-5	1,1,2,2-Tetrachloroethane	251		10	3.7
96-18-4	1,2,3-Trichloropropane	202		10	5.4
103-65-1	n-Propylbenzene	275		10	5.0
95-49-8	2-Chlorotoluene	266		10	3.3
106-43-4	4-Chlorotoluene	273		10	3.4
108-67-8	1,3,5-Trimethylbenzene	267		10	3.2
98-06-6	tert-Butylbenzene	271		10	5.0
95-63-6	1,2,4-Trimethylbenzene	270		10	3.4
135-98-8	sec-Butylbenzene	288		10	5.0
541-73-1	1,3-Dichlorobenzene	270		10	2.5
99-87-6	4-Isopropyltoluene	273		10	1.8
106-46-7	1,4-Dichlorobenzene	270		10	2.3
95-50-1	1,2-Dichlorobenzene	267		10	2.8
104-51-8	n-Butylbenzene	299		10	5.0
96-12-8	1,2-Dibromo-3-Chloropropane	161		10	4.6
120-82-1	1,2,4-Trichlorobenzene	268		10	1.6

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-11234/6-A  
 Matrix: Solid Lab File ID: lfmt04.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 12/16/2010 10:46  
 Soil Aliquot Vol: 500 (uL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	302		10	5.0
91-20-3	Naphthalene	132		10	5.0
87-61-6	1,2,3-Trichlorobenzene	192		10	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	88		65-155
2037-26-5	Toluene-d8	107		80-115
460-00-4	Bromofluorobenzene	102		80-115
2199-69-1	1,2-Dichlorobenzene-d4	106		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-11263/3  
 Matrix: Solid Lab File ID: lfmt03.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 12/16/2010 10:14  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	20.4		1.0	0.50
74-87-3	Chloromethane	22.7		1.0	0.37
75-01-4	Vinyl chloride	25.8		1.0	0.50
74-83-9	Bromomethane	21.9		1.0	0.35
75-00-3	Chloroethane	23.9		1.0	0.60
75-69-4	Trichlorofluoromethane	21.3		1.0	0.50
75-35-4	1,1-Dichloroethene	22.1		1.0	0.21
76-13-1	Freon TF	22.8		1.0	0.28
67-64-1	Acetone	102		5.0	1.0
74-88-4	Methyl iodide	19.0		1.0	0.50
75-15-0	Carbon disulfide	21.9		1.0	0.19
79-20-9	Methyl acetate	26.7		1.0	0.50
75-09-2	Methylene Chloride	24.9		1.0	0.50
156-60-5	trans-1,2-Dichloroethene	23.9		1.0	0.50
1634-04-4	Methyl t-butyl ether	22.5		1.0	0.50
75-34-3	1,1-Dichloroethane	23.3		1.0	0.36
108-05-4	Vinyl acetate	25.4		1.0	0.50
594-20-7	2,2-Dichloropropane	22.3		1.0	0.46
156-59-2	cis-1,2-Dichloroethene	23.6		1.0	0.21
78-93-3	2-Butanone	120		5.0	1.1
74-97-5	Bromochloromethane	23.4		1.0	0.53
109-99-9	Tetrahydrofuran	327		14	5.0
67-66-3	Chloroform	22.3		1.0	0.33
71-55-6	1,1,1-Trichloroethane	21.4		1.0	0.36
110-82-7	Cyclohexane	25.0		1.0	0.35
563-58-6	1,1-Dichloropropene	23.5		1.0	0.22
56-23-5	Carbon tetrachloride	21.2		1.0	0.32
78-83-1	Isobutyl alcohol	1240		50	25
71-43-2	Benzene	25.2		1.0	0.31
107-06-2	1,2-Dichloroethane	21.0		1.0	0.33
79-01-6	Trichloroethene	24.2		1.0	0.50
108-87-2	Methylcyclohexane	25.8		1.0	0.50
78-87-5	1,2-Dichloropropane	25.1		1.0	0.38
74-95-3	Dibromomethane	23.4		1.0	0.25
123-91-1	1,4-Dioxane	1320		50	27
75-27-4	Bromodichloromethane	23.0		1.0	0.37

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-11263/3  
 Matrix: Solid Lab File ID: lfmt03.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5(mL) Date Analyzed: 12/16/2010 10:14  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	23.3		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	24.0		1.0	0.32
108-10-1	4-Methyl-2-pentanone	122		5.0	0.21
108-88-3	Toluene	26.6		1.0	0.50
10061-02-6	trans-1,3-Dichloropropene	23.7		1.0	0.50
79-00-5	1,1,2-Trichloroethane	26.3		1.0	0.42
127-18-4	Tetrachloroethene	25.8		1.0	0.50
142-28-9	1,3-Dichloropropane	25.3		1.0	0.33
591-78-6	2-Hexanone	131		5.0	1.0
124-48-1	Dibromochloromethane	25.0		1.0	0.37
106-93-4	1,2-Dibromoethane	25.2		1.0	0.50
108-90-7	Chlorobenzene	26.1		1.0	0.23
630-20-6	1,1,1,2-Tetrachloroethane	25.0		1.0	0.36
100-41-4	Ethylbenzene	25.6		1.0	0.50
179601-23-1	m&p-Xylene	52.7		1.0	0.50
95-47-6	o-Xylene	26.3		1.0	0.50
100-42-5	Styrene	25.8		1.0	0.50
75-25-2	Bromoform	24.3		1.0	0.39
98-82-8	Isopropylbenzene	25.7		1.0	0.50
108-86-1	Bromobenzene	25.4		1.0	0.37
79-34-5	1,1,2,2-Tetrachloroethane	27.2		1.0	0.37
96-18-4	1,2,3-Trichloropropane	21.7		1.0	0.54
103-65-1	n-Propylbenzene	26.0		1.0	0.50
95-49-8	2-Chlorotoluene	25.9		1.0	0.33
106-43-4	4-Chlorotoluene	26.6		1.0	0.34
108-67-8	1,3,5-Trimethylbenzene	25.6		1.0	0.32
98-06-6	tert-Butylbenzene	26.0		1.0	0.50
95-63-6	1,2,4-Trimethylbenzene	25.9		1.0	0.34
135-98-8	sec-Butylbenzene	26.9		1.0	0.50
541-73-1	1,3-Dichlorobenzene	26.3		1.0	0.25
99-87-6	4-Isopropyltoluene	25.5		1.0	0.18
106-46-7	1,4-Dichlorobenzene	26.7		1.0	0.23
95-50-1	1,2-Dichlorobenzene	26.9		1.0	0.28
104-51-8	n-Butylbenzene	27.0		1.0	0.50
96-12-8	1,2-Dibromo-3-Chloropropane	23.3		1.0	0.46
120-82-1	1,2,4-Trichlorobenzene	26.0		1.0	0.16

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-2954-1  
 SDG No.: MONTGO (200-2954)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-11263/3  
 Matrix: Solid Lab File ID: lfmt03.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 12/16/2010 10:14  
 Soil Aliquot Vol.: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 11263 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	26.2		1.0	0.50
91-20-3	Naphthalene	28.6		1.0	0.50
87-61-6	1,2,3-Trichlorobenzene	26.2		1.0	0.25

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	84		65-155
2037-26-5	Toluene-d8	109		80-115
460-00-4	Bromofluorobenzene	101		80-115
2199-69-1	1,2-Dichlorobenzene-d4	106		45-145



# GC/MS VOA Worksheet

Batch Number: 200-11160  
 Method: 5035  
 Analyst: Jackson, Thomas

Date Open: Dec 15 2010 12:50PM  
 Batch End: Dec 15 2010 4:27PM

Lab ID	Client ID	Method Chain	Basis	Preservation Type	Tare Weight	Vial and Sample weight	Initial weight/volume of sample	Final weight/volume of sample
200-2954-A-1	MC-S-32451	5035, 8260B	T	NA	25.249 g	34.44 g	9.191 g	10 mL
200-2954-A-2	MC-S-32519	5035, 8260B	T	NA	25.12 g	38.34 g	13.22 g	10 mL
200-2954-A-3	MC-S-32590	5035, 8260B	T	NA	26.201 g	37.34 g	11.139 g	10 mL
200-2954-A-4	MC-S-32448	5035, 8260B	T	NA	25.315 g	37.79 g	12.475 g	10 mL
200-2954-A-5	MC-S-32557	5035, 8260B	T	NA	25.306 g	34.91 g	9.604 g	10 mL
200-2954-A-6	MC-S-32463	5035, 8260B	T	NA	25.224 g	33.74 g	8.516 g	10 mL
200-2954-A-7	MC-S-32549	5035, 8260B	T	NA	22.172 g	33.48 g	11.308 g	10 mL
200-2954-A-8	MC-S-32570	5035, 8260B	T	NA	25.245 g	35.92 g	10.675 g	10 mL
200-2954-A-9	MC-S-32477	5035, 8260B	T	NA	25.321 g	36.80 g	11.479 g	10 mL
200-2954-A-10	MC-MEOH BLANK	5035, 8260B	T	NA	20.02 g	30.02 g	10 g	10 mL
200-2954-A-11	MC-S-32525	5035, 8260B	T	NA	25.686 g	39.38 g	13.694 g	10 mL

# GC/MS VOA Worksheet

Date Open: Dec 15 2010 12:50PM  
 Batch End: Dec 15 2010 4:27PM

Batch Number: 200-11160  
 Method: 5035  
 Analyst: Jackson, Thomas

Comments

Lab ID	Client ID	Method Chain	Basis	Analysis comment
200-2954-A-1	MC-S-32451	5035, 8260B	T	100 %
200-2954-A-2	MC-S-32519	5035, 8260B	T	100 %
200-2954-A-3	MC-S-32590	5035, 8260B	T	100 %
200-2954-A-4	MC-S-32448	5035, 8260B	T	100 %
200-2954-A-5	MC-S-32557	5035, 8260B	T	CCl4 = 16
200-2954-A-6	MC-S-32463	5035, 8260B	T	100 %
200-2954-A-7	MC-S-32549	5035, 8260B	T	CCl4 = 2
200-2954-A-8	MC-S-32570	5035, 8260B	T	CCl4 = 6
200-2954-A-9	MC-S-32477	5035, 8260B	T	100 %
200-2954-A-10	MC-MEOH BLANK	5035, 8260B	T	Blank
200-2954-A-11	MC-S-32525	5035, 8260B	T	CCl4 = 2

Batch Comment:

ARGONNE NATIONAL LAB 8260B

# GC/MS VOA Worksheet

Batch Number: 200-11234  
 Method: 5035  
 Analyst: Heald, John

Date Open: Dec 16 2010 1:00PM  
 Batch End: Dec 20 2010 11:07AM

Lab ID	Client ID	Method Chain	Basis	Initial weight/volume of sample	Final weight/volume of sample
MB~200-11234/1		5035, 8260B	10 g	10 mL	
MB~200-11234/2			5 g	10 mL	
MB~200-11234/3			5 g	10 mL	
MB~200-11234/4			5 g	10 mL	
MB~200-11234/5			5 g	10 mL	
LCS~200-11234/6		5035, 8260B	10 g	10 mL	

## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica BurlingtonJob No.: 200-2954-1SDG No.: MONTGO (200-2954)Instrument ID: L.iStart Date: 11/20/2010 14:38Analysis Batch Number: 9968End Date: 11/20/2010 20:58

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB. FILE ID	COLUMN ID
BFB 200-9968/1		11/20/2010 14:38	1		DB-624 0.53 (mm)
BFB 200-9968/2		11/20/2010 14:45	1	lfm02.d	DB-624 0.53 (mm)
VIBLK 200-9968/3		11/20/2010 15:04	1		DB-624 0.53 (mm)
IC 200-9968/4		11/20/2010 15:36	1	lfm04.d	DB-624 0.53 (mm)
IC 200-9968/5		11/20/2010 16:09	1	lfm05.d	DB-624 0.53 (mm)
IC 200-9968/6		11/20/2010 16:41	1	lfm06.d	DB-624 0.53 (mm)
ICIS 200-9968/7		11/20/2010 17:13	1	lfm07.d	DB-624 0.53 (mm)
IC 200-9968/8		11/20/2010 17:45	1	lfm08.d	DB-624 0.53 (mm)
IC 200-9968/9		11/20/2010 18:17	1	lfm09.d	DB-624 0.53 (mm)
VIBLK 200-9968/10		11/20/2010 18:49	1		DB-624 0.53 (mm)
VIBLK 200-9968/11		11/20/2010 19:21	1		DB-624 0.53 (mm)
ICV 200-9968/12		11/20/2010 19:53	1	lfm12.d	DB-624 0.53 (mm)
ICV 200-9968/13		11/20/2010 20:26	1		DB-624 0.53 (mm)
VIBLK 200-9968/14		11/20/2010 20:58	1		DB-624 0.53 (mm)

## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica BurlingtonJob No.: 200-2954-1SDG No.: MONTGO (200-2954)Instrument ID: L.iStart Date: 12/16/2010 09:22Analysis Batch Number: 11263End Date: 12/16/2010 19:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 200-11263/1		12/16/2010 09:22	1	lfmt01.d	DB-624 0.53 (mm)
CCVIS 200-11263/2		12/16/2010 09:42	1	lfmt02.d	DB-624 0.53 (mm)
LCS 200-11263/3		12/16/2010 10:14	1	lfmt03.d	DB-624 0.53 (mm)
LCS 200-11234/6-A		12/16/2010 10:46	1	lfmt04.d	DB-624 0.53 (mm)
VIBLK 200-11263/5		12/16/2010 11:18	1		DB-624 0.53 (mm)
ZZZZZ		12/16/2010 11:51	1		DB-624 0.53 (mm)
ZZZZZ		12/16/2010 12:23	1		DB-624 0.53 (mm)
ZZZZZ		12/16/2010 13:00	1		DB-624 0.53 (mm)
MB 200-11234/1-A		12/16/2010 13:32	1	lfmt09.d	DB-624 0.53 (mm)
200-2954-1	MC-S-32451	12/16/2010 14:23	1	lfmt10.d	DB-624 0.53 (mm)
200-2954-2	MC-S-32519	12/16/2010 14:55	1	lfmt11.d	DB-624 0.53 (mm)
200-2954-3	MC-S-32590	12/16/2010 15:27	1	lfmt12.d	DB-624 0.53 (mm)
200-2954-4	MC-S-32448	12/16/2010 16:00	1	lfmt13.d	DB-624 0.53 (mm)
200-2954-5	MC-S-32557	12/16/2010 16:32	1	lfmt14.d	DB-624 0.53 (mm)
200-2954-6	MC-S-32463	12/16/2010 17:04	1	lfmt15.d	DB-624 0.53 (mm)
200-2954-7	MC-S-32549	12/16/2010 17:36	1	lfmt16.d	DB-624 0.53 (mm)
200-2954-8	MC-S-32570	12/16/2010 18:08	1	lfmt17.d	DB-624 0.53 (mm)
200-2954-9	MC-S-32477	12/16/2010 18:40	1	lfmt18.d	DB-624 0.53 (mm)
200-2954-10	MC-MEOH BLANK	12/16/2010 19:12	1	lfmt19.d	DB-624 0.53 (mm)
200-2954-11	MC-S-32525	12/16/2010 19:45	1	lfmt20.d	DB-624 0.53 (mm)

# Shipping and Receiving Documents

ORIGIN ID: ENLA (630) 252-5779  
DEBBIE LEASURE  
US DOE/ARGONNE NATIONAL LAB  
9700 S CASS AVE

LEMONT, IL 60439  
UNITED STATES US

SHIP DATE: 14DEC10  
ACTWGT: 11.5 LB MAN  
CAD: 0015778/CAFE2471  
DIMS: 16x16x12 IN

BILL SENDER

TO **KIRK YOUNG**

**STL - BURLINGTON - TRANSAMERICA**

**30 COMMUNITY DRIVE**

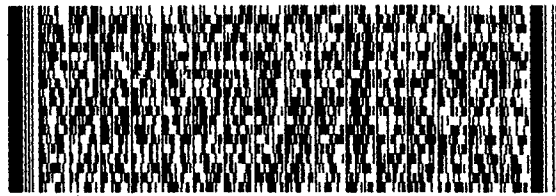
**SUITE 11**

**SOUTH BURLINGTON VT 05403**

(802) 680-1990

REF: 367031DL

01 000101000101 01 000101000101 01 000101000101 01 000101000101 01 000101000101



**FedEx**  
Express



J10101009010124

TRK# 7269 3171 3127  
0201

**WED - 15 DEC AA**  
**PRIORITY OVERNIGHT**

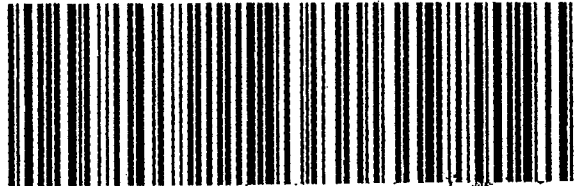
ADG

**05403**

VT-US

**BTVA**

**XH BTVA**



art # 154254-354 RITE 08/10



## Login Sample Receipt Check List

Client: Argonne National Laboratory

Job Number: 200-2954-1  
SDG Number: MONTGO (200-2954)

**Login Number: 2954**  
**Creator: Keeton, Jamie**  
**List Number: 1**

**List Source: TestAmerica Burlington**

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.1°C IR gun ID 96, CF= -1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	Sample MC-S-32490 was listed on C-O-C, but was not received.
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

## ANALYTICAL REPORT

Job Number: 200-5266-1

SDG Number: Montgomery City (200-5266)

Job Description: Montgomery City (200-5266)

Contract Number: EP-W-09-044

For:

Argonne National Laboratory

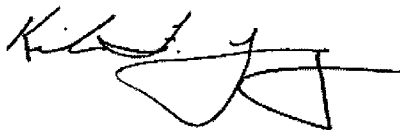
9700 South Cass Avenue

Building 203

Office B-149

Argonne, IL 60439

Attention: Mr. Clyde Dennis



Approved for release.  
Kirk F Young  
Project Manager I  
6/2/2011 8:59 AM

---

Kirk F Young

Project Manager I

kirk.young@testamericainc.com

06/02/2011

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

TestAmerica Laboratories, Inc.

TestAmerica Burlington 30 Community Drive, Suite 11, South Burlington, VT 05403

Tel (802) 660-1990 Fax (802) 660-1919 [www.testamericainc.com](http://www.testamericainc.com)



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## **CASE NARRATIVE**

**Client: Argonne National Laboratory**

**Project: Montgomery City (200-5266)**

**Report Number: 200-5266-1**

Enclosed is the data set for the referenced project work. With the exceptions noted as flags or footnotes, standard analytical protocols were followed in performing the analytical work and the applied control limits were met.

Calculations were performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods of analysis, unless otherwise detailed in the individual sections below.

Manual integration was employed in deriving certain of the analytical results. The values that have been derived from manual integration are qualified on the quantitation reports, and further documented with chromatographic profiles. An itemized listing of the manual integrations that were performed follows this narrative discussion, referencing the specific acquisition file names and the compounds for which manual integration was applied.

Included in this submittal is an itemized listing of the standards that were used in performing the analytical work.

### **Receipt**

The samples were received on 05/20/2011. 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.

### **SW846 Method(s) 5035/8260B Volatile Organics (Medium Level Soil)**

The samples were analyzed by the referenced method(s), 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 results are reported on an as received basis, without an adjustment for moisture content. Each analysis associated with the samples in this 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 analytical sequence. 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 chloroethane and methyl iodide, for which the recovery was at or below 50 percent. Additionally, isobutyl alcohol also exhibited a particularly low recovery performance. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. Trace concentrations of chloromethane and methyl iodide, and a relatively high concentration of bromomethane were identified in the analysis of sample MC-S-BLANK. The derived concentration of bromomethane (12 ug/Kg) was above the established reporting limit of 10 ug/Kg. Trace concentrations of

chloromethane and methyl iodide, and a relatively high concentration of bromomethane were also identified in the analysis of the methanol instrument blank associated with the analytical work. In that analysis the derived concentration of bromomethane (13.5 ug/Kg) was above the established reporting limit of 10 ug/Kg.

The initial calibration was established using five concentration levels of a standard of diesel fuel. With the exception of that for methyl iodide, the relative standard deviation of the responses for each analyte in the initial calibration was below 15.0 percent. The relative standard deviation of the responses for methyl iodide was 43.0 percent. The initial calibration was verified with an analytical standard from a source different than was used for calibration. With the exception of that for vinyl acetate, there was an acceptable performance of each analyte in the initial calibration verification as measured against a  $\pm 25.0$  percent tolerance. The recovery of vinyl acetate in the initial calibration verification was low, representing a 35.3 percent difference from the reference value. With the exception of those for acrolein and methyl iodide, there was an acceptable performance of each analyte in the continuing calibration check acquisition as measured against a  $\pm 15.0$  percent tolerance. The response for acrolein was low in that acquisition representing a 22.4 percent difference from the average response in the initial calibration, and the response for methyl iodide was high representing a 46.2 percent difference.

## SAMPLE SUMMARY

Client: Argonne National Laboratory

Job Number: 200-5266-1  
Sdg Number: Montgomery City (200-5266)

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
200-5266-1	MC-S-32939	Solid	05/15/2011 0000	05/20/2011 1030
200-5266-2	MC-S-32931	Solid	05/15/2011 0000	05/20/2011 1030
200-5266-3	MC-S-32959	Solid	05/15/2011 0000	05/20/2011 1030
200-5266-4	MC-S-32961	Solid	05/15/2011 0000	05/20/2011 1030
200-5266-5	MC-S-32960	Solid	05/15/2011 0000	05/20/2011 1030
200-5266-6	MC-S-33275	Solid	05/15/2011 0000	05/20/2011 1030
200-5266-7	MC-S-BLANK	Solid	05/15/2011 0000	05/20/2011 1030

## METHOD SUMMARY

Client: Argonne National Laboratory

Job Number: 200-5266-1  
Sdg Number: Montgomery City (200-5266)

Description	Lab Location	Method	Preparation Method
<b>Matrix: Solid</b>			
Volatile Organic Compounds (GC/MS)	TAL BUR	SW846 8260B	
Purge and Trap	TAL BUR		SW846 5035

### Lab References:

TAL BUR = TestAmerica Burlington

### Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.



## Quality Control Results

Client: Argonne National Laboratory

Job Number: 200-5266-1  
Sdg Number: Montgomery City (200-5266)

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Prep Batch: 200-18315</b>					
200-5266-1	MC-S-32939	T	Solid	5035	
200-5266-2	MC-S-32931	T	Solid	5035	
200-5266-3	MC-S-32959	T	Solid	5035	
200-5266-4	MC-S-32961	T	Solid	5035	
200-5266-5	MC-S-32960	T	Solid	5035	
200-5266-6	MC-S-33275	T	Solid	5035	
200-5266-7	MC-S-BLANK	T	Solid	5035	
<b>Prep Batch: 200-18519</b>					
LCS 200-18519/1-A	Lab Control Sample	T	Solid	5035	
MB 200-18519/3-A	Method Blank	T	Solid	5035	
<b>Analysis Batch:200-18603</b>					
LCS 200-18603/3	Lab Control Sample	T	Solid	8260B	
MB 200-18603/6	Method Blank	T	Solid	8260B	
LCS 200-18519/1-A	Lab Control Sample	T	Solid	8260B	200-18519
MB 200-18519/3-A	Method Blank	T	Solid	8260B	200-18519
200-5266-1	MC-S-32939	T	Solid	8260B	200-18315
200-5266-2	MC-S-32931	T	Solid	8260B	200-18315
200-5266-3	MC-S-32959	T	Solid	8260B	200-18315
200-5266-4	MC-S-32961	T	Solid	8260B	200-18315
200-5266-5	MC-S-32960	T	Solid	8260B	200-18315
200-5266-6	MC-S-33275	T	Solid	8260B	200-18315
200-5266-7	MC-S-BLANK	T	Solid	8260B	200-18315

**Report Basis**

T = Total

## DATA REPORTING QUALIFIERS

Client: Argonne National Laboratory

Job Number: 200-5266-1  
Sdg Number: Montgomery City (200-5266)

Lab Section	Qualifier	Description
GC/MS VOA		
	B	Compound was found in the blank and sample.
	U	Indicates the analyte was analyzed for but not detected.
	^	Instrument related QC exceeds the control limits
	*	Recovery or RPD exceeds control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

# Method 8260B

---

Volatile Organic Compounds (GC/MS)  
by Method 8260B

FORM II  
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Matrix: Solid Level: Medium  
 GC Column (1): DB-624 ID: 0.53 (mm)

Client Sample ID	Lab Sample ID	DCA #	TOL #	BFB #	DCZ #
MC-S-32939	200-5266-1	98	105	102	102
MC-S-32931	200-5266-2	95	105	102	102
MC-S-32959	200-5266-3	95	102	101	101
MC-S-32961	200-5266-4	99	107	103	103
MC-S-32960	200-5266-5	96	105	103	102
MC-S-33275	200-5266-6	92	99	97	98
MC-S-BLANK	200-5266-7	90	102	98	97
	MB 200-18519/3-A	92	103	101	101
	MB 200-18603/6	99	104	105	103
	LCS 200-18519/1-A	101	104	101	101
	LCS 200-18603/3	102	106	103	104

	<u>QC LIMITS</u>
DCA = 1,2-Dichloroethane-d4	65-155
TOL = Toluene-d8	80-115
BFB = Bromofluorobenzene	80-115
DCZ = 1,2-Dichlorobenzene-d4	45-145

# Column to be used to flag recovery values

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Matrix: Solid Level: Medium Lab File ID: lfwbc04.d  
 Lab ID: LCS 200-18519/1-A Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dichlorodifluoromethane	250	211	85	30-180	
Chloromethane	250	280	112	55-150	
Vinyl chloride	250	259	104	65-145	
Bromomethane	250	165	66	65-145	
Chloroethane	250	113	45	70-135	*
Trichlorofluoromethane	250	149	60	70-140	*
1,1-Dichloroethene	250	148	59	75-135	*
Freon TF	250	146	59	75-140	*
Acetone	1250	1460	117	50-130	
Methyl iodide	250	122	49	70-150	*
Carbon disulfide	250	144	57	80-135	*
Methyl acetate	250	318	127	60-140	
Methylene Chloride	250	235	94	75-140	
trans-1,2-Dichloroethene	250	243	97	80-130	
Methyl t-butyl ether	250	219	88	85-130	
1,1-Dichloroethane	250	204	81	85-120	*
Vinyl acetate	250	235	94	70-135	
2,2-Dichloropropane	250	251	100	85-120	
cis-1,2-Dichloroethene	250	252	101	80-120	
2-Butanone	1250	1080	86	70-135	
Bromochloromethane	250	209	83	75-125	
Tetrahydrofuran	3500	3260	93	75-125	
Chloroform	250	214	86	85-120	
1,1,1-Trichloroethane	250	239	95	80-115	
Cyclohexane	250	255	102	60-140	
1,1-Dichloropropene	250	258	103	85-120	
Carbon tetrachloride	250	225	90	80-115	
Isobutyl alcohol	12500	2930	23	70-135	*
Benzene	250	252	101	85-120	
1,2-Dichloroethane	250	220	88	75-120	
Trichloroethene	250	246	99	85-120	
Methylcyclohexane	250	252	101	60-140	
1,2-Dichloropropane	250	244	98	85-120	
Dibromomethane	250	215	86	80-120	
1,4-Dioxane	12500	10700	86	50-160	
Bromodichloromethane	250	226	90	80-115	
2-Chloroethyl vinyl ether	250	239	96	65-145	
cis-1,3-Dichloropropene	250	245	98	85-120	
4-Methyl-2-pentanone	1250	1130	91	65-135	
Toluene	250	258	103	75-125	
trans-1,3-Dichloropropene	250	248	99	85-120	
1,1,2-Trichloroethane	250	239	96	75-125	

# Column to be used to flag recovery and RPD values

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Matrix: Solid Level: Medium Lab File ID: lfwbc04.d  
 Lab ID: LCS 200-18519/1-A Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Tetrachloroethene	250	256	102	85-120	
1,3-Dichloropropane	250	250	100	85-120	
2-Hexanone	1250	1180	94	70-135	
Dibromochloromethane	250	240	96	80-120	
1,2-Dibromoethane	250	256	102	80-120	
Chlorobenzene	250	247	99	80-120	
1,1,1,2-Tetrachloroethane	250	243	97	80-115	
Ethylbenzene	250	256	102	80-120	
m&p-Xylene	500	514	103	80-120	
o-Xylene	250	253	101	85-120	
Styrene	250	262	105	80-125	
Bromoform	250	230	92	75-130	
Isopropylbenzene	250	252	101	85-120	
Bromobenzene	250	240	96	85-120	
1,1,2,2-Tetrachloroethane	250	229	92	75-125	
1,2,3-Trichloropropane	250	221	88	70-125	
n-Propylbenzene	250	255	102	85-120	
2-Chlorotoluene	250	247	99	85-120	
4-Chlorotoluene	250	248	99	85-120	
1,3,5-Trimethylbenzene	250	248	99	85-120	
tert-Butylbenzene	250	252	101	85-120	
1,2,4-Trimethylbenzene	250	242	97	85-120	
sec-Butylbenzene	250	261	104	85-120	
1,3-Dichlorobenzene	250	240	96	80-120	
4-Isopropyltoluene	250	250	100	85-120	
1,4-Dichlorobenzene	250	243	97	85-120	
1,2-Dichlorobenzene	250	238	95	85-120	
n-Butylbenzene	250	270	108	85-125	
1,2-Dibromo-3-Chloropropane	250	200	80	65-130	
1,2,4-Trichlorobenzene	250	246	99	80-125	
Hexachlorobutadiene	250	278	111	65-150	
Naphthalene	250	185	74	80-125	*
1,2,3-Trichlorobenzene	250	224	90	70-125	

# Column to be used to flag recovery and RPD values

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Matrix: Solid Level: Medium Lab File ID: 1fwbc03.d  
 Lab ID: LCS 200-18603/3 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Dichlorodifluoromethane	25.0	21.5	86	30-180	
Chloromethane	25.0	25.4	102	55-150	
Vinyl chloride	25.0	27.8	111	65-145	
Bromomethane	25.0	29.0	116	65-145	
Chloroethane	25.0	26.3	105	70-135	
Trichlorofluoromethane	25.0	24.4	98	70-140	
1,1-Dichloroethene	25.0	25.0	100	75-135	
Freon TF	25.0	22.7	91	75-140	
Acetone	125	122	97	50-130	
Methyl iodide	25.0	34.3	137	70-150	
Carbon disulfide	25.0	22.3	89	80-135	
Methyl acetate	25.0	32.6	131	60-140	
Methylene Chloride	25.0	25.8	103	75-140	
trans-1,2-Dichloroethene	25.0	24.9	100	80-130	
Methyl t-butyl ether	25.0	23.7	95	85-130	
1,1-Dichloroethane	25.0	24.4	98	85-120	
Vinyl acetate	25.0	26.3	105	70-135	
2,2-Dichloropropane	25.0	25.5	102	85-120	
cis-1,2-Dichloroethene	25.0	25.3	101	80-120	
2-Butanone	125	133	107	70-135	
Bromochloromethane	25.0	26.4	106	75-125	
Tetrahydrofuran	350	358	102	75-125	
Chloroform	25.0	23.1	93	85-120	
1,1,1-Trichloroethane	25.0	24.0	96	80-115	
Cyclohexane	25.0	24.6	99	60-140	
1,1-Dichloropropene	25.0	25.3	101	85-120	
Carbon tetrachloride	25.0	23.9	95	80-115	
Isobutyl alcohol	1250	1320	106	70-135	
Benzene	25.0	24.9	100	85-120	
1,2-Dichloroethane	25.0	23.3	93	75-120	
Trichloroethene	25.0	24.2	97	85-120	
Methylcyclohexane	25.0	24.5	98	60-140	
1,2-Dichloropropane	25.0	24.8	99	85-120	
Dibromomethane	25.0	24.8	99	80-120	
1,4-Dioxane	1250	1300	104	50-160	
Bromodichloromethane	25.0	24.0	96	80-115	
2-Chloroethyl vinyl ether	25.0	25.7	103	65-145	
cis-1,3-Dichloropropene	25.0	25.1	100	85-120	
4-Methyl-2-pentanone	125	138	111	65-135	
Toluene	25.0	25.0	100	75-125	
trans-1,3-Dichloropropene	25.0	24.9	100	85-120	
1,1,2-Trichloroethane	25.0	24.9	99	75-125	

# Column to be used to flag recovery and RPD values



FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Matrix: Solid Level: Medium Lab File ID: lfwbc03.d  
 Lab ID: LCS 200-18603/3 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Kg)	LCS CONCENTRATION (ug/Kg)	LCS % REC	QC LIMITS REC	#
Tetrachloroethene	25.0	24.6	98	85-120	
1,3-Dichloropropane	25.0	25.9	104	85-120	
2-Hexanone	125	142	113	70-135	
Dibromochloromethane	25.0	25.7	103	80-120	
1,2-Dibromoethane	25.0	26.7	107	80-120	
Chlorobenzene	25.0	24.3	97	80-120	
1,1,1,2-Tetrachloroethane	25.0	24.5	98	80-115	
Ethylbenzene	25.0	25.0	100	80-120	
m&p-Xylene	50.0	50.4	101	80-120	
o-Xylene	25.0	24.7	99	85-120	
Styrene	25.0	25.7	103	80-125	
Bromoform	25.0	25.4	102	75-130	
Isopropylbenzene	25.0	24.8	99	85-120	
Bromobenzene	25.0	24.2	97	85-120	
1,1,2,2-Tetrachloroethane	25.0	26.1	104	75-125	
1,2,3-Trichloropropane	25.0	24.7	99	70-125	
n-Propylbenzene	25.0	24.7	99	85-120	
2-Chlorotoluene	25.0	24.4	98	85-120	
4-Chlorotoluene	25.0	24.7	99	85-120	
1,3,5-Trimethylbenzene	25.0	24.2	97	85-120	
tert-Butylbenzene	25.0	24.4	98	85-120	
1,2,4-Trimethylbenzene	25.0	23.8	95	85-120	
sec-Butylbenzene	25.0	25.0	100	85-120	
1,3-Dichlorobenzene	25.0	23.7	95	80-120	
4-Isopropyltoluene	25.0	23.9	96	85-120	
1,4-Dichlorobenzene	25.0	23.9	96	85-120	
1,2-Dichlorobenzene	25.0	23.9	95	85-120	
n-Butylbenzene	25.0	25.3	101	85-125	
1,2-Dibromo-3-Chloropropane	25.0	23.7	95	65-130	
1,2,4-Trichlorobenzene	25.0	24.2	97	80-125	
Hexachlorobutadiene	25.0	24.6	98	65-150	
Naphthalene	25.0	24.7	99	80-125	
1,2,3-Trichlorobenzene	25.0	24.2	97	70-125	

# Column to be used to flag recovery and RPD values

FORM IV  
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
SDG No.: Montgomery City (200-5266)  
Lab File ID: lfwbc06.d Lab Sample ID: MB 200-18603/6  
Matrix: Solid Heated Purge: (Y/N) N  
Instrument ID: L.i Date Analyzed: 05/25/2011 08:21  
GC Column: DB-624 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 200-18603/3	lfwbc03.d	05/25/2011 06:44

FORM IV  
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
SDG No.: Montgomery City (200-5266)  
Lab File ID: lfwbc07.d Lab Sample ID: MB 200-18519/3-A  
Matrix: Solid Heated Purge: (Y/N) N  
Instrument ID: L.i Date Analyzed: 05/25/2011 08:53  
GC Column: DB-624 ID: 0.53 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 200-18519/1-A	lfwbc04.d	05/25/2011 07:16
MC-S-BLANK	200-5266-7	lfwbc08.d	05/25/2011 09:34
MC-S-32939	200-5266-1	lfwbc09.d	05/25/2011 10:07
MC-S-32931	200-5266-2	lfwbc10.d	05/25/2011 10:39
MC-S-32959	200-5266-3	lfwbc11.d	05/25/2011 11:12
MC-S-32961	200-5266-4	lfwbc12.d	05/25/2011 11:44
MC-S-32960	200-5266-5	lfwbc13.d	05/25/2011 12:16
MC-S-33275	200-5266-6	lfwbc14.d	05/25/2011 12:49

FORM V  
GC/MS VOA INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Lab File ID: lfw01.d BFB Injection Date: 03/09/2011  
 Instrument ID: L.i BFB Injection Time: 14:22  
 Analysis Batch No.: 14847

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.0	
75	30.0 - 60.0 % of mass 95	42.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	69.3	
175	5.0 - 9.0 % of mass 174	5.9	(8.6)1
176	95.0 - 101.0 % of mass 174	68.3	(98.5)1
177	5.0 - 9.0 % of mass 176	4.6	(6.7)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 200-14847/3	lfw03.d	03/09/2011	15:14
	IC 200-14847/4	lfw04.d	03/09/2011	15:46
	IC 200-14847/5	lfw05.d	03/09/2011	16:19
	ICIS 200-14847/6	lfw06.d	03/09/2011	16:51
	IC 200-14847/7	lfw07.d	03/09/2011	17:23
	IC 200-14847/8	lfw08.d	03/09/2011	17:56
	ICV 200-14847/12	lfw12.d	03/09/2011	20:05

FORM V  
GC/MS VOA INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Lab File ID: lfwbc01.d BFB Injection Date: 05/25/2011  
 Instrument ID: L.i BFB Injection Time: 05:57  
 Analysis Batch No.: 18603

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.0
75	30.0 - 60.0 % of mass 95	43.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.7
173	Less than 2.0 % of mass 174	0.0 (0.0)1
174	50.0 - 120.00 % of mass 95	72.9
175	5.0 - 9.0 % of mass 174	5.4 (7.4)1
176	95.0 - 101.0 % of mass 174	70.5 (96.7)1
177	5.0 - 9.0 % of mass 176	4.8 (6.8)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 200-18603/2	lfwbc02.d	05/25/2011	06:12
	LCS 200-18603/3	lfwbc03.d	05/25/2011	06:44
	LCS 200-18519/1-A	lfwbc04.d	05/25/2011	07:16
	MB 200-18603/6	lfwbc06.d	05/25/2011	08:21
	MB 200-18519/3-A	lfwbc07.d	05/25/2011	08:53
MC-S-BLANK	200-5266-7	lfwbc08.d	05/25/2011	09:34
MC-S-32939	200-5266-1	lfwbc09.d	05/25/2011	10:07
MC-S-32931	200-5266-2	lfwbc10.d	05/25/2011	10:39
MC-S-32959	200-5266-3	lfwbc11.d	05/25/2011	11:12
MC-S-32961	200-5266-4	lfwbc12.d	05/25/2011	11:44
MC-S-32960	200-5266-5	lfwbc13.d	05/25/2011	12:16
MC-S-33275	200-5266-6	lfwbc14.d	05/25/2011	12:49

FORM VIII  
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Sample No.: ICIS 200-14847/6 Date Analyzed: 03/09/2011 16:51  
 Instrument ID: L.i GC Column: DB-624 ID: 0.53(mm)  
 Lab File ID (Standard): lfw06.d Heated Purge: (Y/N) N  
 Calibration ID: 5249

	FB		CBZ		DCB	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	2904194	9.85	2205315	15.62	1231781	20.05
UPPER LIMIT	5808388	10.35	4410630	16.12	2463562	20.55
LOWER LIMIT	1452097	9.35	1102658	15.12	615891	19.55
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 200-14847/12	2890017	9.84	2186817	15.62	1197954	20.04

FB = Fluorobenzene  
 CBZ = Chlorobenzene-d5  
 DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area  
 RT Limit = ± 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII  
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Sample No.: CCVIS 200-18603/2 Date Analyzed: 05/25/2011 06:12  
 Instrument ID: L.i GC Column: DB-624 ID: 0.53 (mm)  
 Lab File ID (Standard): lfwbc02.d Heated Purge: (Y/N) N  
 Calibration ID: 5249

	FB		CBZ		DCB		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	2896850	9.82	2191371	15.59	1250054	20.03	
UPPER LIMIT	5793700	10.32	4382742	16.09	2500108	20.53	
LOWER LIMIT	1448425	9.32	1095686	15.09	625027	19.53	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 200-18603/3		3034491	9.83	2294784	15.60	1277725	20.04
LCS 200-18519/1-A		3027800	9.79	2246616	15.60	1271327	20.04
MB 200-18603/6		3129661	9.84	2353514	15.61	1250723	20.04
MB 200-18519/3-A		3025350	9.80	2290094	15.59	1255200	20.04
200-5266-7	MC-S-BLANK	3002898	9.81	2223192	15.61	1239101	20.04
200-5266-1	MC-S-32939	2972511	9.81	2234540	15.60	1243444	20.05
200-5266-2	MC-S-32931	2880066	9.81	2133930	15.61	1180789	20.05
200-5266-3	MC-S-32959	3034987	9.80	2282691	15.61	1258314	20.04
200-5266-4	MC-S-32961	2905558	9.80	2160270	15.60	1202356	20.04
200-5266-5	MC-S-32960	2886345	9.80	2152367	15.61	1191545	20.04
200-5266-6	MC-S-33275	3006724	9.80	2250699	15.61	1247260	20.04

FB = Fluorobenzene  
 CBZ = Chlorobenzene-d5  
 DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area  
 RT Limit = ± 0.50 minutes of internal standard RT

# Column used to flag values outside QC limits



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-32939 Lab Sample ID: 200-5266-1  
 Matrix: Solid Lab File ID: lfwbc09.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 13.078(g) Date Analyzed: 05/25/2011 10:07  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	7.6	U	7.6	0.99
74-87-3	Chloromethane	2.1	J B	7.6	0.92
75-01-4	Vinyl chloride	7.6	U	7.6	0.92
74-83-9	Bromomethane	6.9	J B	7.6	1.7
75-00-3	Chloroethane	7.6	U *	7.6	2.6
75-69-4	Trichlorofluoromethane	7.6	U *	7.6	0.99
75-35-4	1,1-Dichloroethene	7.6	U *	7.6	1.1
76-13-1	Freon TF	7.6	U *	7.6	1.1
67-64-1	Acetone	38	U	38	6.4
74-88-4	Methyl iodide	6.4	J * B	7.6	2.4
75-15-0	Carbon disulfide	7.6	U *	7.6	1.2
79-20-9	Methyl acetate	7.6	U	7.6	2.1
75-09-2	Methylene Chloride	7.6	U	7.6	1.9
156-60-5	trans-1,2-Dichloroethene	7.6	U	7.6	1.3
1634-04-4	Methyl t-butyl ether	7.6	U	7.6	1.1
75-34-3	1,1-Dichloroethane	7.6	U *	7.6	1.4
108-05-4	Vinyl acetate	7.6	U ^	7.6	2.5
594-20-7	2,2-Dichloropropane	7.6	U	7.6	1.5
156-59-2	cis-1,2-Dichloroethene	7.6	U	7.6	1.6
78-93-3	2-Butanone	38	U	38	5.7
74-97-5	Bromochloromethane	7.6	U	7.6	1.7
109-99-9	Tetrahydrofuran	110	U	110	9.9
67-66-3	Chloroform	7.6	U	7.6	1.2
71-55-6	1,1,1-Trichloroethane	7.6	U	7.6	1.4
110-82-7	Cyclohexane	7.6	U	7.6	1.2
563-58-6	1,1-Dichloropropene	7.6	U	7.6	1.6
56-23-5	Carbon tetrachloride	7.6	U	7.6	0.99
78-83-1	Isobutyl alcohol	380	U *	380	99
71-43-2	Benzene	7.6	U	7.6	1.4
107-06-2	1,2-Dichloroethane	7.6	U	7.6	1.6
79-01-6	Trichloroethene	7.6	U	7.6	1.5
108-87-2	Methylcyclohexane	7.6	U	7.6	1.1
78-87-5	1,2-Dichloropropane	7.6	U	7.6	1.5
74-95-3	Dibromomethane	7.6	U	7.6	1.8
123-91-1	1,4-Dioxane	380	U	380	99
75-27-4	Bromodichloromethane	7.6	U	7.6	1.7

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-32939 Lab Sample ID: 200-5266-1  
 Matrix: Solid Lab File ID: lfwbc09.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 13.078(g) Date Analyzed: 05/25/2011 10:07  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	7.6	U	7.6	0.84
10061-01-5	cis-1,3-Dichloropropene	7.6	U	7.6	1.7
108-10-1	4-Methyl-2-pentanone	38	U	38	4.5
108-88-3	Toluene	7.6	U	7.6	1.5
10061-02-6	trans-1,3-Dichloropropene	7.6	U	7.6	2.1
79-00-5	1,1,2-Trichloroethane	7.6	U	7.6	1.6
127-18-4	Tetrachloroethene	7.6	U	7.6	1.4
142-28-9	1,3-Dichloropropane	7.6	U	7.6	1.5
591-78-6	2-Hexanone	38	U	38	5.5
124-48-1	Dibromochloromethane	7.6	U	7.6	1.6
106-93-4	1,2-Dibromoethane	7.6	U	7.6	1.8
108-90-7	Chlorobenzene	7.6	U	7.6	1.8
630-20-6	1,1,1,2-Tetrachloroethane	7.6	U	7.6	1.7
100-41-4	Ethylbenzene	7.6	U	7.6	1.7
179601-23-1	m&p-Xylene	7.6	U	7.6	3.4
95-47-6	o-Xylene	7.6	U	7.6	1.6
100-42-5	Styrene	7.6	U	7.6	1.8
75-25-2	Bromoform	7.6	U	7.6	1.7
98-82-8	Isopropylbenzene	7.6	U	7.6	1.8
108-86-1	Bromobenzene	7.6	U	7.6	1.9
79-34-5	1,1,2,2-Tetrachloroethane	7.6	U	7.6	1.6
96-18-4	1,2,3-Trichloropropane	7.6	U	7.6	2.1
103-65-1	n-Propylbenzene	7.6	U	7.6	1.8
95-49-8	2-Chlorotoluene	7.6	U	7.6	1.9
106-43-4	4-Chlorotoluene	7.6	U	7.6	1.7
108-67-8	1,3,5-Trimethylbenzene	7.6	U	7.6	1.7
98-06-6	tert-Butylbenzene	7.6	U	7.6	1.8
95-63-6	1,2,4-Trimethylbenzene	7.6	U	7.6	1.7
135-98-8	sec-Butylbenzene	7.6	U	7.6	1.8
541-73-1	1,3-Dichlorobenzene	7.6	U	7.6	1.7
99-87-6	4-Isopropyltoluene	7.6	U	7.6	1.6
106-46-7	1,4-Dichlorobenzene	7.6	U	7.6	2.1
95-50-1	1,2-Dichlorobenzene	7.6	U	7.6	1.8
104-51-8	n-Butylbenzene	7.6	U	7.6	1.8
96-12-8	1,2-Dibromo-3-Chloropropane	7.6	U	7.6	3.9
120-82-1	1,2,4-Trichlorobenzene	7.6	U	7.6	1.9

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-32939 Lab Sample ID: 200-5266-1  
 Matrix: Solid Lab File ID: lfwbc09.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 13.078(g) Date Analyzed: 05/25/2011 10:07  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	7.6	U	7.6	2.1
91-20-3	Naphthalene	7.6	U *	7.6	1.6
87-61-6	1,2,3-Trichlorobenzene	7.6	U	7.6	2.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	98		65-155
2037-26-5	Toluene-d8	105		80-115
460-00-4	Bromofluorobenzene	102		80-115
2199-69-1	1,2-Dichlorobenzene-d4	102		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-32931 Lab Sample ID: 200-5266-2  
 Matrix: Solid Lab File ID: lfbwbc10.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 10.938(g) Date Analyzed: 05/25/2011 10:39  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	9.1	U	9.1	1.2
74-87-3	Chloromethane	2.5	J B	9.1	1.1
75-01-4	Vinyl chloride	9.1	U	9.1	1.1
74-83-9	Bromomethane	6.3	J B	9.1	2.0
75-00-3	Chloroethane	9.1	U *	9.1	3.1
75-69-4	Trichlorofluoromethane	9.1	U *	9.1	1.2
75-35-4	1,1-Dichloroethene	9.1	U *	9.1	1.3
76-13-1	Freon TF	9.1	U *	9.1	1.3
67-64-1	Acetone	46	U	46	7.7
74-88-4	Methyl iodide	6.7	J * B	9.1	2.9
75-15-0	Carbon disulfide	9.1	U *	9.1	1.5
79-20-9	Methyl acetate	9.1	U	9.1	2.6
75-09-2	Methylene Chloride	9.1	U	9.1	2.3
156-60-5	trans-1,2-Dichloroethene	9.1	U	9.1	1.6
1634-04-4	Methyl t-butyl ether	9.1	U	9.1	1.4
75-34-3	1,1-Dichloroethane	9.1	U *	9.1	1.6
108-05-4	Vinyl acetate	9.1	U ^	9.1	3.0
594-20-7	2,2-Dichloropropane	9.1	U	9.1	1.7
156-59-2	cis-1,2-Dichloroethene	9.1	U	9.1	1.9
78-93-3	2-Butanone	46	U	46	6.8
74-97-5	Bromochloromethane	9.1	U	9.1	2.0
109-99-9	Tetrahydrofuran	130	U	130	12
67-66-3	Chloroform	9.1	U	9.1	1.5
71-55-6	1,1,1-Trichloroethane	9.1	U	9.1	1.6
110-82-7	Cyclohexane	9.1	U	9.1	1.5
563-58-6	1,1-Dichloropropene	9.1	U	9.1	1.9
56-23-5	Carbon tetrachloride	9.1	U	9.1	1.2
78-83-1	Isobutyl alcohol	460	U *	460	120
71-43-2	Benzene	9.1	U	9.1	1.6
107-06-2	1,2-Dichloroethane	9.1	U	9.1	1.9
79-01-6	Trichloroethene	9.1	U	9.1	1.7
108-87-2	Methylcyclohexane	9.1	U	9.1	1.4
78-87-5	1,2-Dichloropropane	9.1	U	9.1	1.8
74-95-3	Dibromomethane	9.1	U	9.1	2.1
123-91-1	1,4-Dioxane	460	U	460	120
75-27-4	Bromodichloromethane	9.1	U	9.1	2.0

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-32931 Lab Sample ID: 200-5266-2  
 Matrix: Solid Lab File ID: lfbwbc10.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 10.938(g) Date Analyzed: 05/25/2011 10:39  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	9.1	U	9.1	1.0
10061-01-5	cis-1,3-Dichloropropene	9.1	U	9.1	2.0
108-10-1	4-Methyl-2-pentanone	46	U	46	5.4
108-88-3	Toluene	9.1	U	9.1	1.8
10061-02-6	trans-1,3-Dichloropropene	9.1	U	9.1	2.5
79-00-5	1,1,2-Trichloroethane	9.1	U	9.1	1.9
127-18-4	Tetrachloroethene	9.1	U	9.1	1.6
142-28-9	1,3-Dichloropropane	9.1	U	9.1	1.7
591-78-6	2-Hexanone	46	U	46	6.6
124-48-1	Dibromochloromethane	9.1	U	9.1	1.9
106-93-4	1,2-Dibromoethane	9.1	U	9.1	2.1
108-90-7	Chlorobenzene	9.1	U	9.1	2.1
630-20-6	1,1,1,2-Tetrachloroethane	9.1	U	9.1	2.0
100-41-4	Ethylbenzene	9.1	U	9.1	2.0
179601-23-1	m&p-Xylene	9.1	U	9.1	4.0
95-47-6	o-Xylene	9.1	U	9.1	1.9
100-42-5	Styrene	9.1	U	9.1	2.2
75-25-2	Bromoform	9.1	U	9.1	2.0
98-82-8	Isopropylbenzene	9.1	U	9.1	2.2
108-86-1	Bromobenzene	9.1	U	9.1	2.3
79-34-5	1,1,2,2-Tetrachloroethane	9.1	U	9.1	1.9
96-18-4	1,2,3-Trichloropropane	9.1	U	9.1	2.6
103-65-1	n-Propylbenzene	9.1	U	9.1	2.1
95-49-8	2-Chlorotoluene	9.1	U	9.1	2.3
106-43-4	4-Chlorotoluene	9.1	U	9.1	2.0
108-67-8	1,3,5-Trimethylbenzene	9.1	U	9.1	2.0
98-06-6	tert-Butylbenzene	9.1	U	9.1	2.1
95-63-6	1,2,4-Trimethylbenzene	9.1	U	9.1	2.0
135-98-8	sec-Butylbenzene	9.1	U	9.1	2.1
541-73-1	1,3-Dichlorobenzene	9.1	U	9.1	2.0
99-87-6	4-Isopropyltoluene	9.1	U	9.1	1.9
106-46-7	1,4-Dichlorobenzene	9.1	U	9.1	2.5
95-50-1	1,2-Dichlorobenzene	9.1	U	9.1	2.1
104-51-8	n-Butylbenzene	9.1	U	9.1	2.2
96-12-8	1,2-Dibromo-3-Chloropropane	9.1	U	9.1	4.7
120-82-1	1,2,4-Trichlorobenzene	9.1	U	9.1	2.3

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-32931 Lab Sample ID: 200-5266-2  
 Matrix: Solid Lab File ID: lfwbc10.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 10.938(g) Date Analyzed: 05/25/2011 10:39  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	9.1	U	9.1	2.5
91-20-3	Naphthalene	9.1	U *	9.1	1.9
87-61-6	1,2,3-Trichlorobenzene	9.1	U	9.1	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	95		65-155
2037-26-5	Toluene-d8	105		80-115
460-00-4	Bromofluorobenzene	102		80-115
2199-69-1	1,2-Dichlorobenzene-d4	102		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-32959 Lab Sample ID: 200-5266-3  
 Matrix: Solid Lab File ID: 1fwbc11.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 10.087(g) Date Analyzed: 05/25/2011 11:12  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	9.9	U	9.9	1.3
74-87-3	Chloromethane	4.3	J B	9.9	1.2
75-01-4	Vinyl chloride	9.9	U	9.9	1.2
74-83-9	Bromomethane	6.8	J B	9.9	2.2
75-00-3	Chloroethane	9.9	U *	9.9	3.4
75-69-4	Trichlorofluoromethane	9.9	U *	9.9	1.3
75-35-4	1,1-Dichloroethene	9.9	U *	9.9	1.4
76-13-1	Freon TF	9.9	U *	9.9	1.4
67-64-1	Acetone	50	U	50	8.3
74-88-4	Methyl iodide	8.8	J * B	9.9	3.2
75-15-0	Carbon disulfide	9.9	U *	9.9	1.6
79-20-9	Methyl acetate	9.9	U	9.9	2.8
75-09-2	Methylene Chloride	9.9	U	9.9	2.5
156-60-5	trans-1,2-Dichloroethene	9.9	U	9.9	1.7
1634-04-4	Methyl t-butyl ether	9.9	U	9.9	1.5
75-34-3	1,1-Dichloroethane	9.9	U *	9.9	1.8
108-05-4	Vinyl acetate	9.9	U ^	9.9	3.3
594-20-7	2,2-Dichloropropane	9.9	U	9.9	1.9
156-59-2	cis-1,2-Dichloroethene	9.9	U	9.9	2.1
78-93-3	2-Butanone	50	U	50	7.3
74-97-5	Bromochloromethane	9.9	U	9.9	2.2
109-99-9	Tetrahydrofuran	140	U	140	13
67-66-3	Chloroform	4.8	J	9.9	1.6
71-55-6	1,1,1-Trichloroethane	13		9.9	1.8
110-82-7	Cyclohexane	9.9	U	9.9	1.6
563-58-6	1,1-Dichloropropene	9.9	U	9.9	2.1
56-23-5	Carbon tetrachloride	470		9.9	1.3
78-83-1	Isobutyl alcohol	500	U *	500	130
71-43-2	Benzene	9.9	U	9.9	1.8
107-06-2	1,2-Dichloroethane	9.9	U	9.9	2.1
79-01-6	Trichloroethene	9.9	U	9.9	1.9
108-87-2	Methylcyclohexane	9.9	U	9.9	1.5
78-87-5	1,2-Dichloropropane	9.9	U	9.9	2.0
74-95-3	Dibromomethane	9.9	U	9.9	2.3
123-91-1	1,4-Dioxane	500	U	500	130
75-27-4	Bromodichloromethane	9.9	U	9.9	2.2

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-32959 Lab Sample ID: 200-5266-3  
 Matrix: Solid Lab File ID: lfwbcl1.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 10.087(g) Date Analyzed: 05/25/2011 11:12  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	9.9	U	9.9	1.1
10061-01-5	cis-1,3-Dichloropropene	9.9	U	9.9	2.2
108-10-1	4-Methyl-2-pentanone	50	U	50	5.8
108-88-3	Toluene	9.9	U	9.9	2.0
10061-02-6	trans-1,3-Dichloropropene	9.9	U	9.9	2.7
79-00-5	1,1,2-Trichloroethane	9.9	U	9.9	2.1
127-18-4	Tetrachloroethene	9.9	U	9.9	1.8
142-28-9	1,3-Dichloropropane	9.9	U	9.9	1.9
591-78-6	2-Hexanone	50	U	50	7.1
124-48-1	Dibromochloromethane	9.9	U	9.9	2.1
106-93-4	1,2-Dibromoethane	9.9	U	9.9	2.3
108-90-7	Chlorobenzene	9.9	U	9.9	2.3
630-20-6	1,1,1,2-Tetrachloroethane	9.9	U	9.9	2.2
100-41-4	Ethylbenzene	9.9	U	9.9	2.2
179601-23-1	m&p-Xylene	9.9	U	9.9	4.4
95-47-6	o-Xylene	9.9	U	9.9	2.1
100-42-5	Styrene	9.9	U	9.9	2.4
75-25-2	Bromoform	9.9	U	9.9	2.2
98-82-8	Isopropylbenzene	9.9	U	9.9	2.4
108-86-1	Bromobenzene	9.9	U	9.9	2.5
79-34-5	1,1,2,2-Tetrachloroethane	9.9	U	9.9	2.1
96-18-4	1,2,3-Trichloropropane	9.9	U	9.9	2.8
103-65-1	n-Propylbenzene	9.9	U	9.9	2.3
95-49-8	2-Chlorotoluene	9.9	U	9.9	2.5
106-43-4	4-Chlorotoluene	9.9	U	9.9	2.2
108-67-8	1,3,5-Trimethylbenzene	9.9	U	9.9	2.2
98-06-6	tert-Butylbenzene	9.9	U	9.9	2.3
95-63-6	1,2,4-Trimethylbenzene	9.9	U	9.9	2.2
135-98-8	sec-Butylbenzene	9.9	U	9.9	2.3
541-73-1	1,3-Dichlorobenzene	9.9	U	9.9	2.2
99-87-6	4-Isopropyltoluene	9.9	U	9.9	2.1
106-46-7	1,4-Dichlorobenzene	9.9	U	9.9	2.7
95-50-1	1,2-Dichlorobenzene	9.9	U	9.9	2.3
104-51-8	n-Butylbenzene	9.9	U	9.9	2.4
96-12-8	1,2-Dibromo-3-Chloropropane	9.9	U	9.9	5.1
120-82-1	1,2,4-Trichlorobenzene	9.9	U	9.9	2.5



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-32959 Lab Sample ID: 200-5266-3  
 Matrix: Solid Lab File ID: lfwbc11.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 10.087(g) Date Analyzed: 05/25/2011 11:12  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	9.9	U	9.9	2.7
91-20-3	Naphthalene	9.9	U *	9.9	2.1
87-61-6	1,2,3-Trichlorobenzene	9.9	U	9.9	2.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	95		65-155
2037-26-5	Toluene-d8	102		80-115
460-00-4	Bromofluorobenzene	101		80-115
2199-69-1	1,2-Dichlorobenzene-d4	101		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-32961 Lab Sample ID: 200-5266-4  
 Matrix: Solid Lab File ID: lfbwcl2.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 11.428(g) Date Analyzed: 05/25/2011 11:44  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	8.8	U	8.8	1.1
74-87-3	Chloromethane	4.3	J B	8.8	1.1
75-01-4	Vinyl chloride	8.8	U	8.8	1.1
74-83-9	Bromomethane	7.5	J B	8.8	1.9
75-00-3	Chloroethane	8.8	U *	8.8	3.0
75-69-4	Trichlorofluoromethane	8.8	U *	8.8	1.1
75-35-4	1,1-Dichloroethene	8.8	U *	8.8	1.2
76-13-1	Freon TF	8.8	U *	8.8	1.2
67-64-1	Acetone	44	U	44	7.4
74-88-4	Methyl iodide	8.2	J * B	8.8	2.8
75-15-0	Carbon disulfide	8.8	U *	8.8	1.4
79-20-9	Methyl acetate	8.8	U	8.8	2.5
75-09-2	Methylene Chloride	8.8	U	8.8	2.2
156-60-5	trans-1,2-Dichloroethene	8.8	U	8.8	1.5
1634-04-4	Methyl t-butyl ether	8.8	U	8.8	1.3
75-34-3	1,1-Dichloroethane	8.8	U *	8.8	1.6
108-05-4	Vinyl acetate	8.8	U ^	8.8	2.9
594-20-7	2,2-Dichloropropane	8.8	U	8.8	1.7
156-59-2	cis-1,2-Dichloroethene	8.8	U	8.8	1.8
78-93-3	2-Butanone	44	U	44	6.5
74-97-5	Bromochloromethane	8.8	U	8.8	1.9
109-99-9	Tetrahydrofuran	120	U	120	11
67-66-3	Chloroform	4.1	J	8.8	1.4
71-55-6	1,1,1-Trichloroethane	14		8.8	1.6
110-82-7	Cyclohexane	8.8	U	8.8	1.4
563-58-6	1,1-Dichloropropene	8.8	U	8.8	1.8
56-23-5	Carbon tetrachloride	320		8.8	1.1
78-83-1	Isobutyl alcohol	440	U *	440	110
71-43-2	Benzene	8.8	U	8.8	1.6
107-06-2	1,2-Dichloroethane	8.8	U	8.8	1.8
79-01-6	Trichloroethene	8.8	U	8.8	1.7
108-87-2	Methylcyclohexane	8.8	U	8.8	1.3
78-87-5	1,2-Dichloropropane	8.8	U	8.8	1.8
74-95-3	Dibromomethane	8.8	U	8.8	2.0
123-91-1	1,4-Dioxane	440	U	440	110
75-27-4	Bromodichloromethane	8.8	U	8.8	1.9

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-32961 Lab Sample ID: 200-5266-4  
 Matrix: Solid Lab File ID: lfwbc12.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 11.428(g) Date Analyzed: 05/25/2011 11:44  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	8.8	U	8.8	0.96
10061-01-5	cis-1,3-Dichloropropene	8.8	U	8.8	1.9
108-10-1	4-Methyl-2-pentanone	44	U	44	5.2
108-88-3	Toluene	8.8	U	8.8	1.8
10061-02-6	trans-1,3-Dichloropropene	8.8	U	8.8	2.4
79-00-5	1,1,2-Trichloroethane	8.8	U	8.8	1.8
127-18-4	Tetrachloroethene	8.8	U	8.8	1.6
142-28-9	1,3-Dichloropropane	8.8	U	8.8	1.7
591-78-6	2-Hexanone	44	U	44	6.3
124-48-1	Dibromochloromethane	8.8	U	8.8	1.8
106-93-4	1,2-Dibromoethane	8.8	U	8.8	2.0
108-90-7	Chlorobenzene	8.8	U	8.8	2.0
630-20-6	1,1,1,2-Tetrachloroethane	8.8	U	8.8	1.9
100-41-4	Ethylbenzene	8.8	U	8.8	1.9
179601-23-1	m&p-Xylene	8.8	U	8.8	3.9
95-47-6	o-Xylene	8.8	U	8.8	1.8
100-42-5	Styrene	8.8	U	8.8	2.1
75-25-2	Bromoform	8.8	U	8.8	1.9
98-82-8	Isopropylbenzene	8.8	U	8.8	2.1
108-86-1	Bromobenzene	8.8	U	8.8	2.2
79-34-5	1,1,2,2-Tetrachloroethane	8.8	U	8.8	1.8
96-18-4	1,2,3-Trichloropropane	8.8	U	8.8	2.5
103-65-1	n-Propylbenzene	8.8	U	8.8	2.0
95-49-8	2-Chlorotoluene	8.8	U	8.8	2.2
106-43-4	4-Chlorotoluene	8.8	U	8.8	1.9
108-67-8	1,3,5-Trimethylbenzene	8.8	U	8.8	1.9
98-06-6	tert-Butylbenzene	8.8	U	8.8	2.0
95-63-6	1,2,4-Trimethylbenzene	8.8	U	8.8	1.9
135-98-8	sec-Butylbenzene	8.8	U	8.8	2.0
541-73-1	1,3-Dichlorobenzene	8.8	U	8.8	1.9
99-87-6	4-Isopropyltoluene	8.8	U	8.8	1.8
106-46-7	1,4-Dichlorobenzene	8.8	U	8.8	2.4
95-50-1	1,2-Dichlorobenzene	8.8	U	8.8	2.0
104-51-8	n-Butylbenzene	8.8	U	8.8	2.1
96-12-8	1,2-Dibromo-3-Chloropropane	8.8	U	8.8	4.5
120-82-1	1,2,4-Trichlorobenzene	8.8	U	8.8	2.2

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-32961 Lab Sample ID: 200-5266-4  
 Matrix: Solid Lab File ID: 1fwbc12.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 11.428(g) Date Analyzed: 05/25/2011 11:44  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	8.8	U	8.8	2.4
91-20-3	Naphthalene	8.8	U *	8.8	1.8
87-61-6	1,2,3-Trichlorobenzene	8.8	U	8.8	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	99		65-155
2037-26-5	Toluene-d8	107		80-115
460-00-4	Bromofluorobenzene	103		80-115
2199-69-1	1,2-Dichlorobenzene-d4	103		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-32960 Lab Sample ID: 200-5266-5  
 Matrix: Solid Lab File ID: 1fwbc13.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 11.102(g) Date Analyzed: 05/25/2011 12:16  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	9.0	U	9.0	1.2
74-87-3	Chloromethane	4.1	J B	9.0	1.1
75-01-4	Vinyl chloride	9.0	U	9.0	1.1
74-83-9	Bromomethane	6.6	J B	9.0	2.0
75-00-3	Chloroethane	9.0	U *	9.0	3.1
75-69-4	Trichlorofluoromethane	9.0	U *	9.0	1.2
75-35-4	1,1-Dichloroethene	9.0	U *	9.0	1.3
76-13-1	Freon TF	9.0	U *	9.0	1.3
67-64-1	Acetone	45	U	45	7.6
74-88-4	Methyl iodide	6.5	J * B	9.0	2.9
75-15-0	Carbon disulfide	9.0	U *	9.0	1.4
79-20-9	Methyl acetate	9.0	U	9.0	2.5
75-09-2	Methylene Chloride	9.0	U	9.0	2.3
156-60-5	trans-1,2-Dichloroethene	9.0	U	9.0	1.5
1634-04-4	Methyl t-butyl ether	9.0	U	9.0	1.4
75-34-3	1,1-Dichloroethane	9.0	U *	9.0	1.6
108-05-4	Vinyl acetate	9.0	U ^	9.0	3.0
594-20-7	2,2-Dichloropropane	9.0	U	9.0	1.7
156-59-2	cis-1,2-Dichloroethene	9.0	U	9.0	1.9
78-93-3	2-Butanone	45	U	45	6.7
74-97-5	Bromochloromethane	9.0	U	9.0	2.0
109-99-9	Tetrahydrofuran	130	U	130	12
67-66-3	Chloroform	4.0	J	9.0	1.4
71-55-6	1,1,1-Trichloroethane	15		9.0	1.6
110-82-7	Cyclohexane	9.0	U	9.0	1.4
563-58-6	1,1-Dichloropropene	9.0	U	9.0	1.9
56-23-5	Carbon tetrachloride	240		9.0	1.2
78-83-1	Isobutyl alcohol	450	U *	450	120
71-43-2	Benzene	9.0	U	9.0	1.6
107-06-2	1,2-Dichloroethane	9.0	U	9.0	1.9
79-01-6	Trichloroethene	9.0	U	9.0	1.7
108-87-2	Methylcyclohexane	9.0	U	9.0	1.4
78-87-5	1,2-Dichloropropane	9.0	U	9.0	1.8
74-95-3	Dibromomethane	9.0	U	9.0	2.1
123-91-1	1,4-Dioxane	450	U	450	120
75-27-4	Bromodichloromethane	9.0	U	9.0	2.0

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-32960 Lab Sample ID: 200-5266-5  
 Matrix: Solid Lab File ID: lfbwbc13.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 11.102(g) Date Analyzed: 05/25/2011 12:16  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	9.0	U	9.0	0.99
10061-01-5	cis-1,3-Dichloropropene	9.0	U	9.0	2.0
108-10-1	4-Methyl-2-pentanone	45	U	45	5.3
108-88-3	Toluene	9.0	U	9.0	1.8
10061-02-6	trans-1,3-Dichloropropene	9.0	U	9.0	2.4
79-00-5	1,1,2-Trichloroethane	9.0	U	9.0	1.9
127-18-4	Tetrachloroethene	9.0	U	9.0	1.6
142-28-9	1,3-Dichloropropane	9.0	U	9.0	1.7
591-78-6	2-Hexanone	45	U	45	6.5
124-48-1	Dibromochloromethane	9.0	U	9.0	1.9
106-93-4	1,2-Dibromoethane	9.0	U	9.0	2.1
108-90-7	Chlorobenzene	9.0	U	9.0	2.1
630-20-6	1,1,1,2-Tetrachloroethane	9.0	U	9.0	2.0
100-41-4	Ethylbenzene	9.0	U	9.0	2.0
179601-23-1	m&p-Xylene	9.0	U	9.0	4.0
95-47-6	o-Xylene	9.0	U	9.0	1.9
100-42-5	Styrene	9.0	U	9.0	2.2
75-25-2	Bromoform	9.0	U	9.0	2.0
98-82-8	Isopropylbenzene	9.0	U	9.0	2.2
108-86-1	Bromobenzene	9.0	U	9.0	2.3
79-34-5	1,1,2,2-Tetrachloroethane	9.0	U	9.0	1.9
96-18-4	1,2,3-Trichloropropane	9.0	U	9.0	2.5
103-65-1	n-Propylbenzene	9.0	U	9.0	2.1
95-49-8	2-Chlorotoluene	9.0	U	9.0	2.3
106-43-4	4-Chlorotoluene	9.0	U	9.0	2.0
108-67-8	1,3,5-Trimethylbenzene	9.0	U	9.0	2.0
98-06-6	tert-Butylbenzene	9.0	U	9.0	2.1
95-63-6	1,2,4-Trimethylbenzene	9.0	U	9.0	2.0
135-98-8	sec-Butylbenzene	9.0	U	9.0	2.1
541-73-1	1,3-Dichlorobenzene	9.0	U	9.0	2.0
99-87-6	4-Isopropyltoluene	9.0	U	9.0	1.9
106-46-7	1,4-Dichlorobenzene	9.0	U	9.0	2.4
95-50-1	1,2-Dichlorobenzene	9.0	U	9.0	2.1
104-51-8	n-Butylbenzene	9.0	U	9.0	2.2
96-12-8	1,2-Dibromo-3-Chloropropane	9.0	U	9.0	4.6
120-82-1	1,2,4-Trichlorobenzene	9.0	U	9.0	2.3

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-32960 Lab Sample ID: 200-5266-5  
 Matrix: Solid Lab File ID: lfbwcl3.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 11.102(g) Date Analyzed: 05/25/2011 12:16  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	9.0	U	9.0	2.4
91-20-3	Naphthalene	9.0	U *	9.0	1.9
87-61-6	1,2,3-Trichlorobenzene	9.0	U	9.0	2.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	96		65-155
2037-26-5	Toluene-d8	105		80-115
460-00-4	Bromofluorobenzene	103		80-115
2199-69-1	1,2-Dichlorobenzene-d4	102		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-33275 Lab Sample ID: 200-5266-6  
 Matrix: Solid Lab File ID: lfbwbc14.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 12.529(g) Date Analyzed: 05/25/2011 12:49  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	8.0	U	8.0	1.0
74-87-3	Chloromethane	1.9	J B	8.0	0.96
75-01-4	Vinyl chloride	8.0	U	8.0	0.96
74-83-9	Bromomethane	4.0	J B	8.0	1.8
75-00-3	Chloroethane	8.0	U *	8.0	2.7
75-69-4	Trichlorofluoromethane	8.0	U *	8.0	1.0
75-35-4	1,1-Dichloroethene	8.0	U *	8.0	1.1
76-13-1	Freon TF	8.0	U *	8.0	1.1
67-64-1	Acetone	40	U	40	6.7
74-88-4	Methyl iodide	3.8	J * B	8.0	2.6
75-15-0	Carbon disulfide	8.0	U *	8.0	1.3
79-20-9	Methyl acetate	8.0	U	8.0	2.2
75-09-2	Methylene Chloride	8.0	U	8.0	2.0
156-60-5	trans-1,2-Dichloroethene	8.0	U	8.0	1.4
1634-04-4	Methyl t-butyl ether	8.0	U	8.0	1.2
75-34-3	1,1-Dichloroethane	8.0	U *	8.0	1.4
108-05-4	Vinyl acetate	8.0	U ^	8.0	2.6
594-20-7	2,2-Dichloropropane	8.0	U	8.0	1.5
156-59-2	cis-1,2-Dichloroethene	8.0	U	8.0	1.7
78-93-3	2-Butanone	40	U	40	5.9
74-97-5	Bromochloromethane	8.0	U	8.0	1.8
109-99-9	Tetrahydrofuran	110	U	110	10
67-66-3	Chloroform	8.0	U	8.0	1.3
71-55-6	1,1,1-Trichloroethane	8.0	U	8.0	1.4
110-82-7	Cyclohexane	8.0	U	8.0	1.3
563-58-6	1,1-Dichloropropene	8.0	U	8.0	1.7
56-23-5	Carbon tetrachloride	8.0	U	8.0	1.0
78-83-1	Isobutyl alcohol	400	U *	400	100
71-43-2	Benzene	8.0	U	8.0	1.4
107-06-2	1,2-Dichloroethane	8.0	U	8.0	1.7
79-01-6	Trichloroethene	8.0	U	8.0	1.5
108-87-2	Methylcyclohexane	8.0	U	8.0	1.2
78-87-5	1,2-Dichloropropane	8.0	U	8.0	1.6
74-95-3	Dibromomethane	8.0	U	8.0	1.8
123-91-1	1,4-Dioxane	400	U	400	100
75-27-4	Bromodichloromethane	8.0	U	8.0	1.8



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-33275 Lab Sample ID: 200-5266-6  
 Matrix: Solid Lab File ID: lfwbc14.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 12.529(g) Date Analyzed: 05/25/2011 12:49  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	8.0	U	8.0	0.88
10061-01-5	cis-1,3-Dichloropropene	8.0	U	8.0	1.8
108-10-1	4-Methyl-2-pentanone	40	U	40	4.7
108-88-3	Toluene	8.0	U	8.0	1.6
10061-02-6	trans-1,3-Dichloropropene	8.0	U	8.0	2.2
79-00-5	1,1,2-Trichloroethane	8.0	U	8.0	1.7
127-18-4	Tetrachloroethene	8.0	U	8.0	1.4
142-28-9	1,3-Dichloropropane	8.0	U	8.0	1.5
591-78-6	2-Hexanone	40	U	40	5.7
124-48-1	Dibromochloromethane	8.0	U	8.0	1.7
106-93-4	1,2-Dibromoethane	8.0	U	8.0	1.8
108-90-7	Chlorobenzene	8.0	U	8.0	1.8
630-20-6	1,1,1,2-Tetrachloroethane	8.0	U	8.0	1.8
100-41-4	Ethylbenzene	8.0	U	8.0	1.8
179601-23-1	m&p-Xylene	8.0	U	8.0	3.5
95-47-6	o-Xylene	8.0	U	8.0	1.7
100-42-5	Styrene	8.0	U	8.0	1.9
75-25-2	Bromoform	8.0	U	8.0	1.8
98-82-8	Isopropylbenzene	8.0	U	8.0	1.9
108-86-1	Bromobenzene	8.0	U	8.0	2.0
79-34-5	1,1,2,2-Tetrachloroethane	8.0	U	8.0	1.7
96-18-4	1,2,3-Trichloropropane	8.0	U	8.0	2.2
103-65-1	n-Propylbenzene	8.0	U	8.0	1.8
95-49-8	2-Chlorotoluene	8.0	U	8.0	2.0
106-43-4	4-Chlorotoluene	8.0	U	8.0	1.8
108-67-8	1,3,5-Trimethylbenzene	8.0	U	8.0	1.8
98-06-6	tert-Butylbenzene	8.0	U	8.0	1.8
95-63-6	1,2,4-Trimethylbenzene	8.0	U	8.0	1.8
135-98-8	sec-Butylbenzene	8.0	U	8.0	1.8
541-73-1	1,3-Dichlorobenzene	8.0	U	8.0	1.8
99-87-6	4-Isopropyltoluene	8.0	U	8.0	1.7
106-46-7	1,4-Dichlorobenzene	8.0	U	8.0	2.2
95-50-1	1,2-Dichlorobenzene	8.0	U	8.0	1.8
104-51-8	n-Butylbenzene	8.0	U	8.0	1.9
96-12-8	1,2-Dibromo-3-Chloropropane	8.0	U	8.0	4.1
120-82-1	1,2,4-Trichlorobenzene	8.0	U	8.0	2.0

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-33275 Lab Sample ID: 200-5266-6  
 Matrix: Solid Lab File ID: lfwbc14.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 12.529(g) Date Analyzed: 05/25/2011 12:49  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	8.0	U	8.0	2.2
91-20-3	Naphthalene	8.0	U *	8.0	1.7
87-61-6	1,2,3-Trichlorobenzene	8.0	U	8.0	2.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	92		65-155
2037-26-5	Toluene-d8	99		80-115
460-00-4	Bromofluorobenzene	97		80-115
2199-69-1	1,2-Dichlorobenzene-d4	98		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-BLANK Lab Sample ID: 200-5266-7  
 Matrix: Solid Lab File ID: lfwbc08.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 10(g) Date Analyzed: 05/25/2011 09:34  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53(mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	10	U	10	1.3
74-87-3	Chloromethane	4.9	J B	10	1.2
75-01-4	Vinyl chloride	10	U	10	1.2
74-83-9	Bromomethane	12	B	10	2.2
75-00-3	Chloroethane	10	U *	10	3.4
75-69-4	Trichlorofluoromethane	10	U *	10	1.3
75-35-4	1,1-Dichloroethene	10	U *	10	1.4
76-13-1	Freon TF	10	U *	10	1.4
67-64-1	Acetone	50	U	50	8.4
74-88-4	Methyl iodide	9.5	J * B	10	3.2
75-15-0	Carbon disulfide	10	U *	10	1.6
79-20-9	Methyl acetate	10	U	10	2.8
75-09-2	Methylene Chloride	10	U	10	2.5
156-60-5	trans-1,2-Dichloroethene	10	U	10	1.7
1634-04-4	Methyl t-butyl ether	10	U	10	1.5
75-34-3	1,1-Dichloroethane	10	U *	10	1.8
108-05-4	Vinyl acetate	10	U ^	10	3.3
594-20-7	2,2-Dichloropropane	10	U	10	1.9
156-59-2	cis-1,2-Dichloroethene	10	U	10	2.1
78-93-3	2-Butanone	50	U	50	7.4
74-97-5	Bromochloromethane	10	U	10	2.2
109-99-9	Tetrahydrofuran	140	U	140	13
67-66-3	Chloroform	10	U	10	1.6
71-55-6	1,1,1-Trichloroethane	10	U	10	1.8
110-82-7	Cyclohexane	10	U	10	1.6
563-58-6	1,1-Dichloropropene	10	U	10	2.1
56-23-5	Carbon tetrachloride	10	U	10	1.3
78-83-1	Isobutyl alcohol	500	U *	500	130
71-43-2	Benzene	10	U	10	1.8
107-06-2	1,2-Dichloroethane	10	U	10	2.1
79-01-6	Trichloroethene	10	U	10	1.9
108-87-2	Methylcyclohexane	10	U	10	1.5
78-87-5	1,2-Dichloropropane	10	U	10	2.0
74-95-3	Dibromomethane	10	U	10	2.3
123-91-1	1,4-Dioxane	500	U	500	130
75-27-4	Bromodichloromethane	10	U	10	2.2

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-BLANK Lab Sample ID: 200-5266-7  
 Matrix: Solid Lab File ID: lfwbc08.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 10(g) Date Analyzed: 05/25/2011 09:34  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	10	U	10	1.1
10061-01-5	cis-1,3-Dichloropropene	10	U	10	2.2
108-10-1	4-Methyl-2-pentanone	50	U	50	5.9
108-88-3	Toluene	10	U	10	2.0
10061-02-6	trans-1,3-Dichloropropene	10	U	10	2.7
79-00-5	1,1,2-Trichloroethane	10	U	10	2.1
127-18-4	Tetrachloroethene	10	U	10	1.8
142-28-9	1,3-Dichloropropane	10	U	10	1.9
591-78-6	2-Hexanone	50	U	50	7.2
124-48-1	Dibromochloromethane	10	U	10	2.1
106-93-4	1,2-Dibromoethane	10	U	10	2.3
108-90-7	Chlorobenzene	10	U	10	2.3
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	2.2
100-41-4	Ethylbenzene	10	U	10	2.2
179601-23-1	m&p-Xylene	10	U	10	4.4
95-47-6	o-Xylene	10	U	10	2.1
100-42-5	Styrene	10	U	10	2.4
75-25-2	Bromoform	10	U	10	2.2
98-82-8	Isopropylbenzene	10	U	10	2.4
108-86-1	Bromobenzene	10	U	10	2.5
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	2.1
96-18-4	1,2,3-Trichloropropane	10	U	10	2.8
103-65-1	n-Propylbenzene	10	U	10	2.3
95-49-8	2-Chlorotoluene	10	U	10	2.5
106-43-4	4-Chlorotoluene	10	U	10	2.2
108-67-8	1,3,5-Trimethylbenzene	10	U	10	2.2
98-06-6	tert-Butylbenzene	10	U	10	2.3
95-63-6	1,2,4-Trimethylbenzene	10	U	10	2.2
135-98-8	sec-Butylbenzene	10	U	10	2.3
541-73-1	1,3-Dichlorobenzene	10	U	10	2.2
99-87-6	4-Isopropyltoluene	10	U	10	2.1
106-46-7	1,4-Dichlorobenzene	10	U	10	2.7
95-50-1	1,2-Dichlorobenzene	10	U	10	2.3
104-51-8	n-Butylbenzene	10	U	10	2.4
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	10	5.1
120-82-1	1,2,4-Trichlorobenzene	10	U	10	2.5

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: MC-S-BLANK Lab Sample ID: 200-5266-7  
 Matrix: Solid Lab File ID: lfwbc08.d  
 Analysis Method: 8260B Date Collected: 05/15/2011 00:00  
 Sample wt/vol: 10(g) Date Analyzed: 05/25/2011 09:34  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	10	U	10	2.7
91-20-3	Naphthalene	10	U *	10	2.1
87-61-6	1,2,3-Trichlorobenzene	10	U	10	2.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	90		65-155
2037-26-5	Toluene-d8	102		80-115
460-00-4	Bromofluorobenzene	98		80-115
2199-69-1	1,2-Dichlorobenzene-d4	97		45-145

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 200-5266-1 Analy Batch No.: 14847  
 SDG No.: Montgomery City (200-5266)  
 Instrument ID: L.i GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N  
 Calibration Start Date: 03/09/2011 15:14 Calibration End Date: 03/09/2011 17:56 Calibration ID: 5249

Calibration Files:

LEVEL	LAB SAMPLE ID:	EPA SAMPLE NO:	LAB FILE ID:
Level 1	IC 200-14847/3	IC	1fw03.d
Level 2	IC 200-14847/4	IC	1fw04.d
Level 3	IC 200-14847/5	IC	1fw05.d
Level 4	ICIS 200-14847/6	ICIS	1fw06.d
Level 5	IC 200-14847/7	IC	1fw07.d
Level 6	IC 200-14847/8	IC	1fw08.d

ANALYTE	RRF						CURVE TYPE	COEFFICIENT			MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6		B	M1	M2							
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6											
Dichlorodifluoromethane	0.5553	0.5270	0.5088	0.5264	0.5104	Ave		0.5211					3.8		15.0		
Chloromethane	0.4989	0.3055	0.3013	0.2950	0.3086	Ave		0.3154		0.1000			7.3		15.0		
Vinyl chloride	0.3205	0.3151	0.3091	0.3187	0.3145	Ave		0.3140					1.8		15.0		
Bromomethane	0.3060	0.1755	0.1686	0.1559	0.1700	Ave		0.1686					3.9		15.0		
Chloroethane	0.1710	0.2102	0.2013	0.1953	0.1873	Ave		0.1925					7.7		15.0		
Trichlorofluoromethane	0.1665	0.5569	0.5292	0.5143	0.5311	Ave		0.5247					3.7		15.0		
Acrolein	0.4991	0.0353	0.0315	0.0343	0.0334	Ave		0.0336					3.9		15.0		
1,1-Dichloroethene	0.0329	0.3280	0.3074	0.2932	0.3059	Ave		0.3060					3.9		15.0		
Freon TF	0.2985	0.6249	0.6234	0.6099	0.6342	Ave		0.6220					1.4		15.0		
Acetone	0.6155	0.0489	0.0496	0.0480	0.0473	Ave		0.0480					2.5		15.0		
Methyl iodide	0.0462	0.1257	0.1621	0.2313	0.3363	Ave		0.2742					43.0 *		15.0		
Carbon disulfide	0.3928	0.9622	0.8516	0.8303	0.8638	Ave		0.8756					5.2		15.0		
Allyl chloride	0.8717	0.5712	0.5602	0.5412	0.5655	Ave		0.5597					1.9		15.0		
Methyl acetate	0.5559	0.0412	0.0386	0.0393	0.0412	Ave		0.0411					4.7		15.0		
Methylene Chloride	0.0439	0.3305	0.3033	0.2898	0.2915	Ave		0.3007					5.2		15.0		

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 200-5266-1 Analy Batch No.: 14847

SDG No.: Montgomery City (200-5266)

Instrument ID: L.i GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/09/2011 15:14 Calibration End Date: 03/09/2011 17:56 Calibration ID: 5249

ANALYTE	RRF						CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6		B	M1	M2								
tert-Butyl alcohol	0.0185 0.0165	0.0177	0.0177	0.0168	0.0171	0.0171	Ave	0.0174				4.2		15.0				
Acrylonitrile	0.0642 0.0704	0.0659	0.0640	0.0666	0.0671	0.0671	Ave	0.0664				3.5		15.0				
trans-1,2-Dichloroethene	0.3497 0.3313	0.3311	0.3144	0.3325	0.3314	0.3314	Ave	0.3317				3.4		15.0				
Methyl t-butyl ether	0.6378 0.6000	0.5989	0.5891	0.6113	0.5998	0.5998	Ave	0.6061				2.8		15.0				
1,1-Dichloroethane	0.6913 0.6484	0.6440	0.6368	0.6579	0.6530	0.6530	Ave	0.6552			0.1000	2.9		15.0				
Vinyl acetate	0.4804 0.5134	0.5512	0.5344	0.5470	0.5138	0.5138	Ave	0.5234				5.0		15.0				
Chloroprene	0.5214 0.5074	0.5052	0.4928	0.5119	0.5129	0.5129	Ave	0.5086				1.9		15.0				
2,2-Dichloropropane	0.4919 0.4085	0.4426	0.4235	0.4292	0.4202	0.4202	Ave	0.4360				6.8		15.0				
cis-1,2-Dichloroethene	0.3535 0.3306	0.3288	0.3218	0.3343	0.3300	0.3300	Ave	0.3332				3.2		15.0				
2-Butanone	0.0203 0.0212	0.0202	0.0204	0.0213	0.0217	0.0217	Ave	0.0209				3.0		15.0				
Propionitrile	0.0204 0.0242	0.0213	0.0214	0.0230	0.0237	0.0237	Ave	0.0223				6.7		15.0				
Methacrylonitrile	0.0810 0.0762	0.0721	0.0730	0.0755	0.0768	0.0768	Ave	0.0758				4.2		15.0				
Bromochloromethane	0.2062 0.1758	0.1935	0.1906	0.1992	0.1893	0.1893	Ave	0.1924				5.3		15.0				
Tetrahydrofuran	0.0862 0.0795	0.0774	0.0775	0.0800	0.0810	0.0810	Ave	0.0803				4.0		15.0				
Chloroform	0.6371 0.6060	0.6065	0.5861	0.6132	0.6075	0.6075	Ave	0.6094				2.7		15.0				
1,1,1-Trichloroethane	0.4983 0.4686	0.4742	0.4625	0.4796	0.4777	0.4777	Ave	0.4768				2.6		15.0				
Cyclohexane	0.6112 0.5740	0.5734	0.5542	0.5811	0.5813	0.5813	Ave	0.5792				3.2		15.0				
1,1-Dichloropropene	0.5152 0.4895	0.4867	0.4774	0.5006	0.4941	0.4941	Ave	0.4939				2.6		15.0				
Carbon tetrachloride	0.4447 0.4365	0.4343	0.4252	0.4440	0.4402	0.4402	Ave	0.4375				1.7		15.0				
Isobutyl alcohol	0.0112 0.0110	0.0101	0.0104	0.0109	0.0113	0.0113	Ave	0.0108				4.2		15.0				

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 200-5266-1 Analy Batch No.: 14847  
 SDG No.: Montgomery City (200-5266) GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 03/09/2011 15:14 Calibration End Date: 03/09/2011 17:56 Calibration ID: 5249

ANALYTE	RRF						CURVE TYPE			COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	B	M1	M2											
Benzene	0.9750 0.9112	0.9043	0.8841	0.9173	0.9082	0.9082	Ave	0.9167			3.4	15.0								
1,2-Dichloroethane	0.3307 0.3093	0.3118	0.3046	0.3176	0.3088	0.3088	Ave	0.3138			3.0	15.0								
Trichloroethene	0.4211 0.4075	0.4001	0.3874	0.4086	0.4127	0.4127	Ave	0.4062			2.8	15.0								
Methylcyclohexane	0.5201 0.5264	0.5264	0.5117	0.5386	0.5350	0.5350	Ave	0.5264			1.9	15.0								
1,2-Dichloropropane	0.4341 0.4090	0.4068	0.3996	0.4147	0.4086	0.4086	Ave	0.4121			2.9	15.0								
Dibromomethane	0.3345 0.3151	0.3067	0.3034	0.3187	0.3125	0.3125	Ave	0.3152			3.5	15.0								
Methyl methacrylate	0.2885 0.2702	0.2705	0.2604	0.2675	0.2721	0.2721	Ave	0.2715			3.4	15.0								
1,4-Dioxane	0.0021 0.0021	0.0020	0.0021	0.0021	0.0021	0.0021	Ave	0.0021			1.8	15.0								
Bromodichloromethane	0.5945 0.5886	0.5729	0.5642	0.5919	0.5910	0.5910	Ave	0.5838			2.1	15.0								
2-Chloroethyl vinyl ether	0.2128 0.2142	0.2022	0.2064	0.2155	0.2169	0.2169	Ave	0.2113			2.7	15.0								
cis-1,3-Dichloropropene	0.5418 0.5415	0.5272	0.5126	0.5494	0.5388	0.5388	Ave	0.5352			2.5	15.0								
4-Methyl-2-pentanone	0.3306 0.3371	0.3217	0.3240	0.3369	0.3420	0.3420	Ave	0.3321			2.4	15.0								
Toluene	0.8585 0.8071	0.7945	0.7787	0.8117	0.8018	0.8018	Ave	0.8087			3.3	15.0								
trans-1,3-Dichloropropene	0.5902 0.5682	0.5399	0.5531	0.5662	0.5607	0.5607	Ave	0.5631			3.0	15.0								
Ethyl methacrylate	0.4341 0.4215	0.4095	0.4109	0.4267	0.4218	0.4218	Ave	0.4207			2.2	15.0								
1,1,2-Trichloroethane	0.3891 0.3735	0.3780	0.3696	0.3801	0.3731	0.3731	Ave	0.3772			1.8	15.0								
Tetrachloroethene	0.6246 0.6169	0.6039	0.5978	0.6276	0.6187	0.6187	Ave	0.6149			1.9	15.0								
1,3-Dichloropropane	0.6834 0.6518	0.6576	0.6349	0.6595	0.6495	0.6495	Ave	0.6561			2.4	15.0								
2-Hexanone	0.2855 0.2969	0.2706	0.2805	0.2949	0.3011	0.3011	Ave	0.2883			4.0	15.0								
Dibromochloromethane	0.6220 0.6760	0.6279	0.6344	0.6691	0.6658	0.6658	Ave	0.6492			3.6	15.0								

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.



FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 200-5266-1 Analy Batch No.: 14847

SDG No.: Montgomery City (200-5266) GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: L.i Calibration Start Date: 03/09/2011 15:14 Calibration End Date: 03/09/2011 17:56 Calibration ID: 5249

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2							
1,2-Dibromoethane	0.5934 0.6020	0.5876	0.5739	0.6042	0.5772	Ave		0.5897				2.1	15.0			
Chlorobenzene	1.0662 1.0292	1.0035	0.9952	1.0323	1.0229	Ave		1.0249	0.3000			2.4	15.0			
1,1,1,2-Tetrachloroethane	0.4832 0.4931	0.4750	0.4745	0.4985	0.4930	Ave		0.4862				2.1	15.0			
Ethylbenzene	1.6492 1.6142	1.5660	1.5453	1.6114	1.6064	Ave		1.5987				2.3	15.0			
m&p-Xylene	0.6032 0.6004	0.5733	0.5761	0.5988	0.5954	Ave		0.5912				2.2	15.0			
o-Xylene	0.5840 0.5661	0.5572	0.5530	0.5745	0.5663	Ave		0.5668				2.0	15.0			
Styrene	0.9525 0.9712	0.9089	0.9080	0.9631	0.9570	Ave		0.9435				2.9	15.0			
Bromoform	0.4468 0.5132	0.4581	0.4724	0.5079	0.5121	Ave		0.4851	0.1000			6.1	15.0			
Isopropylbenzene	3.0311 2.9794	2.9087	2.8478	2.9363	2.9680	Ave		2.9452				2.1	15.0			
Bromobenzene	0.9653 0.9360	0.9100	0.8946	0.9202	0.9243	Ave		0.9251				2.6	15.0			
1,1,2,2-Tetrachloroethane	1.3758 1.2359	1.2612	1.2363	1.2508	1.2380	Ave		1.2663	0.3000			4.3	15.0			
1,2,3-Trichloropropane	0.2875 0.2728	0.2768	0.2690	0.2750	0.2732	Ave		0.2757				2.3	15.0			
trans-1,4-Dichloro-2-butene	0.2611 0.2560	0.2493	0.2499	0.2544	0.2629	Ave		0.2556				2.2	15.0			
n-Propylbenzene	0.7487 0.7516	0.7350	0.7221	0.7543	0.7555	Ave		0.7445				1.8	15.0			
2-Chlorotoluene	0.7285 0.6897	0.6914	0.6722	0.6878	0.6920	Ave		0.6936				2.7	15.0			
1,3,5-Trimethylbenzene	2.2019 2.1562	2.0777	2.0578	2.1297	2.1550	Ave		2.1297				2.5	15.0			
4-Chlorotoluene	0.7206 0.7109	0.6881	0.6728	0.7058	0.7091	Ave		0.7012				2.5	15.0			
tert-Butylbenzene	2.5198 2.3775	2.3547	2.3144	2.3770	2.3908	Ave		2.3890				2.9	15.0			
1,2,4-Trimethylbenzene	2.2286 2.1887	2.1379	2.0951	2.1426	2.1763	Ave		2.1615				2.1	15.0			
sec-Butylbenzene	3.4327 3.4318	3.3085	3.2624	3.3660	3.4217	Ave		3.3705				2.1	15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD CURVE EVALUTION

Lab Name: TestAmerica Burlington Job No.: 200-5266-1 Analy Batch No.: 14847  
 SDG No.: Montgomery City (200-5266) GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 03/09/2011 15:14 Calibration End Date: 03/09/2011 17:56 Calibration ID: 5249

ANALYTE	RRF						CURVE TYPE	COEFFICIENT			MIN RRF	§RSD	#	MAX §RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	B		M1	M2								
1,3-Dichlorobenzene	1.5547 1.5334	1.4854	1.4655	1.5074	1.5127		Ave	1.5098					15.0				
4-Isopropyltoluene	2.6658 2.6669	2.5828	2.5469	2.6491	2.6845		Ave	2.6327					15.0				
1,4-Dichlorobenzene	1.6932 1.6008	1.5235	1.4834	1.5480	1.5835		Ave	1.5721					15.0				
1,2-Dichlorobenzene	1.4875 1.4056	1.3721	1.3377	1.3736	1.3838		Ave	1.3934					15.0				
n-Butylbenzene	2.3849 2.6058	2.4605	2.4661	2.5823	2.6167		Ave	2.5194					15.0				
1,2-Dibromo-3-Chloropropane	0.2199 0.2199	0.2101	0.2107	0.2147	0.2223		Ave	0.2206					15.0				
1,2,4-Trichlorobenzene	1.0411 0.5765	0.9721	0.9860	1.0215	1.0424		Ave	1.0071					15.0				
Hexachlorobutadiene	0.6543 1.7239	0.6324	0.6403	0.6569	0.6686		Ave	0.6382					15.0				
Naphthalene	1.7597 0.8753	1.6353	1.6674	1.7050	1.7772		Ave	1.7114					15.0				
1,2,3-Trichlorobenzene	0.8940 0.2808	0.8691	0.8548	0.8821	0.8965		Ave	0.8786					15.0				
1,2-Dichloroethane-d4	0.2503 1.2380	0.2565	0.2475	0.2555	0.2510		Ave	0.2569					15.0				
Toluene-d8	1.2038 1.4971	1.1737	1.1465	1.1987	1.2010		Ave	1.1936					15.0				
Bromofluorobenzene	1.3288 1.0288	1.3107	1.2806	1.3081	1.3124		Ave	1.3396					15.0				
1,2-Dichlorobenzene-d4	0.9108 0.9108	0.9060	0.8990	0.9105	0.9032		Ave	0.9264					15.0				

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-52666-1 Analy Batch No.: 14847  
 SDG No.: Montgomery City (200-52666)  
 Instrument ID: L.1 GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N  
 Calibration Start Date: 03/09/2011 15:14 Calibration End Date: 03/09/2011 17:56 Calibration ID: 5249

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 200-14847/3	1fw03.d
Level 2	IC 200-14847/4	1fw04.d
Level 3	IC 200-14847/5	1fw05.d
Level 4	ICIS 200-14847/6	1fw06.d
Level 5	IC 200-14847/7	1fw07.d
Level 6	IC 200-14847/8	1fw08.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		
Dichlorodifluoromethane	FB	Ave	63648 5967155	296154	587813	1528853	2979526	1.00 100	5.00	10.0	25.0	50.0	50.0	
Chloromethane	FB	Ave	41038 3876293	171694	348121	856733	1801240	1.00 100	5.00	10.0	25.0	50.0	50.0	
Vinyl chloride	FB	Ave	36735 3660145	177054	357085	925606	1836002	1.00 100	5.00	10.0	25.0	50.0	50.0	
Bromomethane	FB	Ave	20112 2044624	94763	180066	493708	994838	1.00 100	5.00	10.0	25.0	50.0	50.0	
Chloroethane	FB	Ave	24099 1991532	113145	225602	563965	1093135	1.00 100	5.00	10.0	25.0	50.0	50.0	
Trichlorofluoromethane	FB	Ave	63836 5968983	297375	594181	1542511	3021486	1.00 100	5.00	10.0	25.0	50.0	50.0	
Acrolein	FB	Ave	20249 1968479	88543	197860	485627	991309	5.00 500	25.0	50.0	125	250	250	
1,1-Dichloroethene	FB	Ave	37603 3569724	172767	338744	888432	1767757	1.00 100	5.00	10.0	25.0	50.0	50.0	
Freon TF	FB	Ave	71629 7361324	350307	704610	1841780	3645101	1.00 100	5.00	10.0	25.0	50.0	50.0	
Acetone	FB	Ave	28038 2760823	139409	277373	685901	1392712	5.00 500	25.0	50.0	125	250	250	
Methyl iodide	FB	Ave	14408 4697720	91084	267230	976685	2317440	1.00 100	5.00	10.0	25.0	50.0	50.0	
Carbon disulfide	FB	Ave	110297 10425042	478548	959247	2508764	5100982	1.00 100	5.00	10.0	25.0	50.0	50.0	
Allyl chloride	FB	Ave	65480 6648100	314791	625222	1642400	3294896	1.00 100	5.00	10.0	25.0	50.0	50.0	
Methyl acetate	FB	Ave	4719 524706	21677	45440	119692	247540	1.00 100	5.00	10.0	25.0	50.0	50.0	
Methylene Chloride	FB	Ave	37885 3476916	170456	334843	866585	1701693	1.00 100	5.00	10.0	25.0	50.0	50.0	
tert-Butyl alcohol	FB	Ave	105863 3935081	198907	407924	974509	1998227	50.0 2000	100	200	500	1000	1000	

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-5266-1 Analy Batch No.: 14847  
 SDG No.: Montgomery City (200-5266) GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 03/09/2011 15:14 Calibration End Date: 03/09/2011 17:56 Calibration ID: 5249

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		
Acrylonitrile	FB	Ave	7358 841531	37020	73953	193452	391744	1.00 100	5.00	10.0	25.0	50.0		
trans-1,2-Dichloroethene	FB	Ave	40080 3961795	186058	363276	965625	1934669	1.00 100	5.00	10.0	25.0	50.0		
Methyl t-butyl ether	FB	Ave	73115 7175602	336532	680530	1775337	3501319	1.00 100	5.00	10.0	25.0	50.0		
1,1-Dichloroethane	FB	Ave	79245 7755166	361902	735645	1910563	3811714	1.00 100	5.00	10.0	25.0	50.0		
Vinyl acetate	FB	Ave	55068 6140768	309771	617416	1588526	2999502	1.00 100	5.00	10.0	25.0	50.0		
Chloroprene	FB	Ave	59767 6088651	283873	569312	1486754	2993997	1.00 100	5.00	10.0	25.0	50.0		
2,2-Dichloropropane	FB	Ave	56389 4885572	248693	489205	1246618	2452676	1.00 100	5.00	10.0	25.0	50.0		
cis-1,2-Dichloroethene	FB	Ave	40521 3953843	184753	371773	970881	1926515	1.00 100	5.00	10.0	25.0	50.0		
2-Butanone	FB	Ave	11640 1269260	56877	118021	309346	633404	5.00 500	25.0	50.0	125	250		
Propionitrile	FB	Ave	9374 1158338	47857	99081	267066	552411	4.00 400	20.0	40.0	100	200		
Methacrylonitrile	FB	Ave	9286 911865	40530	84365	219328	448576	1.00 100	5.00	10.0	25.0	50.0		
Bromochloromethane	FB	Ave	23639 2102627	108743	220198	578390	1104849	1.00 100	5.00	10.0	25.0	50.0		
Tetrahydrofuran	FB	Ave	138371 13317058	608635	1253434	3251327	6616105	14.0 1400	70.0	140	350	700		
Chloroform	FB	Ave	73026 7247324	340848	677128	1780915	3545998	1.00 100	5.00	10.0	25.0	50.0		
1,1,1-Trichloroethane	FB	Ave	57121 5604889	266506	534287	1392873	2788649	1.00 100	5.00	10.0	25.0	50.0		
Cyclohexane	FB	Ave	70057 6864640	322230	640295	1687489	3392980	1.00 100	5.00	10.0	25.0	50.0		
1,1-Dichloropropene	FB	Ave	59053 5854494	273476	551543	1453984	2884144	1.00 100	5.00	10.0	25.0	50.0		
Carbon tetrachloride	FB	Ave	50970 5219955	244050	491195	1289559	2569695	1.00 100	5.00	10.0	25.0	50.0		
Isobutyl alcohol	FB	Ave	64421 6575371	285027	600272	1588820	3285776	50.0 5000	250	500	1250	2500		
Benzene	FB	Ave	111765 10897887	508192	1021327	2663901	5301574	1.00 100	5.00	10.0	25.0	50.0		
1,2-Dichloroethane	FB	Ave	37910 3699151	175217	351874	922438	1802745	1.00 100	5.00	10.0	25.0	50.0		

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-5266-1 Analy Batch No.: 14847  
 SDG No.: Montgomery City (200-5266) GC Column: DB-624 ID: 0.53(mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 03/09/2011 15:14 Calibration End Date: 03/09/2011 17:56 Calibration ID: 5249

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		
Trichloroethene	FB	Ave	48274 4873784	224827	447507	1186598	2408925	1.00 100	5.00	10.0	25.0	50.0		
Methylcyclohexane	FB	Ave	59619 6295094	295789	591147	1564056	3123230	1.00 100	5.00	10.0	25.0	50.0		
1,2-Dichloropropane	FB	Ave	49763 4891207	228583	461674	1204382	2384969	1.00 100	5.00	10.0	25.0	50.0		
Dibromomethane	FB	Ave	38345 3768786	172352	350500	925668	1824366	1.00 100	5.00	10.0	25.0	50.0		
Methyl methacrylate	CBZ	Ave	24881 2430347	115254	226858	589868	1200400	1.00 100	5.00	10.0	25.0	50.0		
1,4-Dioxane	FB	Ave	11898 1272895	57492	122063	307667	626816	50.0 5000	250	500	1250	2500		
Bromodichloromethane	FB	Ave	68141 7039011	321916	651856	1718917	3449798	1.00 100	5.00	10.0	25.0	50.0		
2-Chloroethyl vinyl ether	FB	Ave	24395 2561406	113624	238424	625823	1266118	1.00 100	5.00	10.0	25.0	50.0		
cis-1,3-Dichloropropene	FB	Ave	62110 6475848	296265	592220	1595430	3144985	1.00 100	5.00	10.0	25.0	50.0		
4-Methyl-2-pentanone	FB	Ave	189473 20159753	904014	1871766	4891775	9983227	5.00 500	25.0	50.0	125	250		
Toluene	CBZ	Ave	74032 7259919	338487	678359	1790052	3538081	1.00 100	5.00	10.0	25.0	50.0		
trans-1,3-Dichloropropene	CBZ	Ave	50894 5110617	230033	481877	1248732	2474239	1.00 100	5.00	10.0	25.0	50.0		
Ethyl methacrylate	FB	Ave	49764 5041126	230117	474656	1239183	2462267	1.00 100	5.00	10.0	25.0	50.0		
1,1,2-Trichloroethane	CBZ	Ave	33552 3359654	161044	322003	838202	1646250	1.00 100	5.00	10.0	25.0	50.0		
Tetrachloroethene	CBZ	Ave	53868 5549084	257304	520828	1384085	2729741	1.00 100	5.00	10.0	25.0	50.0		
1,3-Dichloropropane	CBZ	Ave	58937 5863128	280185	553143	1454487	2865761	1.00 100	5.00	10.0	25.0	50.0		
2-Hexanone	CBZ	Ave	123121 13354023	576553	1222009	3251967	6641976	5.00 500	25.0	50.0	125	250		
Dibromochloromethane	CBZ	Ave	53640 6080047	267510	552675	1475568	2937970	1.00 100	5.00	10.0	25.0	50.0		
1,2-Dibromoethane	CBZ	Ave	51169 5415070	250344	500008	1332446	2546895	1.00 100	5.00	10.0	25.0	50.0		
Chlorobenzene	CBZ	Ave	91950 9257240	427553	866972	2276615	4513649	1.00 100	5.00	10.0	25.0	50.0		
1,1,1,2-Tetrachloroethane	CBZ	Ave	41672 4434958	202383	413336	1099415	2175327	1.00 100	5.00	10.0	25.0	50.0		

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-5266-1 Analy Batch No.: 14847  
 SDG No.: Montgomery City (200-5266) GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N  
 Instrument ID: L.i Calibration Start Date: 03/09/2011 15:14 Calibration End Date: 03/09/2011 17:56 Calibration ID: 5249

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		
Ethylbenzene	CBZ	Ave	142224 14519524	667188	1346259	3553555	7088101	1.00 100	5.00	10.0	25.0	50.0		
m,p-Xylene	CBZ	Ave	104036 10801473	488478	1003821	2641177	5254082	2.00 200	10.0	20.0	50.0	100		
o-Xylene	CBZ	Ave	50359 5091841	237408	481758	1267005	2498641	1.00 100	5.00	10.0	25.0	50.0		
Styrene	CBZ	Ave	82140 8735842	387239	791059	2123914	4222614	1.00 100	5.00	10.0	25.0	50.0		
Bromoform	CBZ	Ave	38532 4616321	195166	411574	1120107	2259529	1.00 100	5.00	10.0	25.0	50.0		
Isopropylbenzene	DCB	Ave	140166 14673921	672885	1363148	3616878	7190868	1.00 100	5.00	10.0	25.0	50.0		
Bromobenzene	DCB	Ave	44640 4609831	210523	428222	1133483	2239381	1.00 100	5.00	10.0	25.0	50.0		
1,1,2,2-Tetrachloroethane	DCB	Ave	63622 6086849	291757	591776	1540760	2999431	1.00 100	5.00	10.0	25.0	50.0		
1,2,3-Trichloropropane	DCB	Ave	13293 1343682	64040	128776	338725	661963	1.00 100	5.00	10.0	25.0	50.0		
trans-1,4-Dichloro-2-butene	DCB	Ave	12075 1261040	57670	119628	313333	636913	1.00 100	5.00	10.0	25.0	50.0		
n-Propylbenzene	DCB	Ave	34622 3701794	170037	345635	929083	1830395	1.00 100	5.00	10.0	25.0	50.0		
2-Chlorotoluene	DCB	Ave	33687 3397071	159941	321771	847221	1676585	1.00 100	5.00	10.0	25.0	50.0		
1,3,5-Trimethylbenzene	DCB	Ave	101821 10619733	480627	984990	2623341	5220994	1.00 100	5.00	10.0	25.0	50.0		
4-Chlorotoluene	DCB	Ave	33321 3501482	159177	322028	869421	1717894	1.00 100	5.00	10.0	25.0	50.0		
tert-Butylbenzene	DCB	Ave	116522 11709196	544722	1107798	2927949	5792379	1.00 100	5.00	10.0	25.0	50.0		
1,2,4-Trimethylbenzene	DCB	Ave	103057 10779320	494570	1002856	2639242	5272639	1.00 100	5.00	10.0	25.0	50.0		
sec-Butylbenzene	DCB	Ave	158741 16901857	765350	1561588	4146195	8289918	1.00 100	5.00	10.0	25.0	50.0		
1,3-Dichlorobenzene	DCB	Ave	71894 7551918	343609	701469	1856826	3664880	1.00 100	5.00	10.0	25.0	50.0		
4-Isopropyltoluene	DCB	Ave	123274 13134657	597490	1219119	3263099	6503961	1.00 100	5.00	10.0	25.0	50.0		
1,4-Dichlorobenzene	DCB	Ave	78301 7883964	352422	710047	1906784	3836556	1.00 100	5.00	10.0	25.0	50.0		
1,2-Dichlorobenzene	DCB	Ave	68787 6922507	317409	640301	1691961	3352638	1.00 100	5.00	10.0	25.0	50.0		

FORM VI  
GC/MS VOA INITIAL CALIBRATION DATA  
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-5266-1 Analyt Batch No.: 14847  
 SDG No.: Montgomery City (200-5266)  
 Instrument ID: L.i GC Column: DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N  
 Calibration Start Date: 03/09/2011 15:14 Calibration End Date: 03/09/2011 17:56 Calibration ID: 5249

ANALYTE	IS REF	CURVE TYPE	RESPONSE						CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	
n-Butylbenzene	DCB	Ave	110286 12833683	569192	1180424	3180821	6339756	1.00 100	5.00	10.0	25.0	50.0	
1,2-Dibromo-3-Chloropropane	DCB	Ave	11374 1083132	48612	100837	264521	538549	1.00 100	5.00	10.0	25.0	50.0	
1,2,4-Trichlorobenzene	DCB	Ave	45282 5127444	224887	471953	1258303	2525590	1.00 100	5.00	10.0	25.0	50.0	
Hexachlorobutadiene	DCB	Ave	26658 3222448	146288	306478	809138	1619865	1.00 100	5.00	10.0	25.0	50.0	
Naphthalene	DCB	Ave	79721 8666564	378303	798123	2100169	4305738	1.00 100	5.00	10.0	25.0	50.0	
1,2,3-Trichlorobenzene	DCB	Ave	40475 4403066	201049	409150	1086582	2171983	1.00 100	5.00	10.0	25.0	50.0	
1,2-Dichloroethane-d4	FB	Ave	32190 2993718	144164	285982	741911	1464879	1.00 100	5.00	10.0	25.0	50.0	
Toluene-d8	CBZ	Ave	106764 10827795	500047	998809	2643588	5299492	1.00 100	5.00	10.0	25.0	50.0	
Bromofluorobenzene	DCB	Ave	69231 6544502	303211	612979	1611233	3179605	1.00 100	5.00	10.0	25.0	50.0	
1,2-Dichlorobenzene-d4	DCB	Ave	47573 4485808	209581	430333	1121546	2188144	1.00 100	5.00	10.0	25.0	50.0	

Curve Type Legend:  
 Ave = Average ISTD

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Lab Sample ID: ICV 200-14847/12 Calibration Date: 03/09/2011 20:05  
 Instrument ID: L.i Calib Start Date: 03/09/2011 15:14  
 GC Column: DB-624 ID: 0.53(mm) Calib End Date: 03/09/2011 17:56  
 Lab File ID: lfw12.d Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5211	0.5285		25.4	25.0	1.4	25.0
Chloromethane	Ave	0.3154	0.2964	0.1000	23.5	25.0	-6.0	25.0
Vinyl chloride	Ave	0.3140	0.3541		28.2	25.0	12.8	25.0
Bromomethane	Ave	0.1686	0.1839		27.3	25.0	9.1	25.0
Chloroethane	Ave	0.1925	0.2015		26.2	25.0	4.7	25.0
Trichlorofluoromethane	Ave	0.5247	0.5444		25.9	25.0	3.7	25.0
Acrolein	Ave	0.0336	0.0278		104	125	-17.2	25.0
1,1-Dichloroethene	Ave	0.3060	0.2872		23.5	25.0	-6.2	25.0
Freon TF	Ave	0.6220	0.5543		22.3	25.0	-10.9	25.0
Acetone	Ave	0.0480	0.0476		124	125	-0.8	25.0
Methyl iodide	Ave	0.2742	0.2819		25.7	25.0	2.8	25.0
Carbon disulfide	Ave	0.8756	0.7845		22.4	25.0	-10.4	25.0
Allyl chloride	Ave	0.5597	0.5166		23.1	25.0	-7.7	25.0
Methyl acetate	Ave	0.0411	0.0403		24.5	25.0	-2.0	25.0
Methylene Chloride	Ave	0.3007	0.3296		27.4	25.0	9.6	25.0
tert-Butyl alcohol	Ave	0.0174	0.0164		473	500	-5.3	25.0
Acrylonitrile	Ave	0.0664	0.0642		24.2	25.0	-3.3	25.0
trans-1,2-Dichloroethene	Ave	0.3317	0.3171		23.9	25.0	-4.4	25.0
Methyl t-butyl ether	Ave	0.6061	0.5667		23.4	25.0	-6.5	25.0
1,1-Dichloroethane	Ave	0.6552	0.6093	0.1000	23.2	25.0	-7.0	25.0
Vinyl acetate	Ave	0.5234	0.3385		16.2	25.0	-35.3*	25.0
Chloroprene	Ave	0.5086	0.4223		20.8	25.0	-17.0	25.0
2,2-Dichloropropane	Ave	0.4360	0.3722		21.3	25.0	-14.6	25.0
cis-1,2-Dichloroethene	Ave	0.3332	0.3170		23.8	25.0	-4.8	25.0
2-Butanone	Ave	0.0209	0.0220		132	125	5.5	25.0
Propionitrile	Ave	0.0223	0.0218		97.4	100	-2.6	25.0
Methacrylonitrile	Ave	0.0758	0.0699		23.0	25.0	-7.8	25.0
Bromochloromethane	Ave	0.1924	0.1881		24.4	25.0	-2.2	25.0
Tetrahydrofuran	Ave	0.0803	0.0748		326	350	-6.8	25.0
Chloroform	Ave	0.6094	0.5491		22.5	25.0	-9.9	25.0
1,1,1-Trichloroethane	Ave	0.4768	0.4501		23.6	25.0	-5.6	25.0
Cyclohexane	Ave	0.5792	0.5316		22.9	25.0	-8.2	25.0
1,1-Dichloropropene	Ave	0.4939	0.4764		24.1	25.0	-3.6	25.0
Carbon tetrachloride	Ave	0.4375	0.4089		23.4	25.0	-6.5	25.0
Isobutyl alcohol	Ave	0.0108	0.0108		1240	1250	-0.6	25.0
Benzene	Ave	0.9167	0.8747		23.9	25.0	-4.6	25.0
1,2-Dichloroethane	Ave	0.3138	0.2923		23.3	25.0	-6.9	25.0
Trichloroethene	Ave	0.4062	0.4014		24.7	25.0	-1.2	25.0
Methylcyclohexane	Ave	0.5264	0.4822		22.9	25.0	-8.4	25.0
1,2-Dichloropropane	Ave	0.4121	0.3865		23.4	25.0	-6.2	25.0
Dibromomethane	Ave	0.3152	0.2968		23.5	25.0	-5.8	25.0



FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Lab Sample ID: ICV 200-14847/12 Calibration Date: 03/09/2011 20:05  
 Instrument ID: L.i Calib Start Date: 03/09/2011 15:14  
 GC Column: DB-624 ID: 0.53(mm) Calib End Date: 03/09/2011 17:56  
 Lab File ID: lfw12.d Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methyl methacrylate	Ave	0.2715	0.2480		22.8	25.0	-8.7	25.0
1,4-Dioxane	Ave	0.0021	0.0021		1250	1250	-0.1	25.0
Bromodichloromethane	Ave	0.5838	0.5495		23.5	25.0	-5.9	25.0
2-Chloroethyl vinyl ether	Ave	0.2113	0.2252		26.6	25.0	6.6	25.0
cis-1,3-Dichloropropene	Ave	0.5352	0.5090		23.8	25.0	-4.9	25.0
4-Methyl-2-pentanone	Ave	0.3321	0.3487		131	125	5.0	25.0
Toluene	Ave	0.8087	0.7794		24.1	25.0	-3.6	25.0
trans-1,3-Dichloropropene	Ave	0.5631	0.5362		23.8	25.0	-4.8	25.0
Ethyl methacrylate	Ave	0.4207	0.3968		23.6	25.0	-5.7	25.0
1,1,2-Trichloroethane	Ave	0.3772	0.3561		23.6	25.0	-5.6	25.0
Tetrachloroethene	Ave	0.6149	0.5797		23.6	25.0	-5.7	25.0
1,3-Dichloropropane	Ave	0.6561	0.6343		24.2	25.0	-3.3	25.0
2-Hexanone	Ave	0.2883	0.3130		136	125	8.6	25.0
Dibromochloromethane	Ave	0.6492	0.6367		24.5	25.0	-1.9	25.0
1,2-Dibromoethane	Ave	0.5897	0.5871		24.9	25.0	-0.4	25.0
Chlorobenzene	Ave	1.025	0.9695	0.3000	23.6	25.0	-5.4	25.0
1,1,1,2-Tetrachloroethane	Ave	0.4862	0.4751		24.4	25.0	-2.3	25.0
Ethylbenzene	Ave	1.599	1.537		24.0	25.0	-3.9	25.0
m&p-Xylene	Ave	0.5912	0.5712		48.3	50.0	-3.4	25.0
o-Xylene	Ave	0.5668	0.5489		24.2	25.0	-3.2	25.0
Styrene	Ave	0.9435	0.9153		24.3	25.0	-3.0	25.0
Bromoform	Ave	0.4851	0.4682	0.1000	24.1	25.0	-3.5	25.0
Isopropylbenzene	Ave	2.945	2.850		24.2	25.0	-3.2	25.0
Bromobenzene	Ave	0.9251	0.9003		24.3	25.0	-2.7	25.0
1,1,2,2-Tetrachloroethane	Ave	1.266	1.120	0.3000	22.1	25.0	-11.5	25.0
1,2,3-Trichloropropane	Ave	0.2757	0.2660		24.1	25.0	-3.5	25.0
trans-1,4-Dichloro-2-butene	Ave	0.2556	0.2389		23.4	25.0	-6.6	25.0
n-Propylbenzene	Ave	0.7445	0.7092		23.8	25.0	-4.7	25.0
2-Chlorotoluene	Ave	0.6936	0.6765		24.4	25.0	-2.5	25.0
1,3,5-Trimethylbenzene	Ave	2.130	2.047		24.0	25.0	-3.9	25.0
4-Chlorotoluene	Ave	0.7012	0.6824		24.3	25.0	-2.7	25.0
tert-Butylbenzene	Ave	2.389	2.293		24.0	25.0	-4.0	25.0
1,2,4-Trimethylbenzene	Ave	2.162	2.036		23.5	25.0	-5.8	25.0
sec-Butylbenzene	Ave	3.371	3.254		24.1	25.0	-3.5	25.0
1,3-Dichlorobenzene	Ave	1.510	1.434		23.7	25.0	-5.0	25.0
4-Isopropyltoluene	Ave	2.633	2.467		23.4	25.0	-6.3	25.0
1,4-Dichlorobenzene	Ave	1.572	1.505		23.9	25.0	-4.3	25.0
1,2-Dichlorobenzene	Ave	1.393	1.319		23.7	25.0	-5.3	25.0
n-Butylbenzene	Ave	2.519	2.417		24.0	25.0	-4.1	25.0
1,2-Dibromo-3-Chloropropane	Ave	0.2206	0.2175		24.6	25.0	-1.4	25.0
1,2,4-Trichlorobenzene	Ave	1.007	0.9728		24.1	25.0	-3.4	25.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Lab Sample ID: ICV 200-14847/12 Calibration Date: 03/09/2011 20:05  
 Instrument ID: L.i Calib Start Date: 03/09/2011 15:14  
 GC Column: DB-624 ID: 0.53(mm) Calib End Date: 03/09/2011 17:56  
 Lab File ID: lfw12.d Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobutadiene	Ave	0.6382	0.6369		24.9	25.0	-0.2	25.0
Naphthalene	Ave	1.711	1.695		24.8	25.0	-1.0	25.0
1,2,3-Trichlorobenzene	Ave	0.8786	0.8681		24.7	25.0	-1.2	25.0
1,2-Dichloroethane-d4	Ave	0.2569	0.2555		24.9	25.0	-0.6	25.0
Toluene-d8	Ave	1.194	1.215		25.4	25.0	1.8	25.0
Bromofluorobenzene	Ave	1.340	1.334		24.9	25.0	-0.4	25.0
1,2-Dichlorobenzene-d4	Ave	0.9264	0.9322		25.2	25.0	0.6	25.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Lab Sample ID: CCVIS 200-18603/2 Calibration Date: 05/25/2011 06:12  
 Instrument ID: L.i Calib Start Date: 03/09/2011 15:14  
 GC Column: DB-624 ID: 0.53(mm) Calib End Date: 03/09/2011 17:56  
 Lab File ID: lfwbc02.d Conc. Units: ug/L Heated Purge: (Y/N) N  
 EPA Sample No.: CCVIS

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5211	0.4923		23.6	25.0	-5.5	20.0
Chloromethane	Ave	0.3154	0.3275	0.1000	26.0	25.0	3.8	20.0
Vinyl chloride	Ave	0.3140	0.3493		27.8	25.0	11.2	20.0
Bromomethane	Ave	0.1686	0.1733		25.7	25.0	2.8	20.0
Chloroethane	Ave	0.1925	0.2000		26.0	25.0	3.9	20.0
Trichlorofluoromethane	Ave	0.5247	0.5373		25.6	25.0	2.4	20.0
Acrolein	Ave	0.0336	0.0261		97.0	125	-22.4*	20.0
1,1-Dichloroethene	Ave	0.3060	0.2932		24.0	25.0	-4.2	20.0
Freon TF	Ave	0.6220	0.6136		24.7	25.0	-1.4	20.0
Acetone	Ave	0.0480	0.0486		127	125	1.2	20.0
Methyl iodide	Ave	0.2742	0.4010		36.6	25.0	46.2*	20.0
Carbon disulfide	Ave	0.8756	0.8239		23.5	25.0	-5.9	20.0
Allyl chloride	Ave	0.5597	0.5348		23.9	25.0	-4.5	20.0
Methyl acetate	Ave	0.0411	0.0490		29.8	25.0	19.2	20.0
Methylene Chloride	Ave	0.3007	0.2811		23.4	25.0	-6.5	20.0
tert-Butyl alcohol	Ave	0.0174	0.0171		493	500	-1.5	20.0
Acrylonitrile	Ave	0.0664	0.0663		25.0	25.0	-0.2	20.0
trans-1,2-Dichloroethene	Ave	0.3317	0.3229		24.3	25.0	-2.6	20.0
Methyl t-butyl ether	Ave	0.6061	0.5693		23.5	25.0	-6.1	20.0
1,1-Dichloroethane	Ave	0.6552	0.6213	0.1000	23.7	25.0	-5.2	20.0
Vinyl acetate	Ave	0.5234	0.5869		28.0	25.0	12.1	20.0
Chloroprene	Ave	0.5086	0.4858		23.9	25.0	-4.5	20.0
2,2-Dichloropropane	Ave	0.4360	0.4397		25.2	25.0	0.9	20.0
cis-1,2-Dichloroethene	Ave	0.3332	0.3167		23.8	25.0	-4.9	20.0
2-Butanone	Ave	0.0209	0.0223		133	125	6.7	20.0
Propionitrile	Ave	0.0223	0.0241		108	100	8.0	20.0
Methacrylonitrile	Ave	0.0758	0.0829		27.3	25.0	9.4	20.0
Bromochloromethane	Ave	0.1924	0.1892		24.6	25.0	-1.7	20.0
Tetrahydrofuran	Ave	0.0803	0.0830		362	350	3.4	20.0
Chloroform	Ave	0.6094	0.5670		23.3	25.0	-7.0	20.0
1,1,1-Trichloroethane	Ave	0.4768	0.4526		23.7	25.0	-5.1	20.0
Cyclohexane	Ave	0.5792	0.5660		24.4	25.0	-2.3	20.0
1,1-Dichloropropene	Ave	0.4939	0.4829		24.4	25.0	-2.2	20.0
Carbon tetrachloride	Ave	0.4375	0.4148		23.7	25.0	-5.2	20.0
Isobutyl alcohol	Ave	0.0108	0.0113		1300	1250	4.1	20.0
Benzene	Ave	0.9167	0.8853		24.1	25.0	-3.4	20.0
1,2-Dichloroethane	Ave	0.3138	0.2868		22.8	25.0	-8.6	20.0
Trichloroethene	Ave	0.4062	0.3836		23.6	25.0	-5.6	20.0
Methylcyclohexane	Ave	0.5264	0.5164		24.5	25.0	-1.9	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Lab Sample ID: CCVIS 200-18603/2 Calibration Date: 05/25/2011 06:12  
 Instrument ID: L.i Calib Start Date: 03/09/2011 15:14  
 GC Column: DB-624 ID: 0.53(mm) Calib End Date: 03/09/2011 17:56  
 Lab File ID: lfwbc02.d Conc. Units: ug/L Heated Purge: (Y/N) N  
 EPA Sample No.: CCVIS

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.4121	0.4021		24.4	25.0	-2.4	20.0
Dibromomethane	Ave	0.3152	0.3034		24.1	25.0	-3.7	20.0
Methyl methacrylate	Ave	0.2715	0.2898		26.7	25.0	6.7	20.0
1,4-Dioxane	Ave	0.0021	0.0022		1330	1250	6.1	20.0
Bromodichloromethane	Ave	0.5838	0.5519		23.6	25.0	-5.5	20.0
2-Chloroethyl vinyl ether	Ave	0.2113	0.2172		25.7	25.0	2.8	20.0
cis-1,3-Dichloropropene	Ave	0.5352	0.5303		24.8	25.0	-0.9	20.0
4-Methyl-2-pentanone	Ave	0.3321	0.3545		133	125	6.7	20.0
Toluene	Ave	0.8087	0.7805		24.1	25.0	-3.5	20.0
trans-1,3-Dichloropropene	Ave	0.5631	0.5427		24.1	25.0	-3.6	20.0
Ethyl methacrylate	Ave	0.4207	0.3868		23.0	25.0	-8.1	20.0
1,1,2-Trichloroethane	Ave	0.3772	0.3681		24.4	25.0	-2.4	20.0
Tetrachloroethene	Ave	0.6149	0.6004		24.4	25.0	-2.4	20.0
1,3-Dichloropropane	Ave	0.6561	0.6535		24.9	25.0	-0.4	20.0
2-Hexanone	Ave	0.2883	0.3091		134	125	7.2	20.0
Dibromochloromethane	Ave	0.6492	0.6328		24.4	25.0	-2.5	20.0
1,2-Dibromoethane	Ave	0.5897	0.5915		25.1	25.0	0.3	20.0
Chlorobenzene	Ave	1.025	0.9869	0.3000	24.1	25.0	-3.7	20.0
1,1,1,2-Tetrachloroethane	Ave	0.4862	0.4615		23.7	25.0	-5.1	20.0
Ethylbenzene	Ave	1.599	1.553		24.3	25.0	-2.8	20.0
m&p-Xylene	Ave	0.5912	0.5703		48.2	50.0	-3.5	20.0
o-Xylene	Ave	0.5668	0.5499		24.3	25.0	-3.0	20.0
Styrene	Ave	0.9435	0.9473		25.1	25.0	0.4	20.0
Bromoform	Ave	0.4851	0.4816	0.1000	24.8	25.0	-0.7	20.0
Isopropylbenzene	Ave	2.945	2.776		23.6	25.0	-5.7	20.0
Bromobenzene	Ave	0.9251	0.8466		22.9	25.0	-8.5	20.0
1,1,2,2-Tetrachloroethane	Ave	1.266	1.239	0.3000	24.5	25.0	-2.2	20.0
1,2,3-Trichloropropane	Ave	0.2757	0.2562		23.2	25.0	-7.1	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2556	0.2394		23.4	25.0	-6.3	20.0
n-Propylbenzene	Ave	0.7445	0.7228		24.3	25.0	-2.9	20.0
2-Chlorotoluene	Ave	0.6936	0.6458		23.3	25.0	-6.9	20.0
1,3,5-Trimethylbenzene	Ave	2.130	1.999		23.5	25.0	-6.1	20.0
4-Chlorotoluene	Ave	0.7012	0.6571		23.4	25.0	-6.3	20.0
tert-Butylbenzene	Ave	2.389	2.247		23.5	25.0	-6.0	20.0
1,2,4-Trimethylbenzene	Ave	2.162	2.020		23.4	25.0	-6.5	20.0
sec-Butylbenzene	Ave	3.371	3.239		24.0	25.0	-3.9	20.0
1,3-Dichlorobenzene	Ave	1.510	1.414		23.4	25.0	-6.4	20.0
4-Isopropyltoluene	Ave	2.633	2.524		24.0	25.0	-4.1	20.0
1,4-Dichlorobenzene	Ave	1.572	1.464		23.3	25.0	-6.9	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Lab Sample ID: CCVIS 200-18603/2 Calibration Date: 05/25/2011 06:12  
 Instrument ID: L.i Calib Start Date: 03/09/2011 15:14  
 GC Column: DB-624 ID: 0.53(mm) Calib End Date: 03/09/2011 17:56  
 Lab File ID: lfwbc02.d Conc. Units: ug/L Heated Purge: (Y/N) N  
 EPA Sample No.: CCVIS

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichlorobenzene	Ave	1.393	1.294		23.2	25.0	-7.1	20.0
n-Butylbenzene	Ave	2.519	2.496		24.8	25.0	-0.9	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.2206	0.1970		22.3	25.0	-10.7	20.0
1,2,4-Trichlorobenzene	Ave	1.007	0.9532		23.7	25.0	-5.3	20.0
Hexachlorobutadiene	Ave	0.6382	0.6041		23.7	25.0	-5.3	20.0
Naphthalene	Ave	1.711	1.504		22.0	25.0	-12.1	20.0
1,2,3-Trichlorobenzene	Ave	0.8786	0.7994		22.7	25.0	-9.0	20.0
1,2-Dichloroethane-d4	Ave	0.2569	0.2425		23.6	25.0	-5.6	20.0
Toluene-d8	Ave	1.194	1.150		24.1	25.0	-3.6	20.0
Bromofluorobenzene	Ave	1.340	1.241		23.2	25.0	-7.4	20.0
1,2-Dichlorobenzene-d4	Ave	0.9264	0.8729		23.6	25.0	-5.8	20.0

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-18519/3-A  
 Matrix: Solid Lab File ID: lfwbc07.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 05/25/2011 08:53  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	10	U	10	1.3
74-87-3	Chloromethane	7.57	J	10	1.2
75-01-4	Vinyl chloride	10	U	10	1.2
74-83-9	Bromomethane	13.5		10	2.2
75-00-3	Chloroethane	10	U	10	3.4
75-69-4	Trichlorofluoromethane	10	U	10	1.3
75-35-4	1,1-Dichloroethene	10	U	10	1.4
76-13-1	Freon TF	10	U	10	1.4
67-64-1	Acetone	50	U	50	8.4
74-88-4	Methyl iodide	9.50	J	10	3.2
75-15-0	Carbon disulfide	10	U	10	1.6
79-20-9	Methyl acetate	10	U	10	2.8
75-09-2	Methylene Chloride	10	U	10	2.5
156-60-5	trans-1,2-Dichloroethene	10	U	10	1.7
1634-04-4	Methyl t-butyl ether	10	U	10	1.5
75-34-3	1,1-Dichloroethane	10	U	10	1.8
108-05-4	Vinyl acetate	10	U	10	3.3
594-20-7	2,2-Dichloropropane	10	U	10	1.9
156-59-2	cis-1,2-Dichloroethene	10	U	10	2.1
78-93-3	2-Butanone	50	U	50	7.4
74-97-5	Bromochloromethane	10	U	10	2.2
109-99-9	Tetrahydrofuran	140	U	140	13
67-66-3	Chloroform	10	U	10	1.6
71-55-6	1,1,1-Trichloroethane	10	U	10	1.8
110-82-7	Cyclohexane	10	U	10	1.6
563-58-6	1,1-Dichloropropene	10	U	10	2.1
56-23-5	Carbon tetrachloride	10	U	10	1.3
78-83-1	Isobutyl alcohol	500	U	500	130
71-43-2	Benzene	10	U	10	1.8
107-06-2	1,2-Dichloroethane	10	U	10	2.1
79-01-6	Trichloroethene	10	U	10	1.9
108-87-2	Methylcyclohexane	10	U	10	1.5
78-87-5	1,2-Dichloropropane	10	U	10	2.0
74-95-3	Dibromomethane	10	U	10	2.3
123-91-1	1,4-Dioxane	500	U	500	130
75-27-4	Bromodichloromethane	10	U	10	2.2

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-18519/3-A  
 Matrix: Solid Lab File ID: lfbwc07.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 05/25/2011 08:53  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	10	U	10	1.1
10061-01-5	cis-1,3-Dichloropropene	10	U	10	2.2
108-10-1	4-Methyl-2-pentanone	50	U	50	5.9
108-88-3	Toluene	10	U	10	2.0
10061-02-6	trans-1,3-Dichloropropene	10	U	10	2.7
79-00-5	1,1,2-Trichloroethane	10	U	10	2.1
127-18-4	Tetrachloroethene	10	U	10	1.8
142-28-9	1,3-Dichloropropane	10	U	10	1.9
591-78-6	2-Hexanone	50	U	50	7.2
124-48-1	Dibromochloromethane	10	U	10	2.1
106-93-4	1,2-Dibromoethane	10	U	10	2.3
108-90-7	Chlorobenzene	10	U	10	2.3
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	2.2
100-41-4	Ethylbenzene	10	U	10	2.2
179601-23-1	m&p-Xylene	10	U	10	4.4
95-47-6	o-Xylene	10	U	10	2.1
100-42-5	Styrene	10	U	10	2.4
75-25-2	Bromoform	10	U	10	2.2
98-82-8	Isopropylbenzene	10	U	10	2.4
108-86-1	Bromobenzene	10	U	10	2.5
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	2.1
96-18-4	1,2,3-Trichloropropane	10	U	10	2.8
103-65-1	n-Propylbenzene	10	U	10	2.3
95-49-8	2-Chlorotoluene	10	U	10	2.5
106-43-4	4-Chlorotoluene	10	U	10	2.2
108-67-8	1,3,5-Trimethylbenzene	10	U	10	2.2
98-06-6	tert-Butylbenzene	10	U	10	2.3
95-63-6	1,2,4-Trimethylbenzene	10	U	10	2.2
135-98-8	sec-Butylbenzene	10	U	10	2.3
541-73-1	1,3-Dichlorobenzene	10	U	10	2.2
99-87-6	4-Isopropyltoluene	10	U	10	2.1
106-46-7	1,4-Dichlorobenzene	10	U	10	2.7
95-50-1	1,2-Dichlorobenzene	10	U	10	2.3
104-51-8	n-Butylbenzene	10	U	10	2.4
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	10	5.1
120-82-1	1,2,4-Trichlorobenzene	10	U	10	2.5

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-18519/3-A  
 Matrix: Solid Lab File ID: lfwbc07.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 05/25/2011 08:53  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	10	U	10	2.7
91-20-3	Naphthalene	10	U	10	2.1
87-61-6	1,2,3-Trichlorobenzene	10	U	10	2.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	92		65-155
2037-26-5	Toluene-d8	103		80-115
460-00-4	Bromofluorobenzene	101		80-115
2199-69-1	1,2-Dichlorobenzene-d4	101		45-145



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-18603/6  
 Matrix: Solid Lab File ID: lfwbc06.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 05/25/2011 08:21  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.13
74-87-3	Chloromethane	1.0	U	1.0	0.12
75-01-4	Vinyl chloride	1.0	U	1.0	0.12
74-83-9	Bromomethane	1.0	U	1.0	0.22
75-00-3	Chloroethane	1.0	U	1.0	0.34
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.13
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.14
76-13-1	Freon TF	1.0	U	1.0	0.14
67-64-1	Acetone	5.0	U	5.0	0.84
74-88-4	Methyl iodide	1.0	U	1.0	0.32
75-15-0	Carbon disulfide	1.0	U	1.0	0.16
79-20-9	Methyl acetate	1.0	U	1.0	0.28
75-09-2	Methylene Chloride	1.0	U	1.0	0.25
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl t-butyl ether	1.0	U	1.0	0.15
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.18
108-05-4	Vinyl acetate	1.0	U	1.0	0.33
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.19
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.21
78-93-3	2-Butanone	5.0	U	5.0	0.74
74-97-5	Bromochloromethane	1.0	U	1.0	0.22
109-99-9	Tetrahydrofuran	14	U	14	1.3
67-66-3	Chloroform	1.0	U	1.0	0.16
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.18
110-82-7	Cyclohexane	1.0	U	1.0	0.16
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.21
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
78-83-1	Isobutyl alcohol	50	U	50	13
71-43-2	Benzene	1.0	U	1.0	0.18
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.19
108-87-2	Methylcyclohexane	1.0	U	1.0	0.15
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.20
74-95-3	Dibromomethane	1.0	U	1.0	0.23
123-91-1	1,4-Dioxane	50	U	50	13
75-27-4	Bromodichloromethane	1.0	U	1.0	0.22

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-18603/6  
 Matrix: Solid Lab File ID: 1fwbc06.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 05/25/2011 08:21  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	1.0	U	1.0	0.11
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.22
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.59
108-88-3	Toluene	1.0	U	1.0	0.20
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.27
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.21
127-18-4	Tetrachloroethene	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.19
591-78-6	2-Hexanone	5.0	U	5.0	0.72
124-48-1	Dibromochloromethane	1.0	U	1.0	0.21
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.23
108-90-7	Chlorobenzene	1.0	U	1.0	0.23
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.22
100-41-4	Ethylbenzene	1.0	U	1.0	0.22
179601-23-1	m&p-Xylene	1.0	U	1.0	0.44
95-47-6	o-Xylene	1.0	U	1.0	0.21
100-42-5	Styrene	1.0	U	1.0	0.24
75-25-2	Bromoform	1.0	U	1.0	0.22
98-82-8	Isopropylbenzene	1.0	U	1.0	0.24
108-86-1	Bromobenzene	1.0	U	1.0	0.25
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.28
103-65-1	n-Propylbenzene	1.0	U	1.0	0.23
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.25
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.22
108-67-8	1,3,5-Trimethylbenzene	1.0	U	1.0	0.22
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.23
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.22
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.23
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.22
99-87-6	4-Isopropyltoluene	1.0	U	1.0	0.21
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.27
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.23
104-51-8	n-Butylbenzene	1.0	U	1.0	0.24
96-12-8	1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.51
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.25

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-18603/6  
 Matrix: Solid Lab File ID: lfwbc06.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 05/25/2011 08:21  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.27
91-20-3	Naphthalene	1.0	U	1.0	0.21
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	99		65-155
2037-26-5	Toluene-d8	104		80-115
460-00-4	Bromofluorobenzene	105		80-115
2199-69-1	1,2-Dichlorobenzene-d4	103		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-18519/1-A  
 Matrix: Solid Lab File ID: lfwbc04.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 05/25/2011 07:16  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	211		10	1.3
74-87-3	Chloromethane	280		10	1.2
75-01-4	Vinyl chloride	259		10	1.2
74-83-9	Bromomethane	165		10	2.2
75-00-3	Chloroethane	113		10	3.4
75-69-4	Trichlorofluoromethane	149		10	1.3
75-35-4	1,1-Dichloroethene	148		10	1.4
76-13-1	Freon TF	146		10	1.4
67-64-1	Acetone	1460		50	8.4
74-88-4	Methyl iodide	122		10	3.2
75-15-0	Carbon disulfide	144		10	1.6
79-20-9	Methyl acetate	318		10	2.8
75-09-2	Methylene Chloride	235		10	2.5
156-60-5	trans-1,2-Dichloroethene	243		10	1.7
1634-04-4	Methyl t-butyl ether	219		10	1.5
75-34-3	1,1-Dichloroethane	204		10	1.8
108-05-4	Vinyl acetate	235		10	3.3
594-20-7	2,2-Dichloropropane	251		10	1.9
156-59-2	cis-1,2-Dichloroethene	252		10	2.1
78-93-3	2-Butanone	1080		50	7.4
74-97-5	Bromochloromethane	209		10	2.2
109-99-9	Tetrahydrofuran	3260		140	13
67-66-3	Chloroform	214		10	1.6
71-55-6	1,1,1-Trichloroethane	239		10	1.8
110-82-7	Cyclohexane	255		10	1.6
563-58-6	1,1-Dichloropropene	258		10	2.1
56-23-5	Carbon tetrachloride	225		10	1.3
78-83-1	Isobutyl alcohol	2930		500	130
71-43-2	Benzene	252		10	1.8
107-06-2	1,2-Dichloroethane	220		10	2.1
79-01-6	Trichloroethene	246		10	1.9
108-87-2	Methylcyclohexane	252		10	1.5
78-87-5	1,2-Dichloropropane	244		10	2.0
74-95-3	Dibromomethane	215		10	2.3
123-91-1	1,4-Dioxane	10700		500	130
75-27-4	Bromodichloromethane	226		10	2.2

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-18519/1-A  
 Matrix: Solid Lab File ID: lfwbc04.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 05/25/2011 07:16  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10(mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	239		10	1.1
10061-01-5	cis-1,3-Dichloropropene	245		10	2.2
108-10-1	4-Methyl-2-pentanone	1130		50	5.9
108-88-3	Toluene	258		10	2.0
10061-02-6	trans-1,3-Dichloropropene	248		10	2.7
79-00-5	1,1,2-Trichloroethane	239		10	2.1
127-18-4	Tetrachloroethene	256		10	1.8
142-28-9	1,3-Dichloropropane	250		10	1.9
591-78-6	2-Hexanone	1180		50	7.2
124-48-1	Dibromochloromethane	240		10	2.1
106-93-4	1,2-Dibromoethane	256		10	2.3
108-90-7	Chlorobenzene	247		10	2.3
630-20-6	1,1,1,2-Tetrachloroethane	243		10	2.2
100-41-4	Ethylbenzene	256		10	2.2
179601-23-1	m&p-Xylene	514		10	4.4
95-47-6	o-Xylene	253		10	2.1
100-42-5	Styrene	262		10	2.4
75-25-2	Bromoform	230		10	2.2
98-82-8	Isopropylbenzene	252		10	2.4
108-86-1	Bromobenzene	240		10	2.5
79-34-5	1,1,2,2-Tetrachloroethane	229		10	2.1
96-18-4	1,2,3-Trichloropropane	221		10	2.8
103-65-1	n-Propylbenzene	255		10	2.3
95-49-8	2-Chlorotoluene	247		10	2.5
106-43-4	4-Chlorotoluene	248		10	2.2
108-67-8	1,3,5-Trimethylbenzene	248		10	2.2
98-06-6	tert-Butylbenzene	252		10	2.3
95-63-6	1,2,4-Trimethylbenzene	242		10	2.2
135-98-8	sec-Butylbenzene	261		10	2.3
541-73-1	1,3-Dichlorobenzene	240		10	2.2
99-87-6	4-Isopropyltoluene	250		10	2.1
106-46-7	1,4-Dichlorobenzene	243		10	2.7
95-50-1	1,2-Dichlorobenzene	238		10	2.3
104-51-8	n-Butylbenzene	270		10	2.4
96-12-8	1,2-Dibromo-3-Chloropropane	200		10	5.1
120-82-1	1,2,4-Trichlorobenzene	246		10	2.5

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-18519/1-A  
 Matrix: Solid Lab File ID: lfwbc04.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 10(g) Date Analyzed: 05/25/2011 07:16  
 Soil Aliquot Vol: 0.500 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 10 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	278		10	2.7
91-20-3	Naphthalene	185		10	2.1
87-61-6	1,2,3-Trichlorobenzene	224		10	2.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	101		65-155
2037-26-5	Toluene-d8	104		80-115
460-00-4	Bromofluorobenzene	101		80-115
2199-69-1	1,2-Dichlorobenzene-d4	101		45-145

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-18603/3  
 Matrix: Solid Lab File ID: lfwbc03.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 05/25/2011 06:44  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-71-8	Dichlorodifluoromethane	21.5		1.0	0.13
74-87-3	Chloromethane	25.4		1.0	0.12
75-01-4	Vinyl chloride	27.8		1.0	0.12
74-83-9	Bromomethane	29.0		1.0	0.22
75-00-3	Chloroethane	26.3		1.0	0.34
75-69-4	Trichlorofluoromethane	24.4		1.0	0.13
75-35-4	1,1-Dichloroethene	25.0		1.0	0.14
76-13-1	Freon TF	22.7		1.0	0.14
67-64-1	Acetone	122		5.0	0.84
74-88-4	Methyl iodide	34.3		1.0	0.32
75-15-0	Carbon disulfide	22.3		1.0	0.16
79-20-9	Methyl acetate	32.6		1.0	0.28
75-09-2	Methylene Chloride	25.8		1.0	0.25
156-60-5	trans-1,2-Dichloroethene	24.9		1.0	0.17
1634-04-4	Methyl t-butyl ether	23.7		1.0	0.15
75-34-3	1,1-Dichloroethane	24.4		1.0	0.18
108-05-4	Vinyl acetate	26.3		1.0	0.33
594-20-7	2,2-Dichloropropane	25.5		1.0	0.19
156-59-2	cis-1,2-Dichloroethene	25.3		1.0	0.21
78-93-3	2-Butanone	133		5.0	0.74
74-97-5	Bromochloromethane	26.4		1.0	0.22
109-99-9	Tetrahydrofuran	358		14	1.3
67-66-3	Chloroform	23.1		1.0	0.16
71-55-6	1,1,1-Trichloroethane	24.0		1.0	0.18
110-82-7	Cyclohexane	24.6		1.0	0.16
563-58-6	1,1-Dichloropropene	25.3		1.0	0.21
56-23-5	Carbon tetrachloride	23.9		1.0	0.13
78-83-1	Isobutyl alcohol	1320		50	13
71-43-2	Benzene	24.9		1.0	0.18
107-06-2	1,2-Dichloroethane	23.3		1.0	0.21
79-01-6	Trichloroethene	24.2		1.0	0.19
108-87-2	Methylcyclohexane	24.5		1.0	0.15
78-87-5	1,2-Dichloropropane	24.8		1.0	0.20
74-95-3	Dibromomethane	24.8		1.0	0.23
123-91-1	1,4-Dioxane	1300		50	13
75-27-4	Bromodichloromethane	24.0		1.0	0.22

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-18603/3  
 Matrix: Solid Lab File ID: 1fwbc03.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 05/25/2011 06:44  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
110-75-8	2-Chloroethyl vinyl ether	25.7		1.0	0.11
10061-01-5	cis-1,3-Dichloropropene	25.1		1.0	0.22
108-10-1	4-Methyl-2-pentanone	138		5.0	0.59
108-88-3	Toluene	25.0		1.0	0.20
10061-02-6	trans-1,3-Dichloropropene	24.9		1.0	0.27
79-00-5	1,1,2-Trichloroethane	24.9		1.0	0.21
127-18-4	Tetrachloroethene	24.6		1.0	0.18
142-28-9	1,3-Dichloropropane	25.9		1.0	0.19
591-78-6	2-Hexanone	142		5.0	0.72
124-48-1	Dibromochloromethane	25.7		1.0	0.21
106-93-4	1,2-Dibromoethane	26.7		1.0	0.23
108-90-7	Chlorobenzene	24.3		1.0	0.23
630-20-6	1,1,1,2-Tetrachloroethane	24.5		1.0	0.22
100-41-4	Ethylbenzene	25.0		1.0	0.22
179601-23-1	m&p-Xylene	50.4		1.0	0.44
95-47-6	o-Xylene	24.7		1.0	0.21
100-42-5	Styrene	25.7		1.0	0.24
75-25-2	Bromoform	25.4		1.0	0.22
98-82-8	Isopropylbenzene	24.8		1.0	0.24
108-86-1	Bromobenzene	24.2		1.0	0.25
79-34-5	1,1,2,2-Tetrachloroethane	26.1		1.0	0.21
96-18-4	1,2,3-Trichloropropane	24.7		1.0	0.28
103-65-1	n-Propylbenzene	24.7		1.0	0.23
95-49-8	2-Chlorotoluene	24.4		1.0	0.25
106-43-4	4-Chlorotoluene	24.7		1.0	0.22
108-67-8	1,3,5-Trimethylbenzene	24.2		1.0	0.22
98-06-6	tert-Butylbenzene	24.4		1.0	0.23
95-63-6	1,2,4-Trimethylbenzene	23.8		1.0	0.22
135-98-8	sec-Butylbenzene	25.0		1.0	0.23
541-73-1	1,3-Dichlorobenzene	23.7		1.0	0.22
99-87-6	4-Isopropyltoluene	23.9		1.0	0.21
106-46-7	1,4-Dichlorobenzene	23.9		1.0	0.27
95-50-1	1,2-Dichlorobenzene	23.9		1.0	0.23
104-51-8	n-Butylbenzene	25.3		1.0	0.24
96-12-8	1,2-Dibromo-3-Chloropropane	23.7		1.0	0.51
120-82-1	1,2,4-Trichlorobenzene	24.2		1.0	0.25



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266)  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-18603/3  
 Matrix: Solid Lab File ID: lfwbc03.d  
 Analysis Method: 8260B Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 05/25/2011 06:44  
 Soil Aliquot Vol: 5 (mL) Dilution Factor: 1  
 Soil Extract Vol.: 5 (mL) GC Column: DB-624 ID: 0.53 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Medium  
 Analysis Batch No.: 18603 Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
87-68-3	Hexachlorobutadiene	24.6		1.0	0.27
91-20-3	Naphthalene	24.7		1.0	0.21
87-61-6	1,2,3-Trichlorobenzene	24.2		1.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4	102		65-155
2037-26-5	Toluene-d8	106		80-115
460-00-4	BromoFluorobenzene	103		80-115
2199-69-1	1,2-Dichlorobenzene-d4	104		45-145

## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica BurlingtonJob No.: 200-5266-1SDG No.: Montgomery City (200-5266)Instrument ID: L.iStart Date: 03/09/2011 14:22Analysis Batch Number: 14847End Date: 03/09/2011 21:10

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 200-14847/1		03/09/2011 14:22	1	lfw01.d	DB-624 0.53 (mm)
VIBLK 200-14847/2		03/09/2011 14:42	1		DB-624 0.53 (mm)
IC 200-14847/3		03/09/2011 15:14	1	lfw03.d	DB-624 0.53 (mm)
IC 200-14847/4		03/09/2011 15:46	1	lfw04.d	DB-624 0.53 (mm)
IC 200-14847/5		03/09/2011 16:19	1	lfw05.d	DB-624 0.53 (mm)
ICIS 200-14847/6		03/09/2011 16:51	1	lfw06.d	DB-624 0.53 (mm)
IC 200-14847/7		03/09/2011 17:23	1	lfw07.d	DB-624 0.53 (mm)
IC 200-14847/8		03/09/2011 17:56	1	lfw08.d	DB-624 0.53 (mm)
VIBLK 200-14847/9		03/09/2011 18:28	1		DB-624 0.53 (mm)
VIBLK 200-14847/10		03/09/2011 19:00	1		DB-624 0.53 (mm)
ICV 200-14847/11		03/09/2011 19:33	1		DB-624 0.53 (mm)
ICV 200-14847/12		03/09/2011 20:05	1	lfw12.d	DB-624 0.53 (mm)
VIBLK 200-14847/13		03/09/2011 20:38	1		DB-624 0.53 (mm)
ZZZZZ		03/09/2011 21:10	1		DB-624 0.53 (mm)

## GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica BurlingtonJob No.: 200-5266-1SDG No.: Montgomery City (200-5266)Instrument ID: L.iStart Date: 05/25/2011 05:57Analysis Batch Number: 18603End Date: 05/25/2011 17:40

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 200-18603/1		05/25/2011 05:57	1	1fwbc01.d	DB-624 0.53(mm)
CCVIS 200-18603/2		05/25/2011 06:12	1	1fwbc02.d	DB-624 0.53(mm)
LCS 200-18603/3		05/25/2011 06:44	1	1fwbc03.d	DB-624 0.53(mm)
LCS 200-18519/1-A		05/25/2011 07:16	1	1fwbc04.d	DB-624 0.53(mm)
VIBLK 200-18603/5		05/25/2011 07:49	1		DB-624 0.53(mm)
MB 200-18603/6		05/25/2011 08:21	1	1fwbc06.d	DB-624 0.53(mm)
MB 200-18519/3-A		05/25/2011 08:53	1	1fwbc07.d	DB-624 0.53(mm)
200-5266-7	MC-S-BLANK	05/25/2011 09:34	1	1fwbc08.d	DB-624 0.53(mm)
200-5266-1	MC-S-32939	05/25/2011 10:07	1	1fwbc09.d	DB-624 0.53(mm)
200-5266-2	MC-S-32931	05/25/2011 10:39	1	1fwbc10.d	DB-624 0.53(mm)
200-5266-3	MC-S-32959	05/25/2011 11:12	1	1fwbc11.d	DB-624 0.53(mm)
200-5266-4	MC-S-32961	05/25/2011 11:44	1	1fwbc12.d	DB-624 0.53(mm)
200-5266-5	MC-S-32960	05/25/2011 12:16	1	1fwbc13.d	DB-624 0.53(mm)
200-5266-6	MC-S-33275	05/25/2011 12:49	1	1fwbc14.d	DB-624 0.53(mm)
VIBLK 200-18603/15		05/25/2011 13:21	1		DB-624 0.53(mm)
ZZZZZ		05/25/2011 13:53	1		DB-624 0.53(mm)
ZZZZZ		05/25/2011 14:26	8.8		DB-624 0.53(mm)
ZZZZZ		05/25/2011 14:58	1		DB-624 0.53(mm)
ZZZZZ		05/25/2011 15:30	1		DB-624 0.53(mm)
ZZZZZ		05/25/2011 16:03	1		DB-624 0.53(mm)
ZZZZZ		05/25/2011 16:35	1		DB-624 0.53(mm)
ZZZZZ		05/25/2011 17:08	1		DB-624 0.53(mm)
ZZZZZ		05/25/2011 17:40	1		DB-624 0.53(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266) Batch Start Date: 05/20/11 14:41 Batch Analyst: Heald, John  
 Batch Number: 18315 Batch End Date: 05/20/11 14:50  
 Batch Method: 5035

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	AnalysisComment
200-5266-A-1	MC-S-32939	5035, 8260B	T	13.078 g	10 mL	
200-5266-A-2	MC-S-32931	5035, 8260B	T	10.938 g	10 mL	
200-5266-A-3	MC-S-32959	5035, 8260B	T	10.087 g	10 mL	
200-5266-A-4	MC-S-32961	5035, 8260B	T	11.428 g	10 mL	
200-5266-A-5	MC-S-32960	5035, 8260B	T	11.102 g	10 mL	
200-5266-A-6	MC-S-33275	5035, 8260B	T	12.529 g	10 mL	
200-5266-A-7	MC-S-BLANK	5035, 8260B	T	10 g	10 mL	TB

Batch Notes	

Basis	Basis Description
T	Total/NA

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Burlington Job No.: 200-5266-1  
 SDG No.: Montgomery City (200-5266) Batch Start Date: 05/25/11 06:11 Batch Analyst: Heald, John  
 Batch Number: 18519 Batch End Date: 05/25/11 06:15  
 Batch Method: 5035

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount
LCS 200-18519/1		5035, 8260B		10 g	10 mL
MB 200-18519/3		5035, 8260B		10 g	10 mL

Batch Notes

Basis	Basis Description

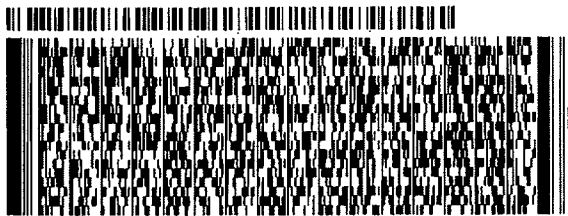
# **Shipping and Receiving Documents**



ORIGIN ID: ENLA (630) 252-2977  
CHARLES BLAIR  
US DOE/ARGONNE NATIONAL LABORATORY  
9700 S CASS AVE  
BLDG 46  
LEMONT, IL 60439  
UNITED STATES US

SHIP DATE: 19MAY11  
ACTWGT: 13.7 LB MAN  
CAD: 0015778/CAFE2472  
DIMS: 24x24x13 IN  
BILL SENDER

TO **KIRK YOUNG**  
**TRANSAMERICA**  
**30 COMMUNITY DRIVE**  
**SUITE 11**  
**SOUTH BURLINGTON VT 05403**  
(802) 680-1980  
REF: 369492JW



**FedEx**  
Express

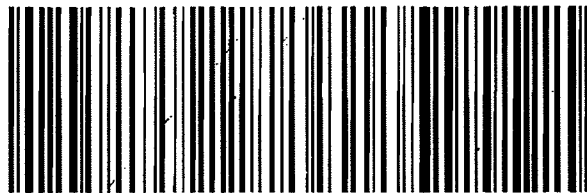


**FRI - 20 MAY A4**  
**PRIORITY OVERNIGHT**

TRK# 7269 3172 8222  
0201

**XH BTVA**

**05403**  
VT-US  
BTV



S05C1/1577/DA47

POSTNET 750254-330 RTTS 01-11



## Login Sample Receipt Checklist

Client: Argonne National Laboratory

Job Number: 200-5266-1  
SDG Number: Montgomery City (200-5266)

**Login Number: 5266**  
**List Number: 2**  
**Creator: Keeton, Jamie**

**List Source: TestAmerica Burlington**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.5 °C, IR gun ID 96, CF= 0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	The container labels list numeric portions of IDs. The COC lists full format.
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

**Young, Kirk**

---

**From:** Alvarado, Jorge S. [jalvarado@anl.gov]  
**Sent:** Friday, May 20, 2011 10:55 AM  
**To:** Young, Kirk  
**Subject:** Mass of soil/methanol samples, 05/20/11

Kirk,

Here are the mass for each the soil samples sent on 05/19/11, COC: 4907. Mass were not recorded in COC.  
Volume of Methanol = 10.0 ml.

MC-S-32939	13.078g
MC-S-32931	10.938g
MC-S-32959	10.087g
MC-S-32961	11.428g
MC-S-32960	11.102g
MC-S-33275	12.529g

Sorry about the omission. Thank you very much.

Jorge

Jorge S. Alvarado, Ph.D.  
Environmental Science Division  
Argonne National Laboratory  
Argonne, IL 60439  
(630)-252-5267  
jalvarado@anl.gov

**"Its not the destination, its the journey... We cannot change the wind, but we can trim our sails." -  
written on a bench on the Via dell'Amore.**



## ANALYTICAL REPORT

Job Number: 200-2183-1

SDG Number: 200-2183

Job Description: Montgomery City (200-2183)

Contract Number: 8E-00302

For:

Argonne National Laboratory

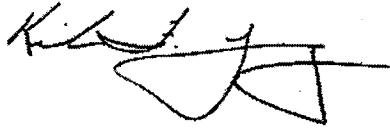
9700 South Cass Avenue

Building 203

Office B-149

Argonne, IL 60439

Attention: Mr. Clyde Dennis



Approved for release.  
Kirk F Young  
Project Manager I  
10/30/2010 7:52 AM

---

Kirk F Young  
Project Manager I  
kirk.young@testamericainc.com  
10/30/2010

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

TestAmerica Laboratories, Inc.

TestAmerica Burlington 30 Community Drive, Suite 11, South Burlington, VT 05403

Tel (802) 660-1990 Fax (802) 660-1919 [www.testamericainc.com](http://www.testamericainc.com)



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## CASE NARRATIVE

**Client: Argonne National Laboratory**

**Project: Montgomery City (200-2183)**

**Report Number: 200-2183-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### **Receipt**

The samples were received on 10/27/2010. 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, as received, were not acid preserved. On that basis, the laboratory did provide for the analytical work to be performed within seven days of sample collection.

### **SOM01.2 Volatile Organics (Trace Level Water)**

A storage blank was prepared for volatile organics analysis, and stored in association with the storage of the samples. That storage blank, identified as VHBLK01, was carried through the holding period with the samples, and analyzed.

Each sample was analyzed without a dilution. Each of the analyses associated with the sample set exhibited an acceptable internal standard performance, and there was an acceptable recovery of each deuterated monitoring compound (DMC) in each analysis. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. Trace concentrations of acetone, carbon disulfide, trans-1,2-dichloroethene, cis-1,2-dichloroethene, 1,2,4-trichlorobenzene, and 1,2,3-trichlorobenzene were identified in the analysis of the method blank associated with the analytical work. The concentration of each compound in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant method blank analysis. The analysis of the storage blank associated with the sample set was free of analyte contamination. Present in the method blank and storage blank analyses was a non-target constituent that represents a compound that is related to the DMC formulation. The fact that the presence of this compound is not within the laboratory's control is at issue. The derived results for that compound have been qualified with an "X" qualifier to reflect the source of the contamination.

The responses for each of the target analytes met the relative standard deviation criterion in the initial calibration. The response for each target analyte met the percent difference criterion in the continuing calibration check acquisition. The response for each target analyte met the 50.0 percent difference criterion in the closing calibration check acquisition.

The primary quantitation mass for methylcyclohexane that is specified in the Statement of Work is mass 83. The laboratory did identify a contribution to mass 83 from 1,2-dichloropropane-d<sub>6</sub>, one

of the deuterated monitoring compounds (DMCs). The laboratory did change the primary quantitation mass assignment to mass 55 for the quantification of methylcyclohexane.

Manual integration was employed in deriving certain of the analytical results. The values that have been derived from manual integration are qualified on the quantitation reports. Extracted ion current profiles for each manual integration are included in the data package, and further documented in the Sample Preparation section of this submittal.



## DATA REPORTING QUALIFIERS

Client: Argonne National Laboratory

Job Number: 200-2183-1

Sdg Number: 200-2183

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	J	Indicates an Estimated Value for TICs
	J	Indicates an estimated value.
	X	See case narrative notes for explanation of the 'X' flag
	B	The analyte was found in an associated blank, as well as in the sample.







# **Shipping and Receiving Documents**

## Login Sample Receipt Check List

Client: Argonne National Laboratory

Job Number: 200-2183-1  
SDG Number: 200-2183

**Login Number: 2183**  
**Creator: Marion, Greg T**  
**List Number: 1**

**List Source: TestAmerica Burlington**

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	NO SEAL NUMBERS
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.5°C IR GUN ID 96/CF= -1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	COC does not list sample times.
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	False	Samples received unpreserved.
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") diameter.	True	
If necessary, staff have been informed of any short hold time or quick needs	True	TAT
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	

## Sample Login Acknowledgement

## Job 200-2183-1

Client Job Description: Montgomery City (200-2183)  
 Purchase Order #: 8E-00302  
 Work Order #: 8E-00302  
 Project Manager: Kirk F Young  
 Job Due Date: 11/10/2010  
 Job TAT: 14 Days  
 Max Deliverable Level: IV

Report To: Argonne National Laboratory  
 Jorge Alvarado  
 9700 South Cass Avenue  
 Building 203  
 Office B-149  
 Argonne, IL 60439

Bill To: Argonne National Laboratory  
 Accounts Payable  
 Chief Financial Offices  
 9700 S. Cass Ave.  
 Building 201  
 Argonne, IL 60439

Earliest Deliverable Due: 11/10/2010

## Login 200-2183

Sample Receipt: 10/27/2010 10:10:00 AM  
 Method of Delivery: FedEx Priority Overnight

Number of Coolers: 1  
 Cooler Temperature(s) (°C) 3.5

Lab Sample #	Client Sample ID	Date Sampled	Matrix	Rpt Basis	Dry / Wet **
Method	Method Description / Work Location				
200-2183-1	MCPWSI-W-32630	10/22/2010 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-2183-2	MCHEMEYER-W-32633	10/22/2010 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-2183-3	MCQCTB-W-32332	10/23/2010 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-2183-4	VHBLK01	10/27/2010 10:40:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet

\* Method on-hold

\*\* Wet/Dry indicates whether the reported results will be corrected for moisture content, and based on sample Wet weight or Dry weight. 10/30/2010 of 1

## METHODOLOGY SUMMARY

Laboratory: TestAmerica Laboratories

Project No:

Location: South Burlington, Vermont

SDG No: 200-2183

### VOA

Volatile Organics Trace - USEPA CLP SOM01.2



2A - FORM II VOA-1  
 WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLKJI	98	103	79	81	103	108	99
02	MCPWSI-W-32630	98	101	78	110	104	110	94
03	MCEMEYER-W-32 633	97	105	80	102	108	111	100
04	MCQCTB-W-32332	100	107	82	84	106	115	103
05	VHBLK01	101	108	82	83	109	111	101

	QC LIMITS
VDMC1 (VCL) = Vinyl Chloride-d3	(65-131)
VDMC2 (CLA) = Chloroethane-d5	(71-131)
VDMC3 (DCE) = 1,1-Dichloroethene-d2	(55-104)
VDMC4 (BUT) = 2-Butanone-d5	(49-155)
VDMC5 (CLF) = Chloroform-d	(78-121)
VDMC6 (DCA) = 1,2-Dichloroethane-d4	(78-129)
VDMC7 (BEN) = Benzene-d6	(77-124)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits

2B - FORM II VOA-2  
 WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON

Contract: 8E-00302

Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (TCA) #	VDMC13 (DCZ) #	OTHER	TOT OUT
01	VBLKJI	81	98	96	80	91	105		0
02	MCPWSI-W-32630	79	97	97	98	94	103		0
03	MICHEMEYER-W-32 633	82	100	99	96	94	107		0
04	MCQCTB-W-32332	84	103	99	87	97	106		0
05	VHBLK01	84	101	99	85	90	110		0

	QC LIMITS
VDMC8 (DPA) = 1,2-Dichloropropane-d6	(79-124)
VDMC9 (TOL) = Toluene-d8	(77-121)
VDMC10 (TDP) = trans-1,3-Dichloropropene-d4	(73-121)
VDMC11 (HEX) = 2-Hexanone-d5	(28-135)
VDMC12 (TCA) = 1,1,2,2-Tetrachloroethane-d2	(73-125)
VDMC13 (DCZ) = 1,2-Dichlorobenzene-d4	(80-131)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJI

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
Lab File ID: JBTH03.D Lab Sample ID: MB 200-8695/3  
Instrument ID: J.i  
Matrix: (SOIL/SED/WATER) Water Date Analyzed: 10/28/2010  
Level: (TRACE or LOW/MED) TRACE Time Analyzed: 1839  
GC Column: DB-624 ID: 0.20 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MCPWSI-W-326 30	200-2183-1	JBTH18.D	0112
02	MICHEMEYER-W- 32633	200-2183-2	JBTH19.D	0138
03	MCQCTB-W-323 32	200-2183-3	JBTH21.D	0228
04	VHBLK01	200-2183-4	JBTH22.D	0253

COMMENTS: \_\_\_\_\_

5A - FORM V VOA  
 VOLATILE ORGANICS INSTRUMENT  
 PERFORMANCE CHECK  
 BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJB

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTIGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Lab File Id: JBT02.D BFB Injection Date: 10/19/2010  
 Instrument Id: J.i BFB Injection Time: 1416  
 GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.6
75	30.0 - 80.0% of mass 95	49.7
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	0.7 ( 0.8)1
174	50.0 - 120% of mass 95	93.0
175	5.0 - 9.0% of mass 174	6.1 ( 6.5)1
176	95.0 - 101% of mass 174	91.4 ( 98.3)1
177	5.0 - 9.0% of mass 176	5.3 ( 5.8)2

1 - Value is %mass 174

2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0.5JB	IC 200-8100/3	JBT03.D	10/19/2010	1424
02	VSTD001JB	IC 200-8100/4	JBT04.D	10/19/2010	1448
03	VSTD005JB	ICIS 200-8100/5	JBT05.D	10/19/2010	1513
04	VSTD010JB	IC 200-8100/6	JBT06.D	10/19/2010	1537
05	VSTD020JB	IC 200-8100/7	JBT07.D	10/19/2010	1602

5A - FORM V VOA  
 VOLATILE ORGANICS INSTRUMENT  
 PERFORMANCE CHECK  
 BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJI

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Lab File Id: JBTH01.D BFB Injection Date: 10/28/2010  
 Instrument Id: J.i BFB Injection Time: 1753  
 GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.0
75	30.0 - 80.0% of mass 95	49.5
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0 ( 0)1
174	50.0 - 120% of mass 95	84.5
175	5.0 - 9.0% of mass 174	6.1 ( 7.2)1
176	95.0 - 101% of mass 174	81.3 ( 96.2)1
177	5.0 - 9.0% of mass 176	5.7 ( 7.0)2

1 - Value is %mass 174

2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005JI	CCVIS 200-8695/2	JBTH02.D	10/28/2010	1813
02	VBLKJI	MB 200-8695/3	JBTH03.D	10/28/2010	1839
03	MCPWSI-W-3 2630	200-2183-1	JBTH18.D	10/29/2010	0112
04	MICHEMEYER- W-32633	200-2183-2	JBTH19.D	10/29/2010	0138
05	MCQCTB-W-3 2332	200-2183-3	JBTH21.D	10/29/2010	0228
06	VHBLK01	200-2183-4	JBTH22.D	10/29/2010	0253
07	VSTD005IJ	CCVC 200-8695/23	JBTH23.D	10/29/2010	0319

8A - FORM VIII VOA  
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 GC Column: DB-624 ID: 0.20 (mm) Init. Calib. Date(s): 10/19/2010 10/19/2010  
 EPA Sample No. (VSTD#####): VSTD005JI Date Analyzed: 10/28/2010  
 Lab File ID (Standard): JBTH02.D Time Analyzed: 1813  
 Instrument ID: J.i Heated Purge: (Y/N) N

	IS1 (CBZ)		IS2 (DFB)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	324222	8.96	402816	5.59	154670	11.79
UPPER LIMIT	453911	9.29	563942	5.92	216538	12.12
LOWER LIMIT	194533	8.63	241690	5.26	92802	11.46
EPA SAMPLE NO.						
01 VBLKJI	320098	8.96	399308	5.59	148637	11.79
02 MCPWSI-W-32630	289096	8.96	355584	5.59	136153	11.79
03 MCHEMEYER-W-32633	292748	8.96	366614	5.59	136356	11.79
04 MCQCTB-W-32332	291372	8.96	367795	5.60	140135	11.79
05 VHBLK01	292208	8.96	362306	5.59	134883	11.80

IS1 (CBZ) = Chlorobenzene-d5  
 IS2 (DFB) = 1,4-Difluorobenzene  
 IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 140% (Trace Volatiles) of internal standard area  
 AREA LOWER LIMIT = 60% (Trace Volatiles) of internal standard area  
 RT UPPER LIMIT = + 0.33 (Trace Volatiles) minutes of internal standard RT  
 RT LOWER LIMIT = - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside contract required QC limits with an asterisk.

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

EPA SAMPLE NO.  
MACHEMEYER-W-32633

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2183-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBTH19.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 10/27/2010  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 10/29/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.1	J B
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.  
MACHEMEYER-W-32633

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2183-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBTH19.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 10/27/2010  
 % Moisture: not dec. Date Analyzed: 10/29/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U



1J - FORM I VOA-TIC  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
MACHEMEYER-W-32633

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2183-2  
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBTH19.D  
Level: (TRACE or LOW/MED) TRACE Date Received: 10/27/2010  
% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 10/29/2010  
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	2.10	0.00	J
02		Unknown	6.92	3.0	B X J
03	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

MCPWSI-W-32630

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2183-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBTH18.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 10/27/2010  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 10/29/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.1	J B
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCPWSI-W-32630

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2183-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBTH18.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 10/27/2010  
 % Moisture: not dec. Date Analyzed: 10/29/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.045	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCPWSI-W-32630

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2183-1  
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBTH18.D  
Level: (TRACE or LOW/MED) TRACE Date Received: 10/27/2010  
% Moisture: not dec. \_\_\_\_\_ Date Analyzed: 10/29/2010  
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	3.0	B X J
02	E9667961	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

MCQCTB-W-32332

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2183-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBTH21.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 10/27/2010  
 % Moisture: not dec. Date Analyzed: 10/29/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	7.1	B
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	1.5	J
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCQCTB-W-32332

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2183-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBTH21.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 10/27/2010  
 % Moisture: not dec. Date Analyzed: 10/29/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.12	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCQCTB-W-32332

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2183-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBTH21.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 10/27/2010  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 10/29/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	Unknown	6.92	3.1	B X J
02	E966796 <sup>1</sup> Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

6A - FORM VI VOA-1  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Instrument ID: J.i Calibration Date(s): 10/19/2010 10/19/2010  
 Heated Purge: (Y/N) N Calibration Time(s): 1424 1602  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

LAB FILE ID: \_\_\_\_\_ RRF0.5 = JBT03.D RRF1.0 = JBT04.D  
 RRF5.0 = JBT05.D RRF10 = JBT06.D RRF20 = JBT07.D

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
Dichlorodifluoromethane	0.510	0.524	0.497	0.501	0.496	0.506	2.3
Chloromethane	0.401	0.371	0.372	0.374	0.370	0.378	3.5
Vinyl chloride	0.396	0.413	0.402	0.408	0.400	0.404	1.7
Bromomethane	0.232	0.225	0.217	0.224	0.222	0.224	2.5
Chloroethane	0.216	0.268	0.225	0.225	0.225	0.232	8.9
Trichlorofluoromethane	0.569	0.615	0.588	0.594	0.612	0.596	3.1
1,1-Dichloroethene	0.267	0.294	0.290	0.286	0.296	0.287	4.1
1,1,2-Trichloro- 1,2,2-trifluoroethane	0.318	0.344	0.336	0.331	0.336	0.333	2.9
Acetone	0.015	0.016	0.014	0.014	0.014	0.015	7.6
Carbon disulfide	0.827	0.814	0.749	0.758	0.775	0.785	4.4
Methyl acetate	0.042	0.038	0.040	0.041	0.040	0.040	4.0
Methylene Chloride	0.227	0.259	0.240	0.252	0.245	0.245	4.9
trans-1,2-Dichloroethene	0.310	0.327	0.309	0.306	0.314	0.313	2.6
Methyl tert-butyl ether	0.333	0.412	0.372	0.397	0.390	0.381	7.9
1,1-Dichloroethane	0.489	0.529	0.498	0.508	0.506	0.506	2.9
cis-1,2-Dichloroethene	0.284	0.316	0.300	0.310	0.304	0.303	4.0
2-Butanone	0.016	0.025	0.022	0.024	0.024	0.022	16.8
Bromochloromethane	0.093	0.110	0.099	0.104	0.102	0.102	6.3
Chloroform	0.465	0.513	0.486	0.508	0.506	0.496	4.0
1,1,1-Trichloroethane	0.689	0.658	0.692	0.670	0.693	0.680	2.3
Cyclohexane	0.620	0.647	0.669	0.639	0.678	0.651	3.6
Carbon tetrachloride	0.624	0.630	0.641	0.628	0.668	0.638	2.8
Benzene	1.585	1.565	1.566	1.508	1.588	1.563	2.1
1,2-Dichloroethane	0.199	0.237	0.209	0.216	0.215	0.215	6.4
Trichloroethene	0.437	0.411	0.413	0.404	0.427	0.418	3.1
Methylcyclohexane	0.485	0.522	0.520	0.507	0.531	0.513	3.5

Report 1,4-Dioxane for Low-Medium VOA analysis only



6B - FORM VI VOA-2  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Instrument ID: J.i Calibration Date(s): 10/19/2010 10/19/2010  
 Heated Purge: (Y/N) N Calibration Time(s): 1424 1602  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
LAB FILE ID: _____	RRF0.5 = <u>JBT03.D</u>	RRF1.0 = <u>JBT04.D</u>					
RRF5.0 = <u>JBT05.D</u>	RRF10 = <u>JBT06.D</u>	RRF20 = <u>JBT07.D</u>					
1,2-Dichloropropane	0.306	0.301	0.304	0.296	0.308	0.303	1.5
Bromodichloromethane	0.358	0.380	0.374	0.385	0.392	0.378	3.3
cis-1,3-Dichloropropene	0.389	0.442	0.456	0.463	0.478	0.446	7.6
4-Methyl-2-pentanone	0.054	0.075	0.074	0.076	0.076	0.071	13.6
Toluene	1.609	1.643	1.629	1.614	1.684	1.636	1.8
trans-1,3-Dichloropropene	0.263	0.339	0.334	0.347	0.352	0.327	11.1
1,1,2-Trichloroethane	0.148	0.177	0.160	0.161	0.159	0.161	6.4
Tetrachloroethene	0.379	0.384	0.384	0.378	0.393	0.383	1.6
2-Hexanone	0.031	0.046	0.049	0.050	0.049	0.045	17.4
Dibromochloromethane	0.180	0.219	0.220	0.231	0.234	0.217	10.0
1,2-Dibromoethane	0.126	0.154	0.146	0.155	0.152	0.147	8.2
Chlorobenzene	1.001	1.004	0.998	0.995	1.023	1.004	1.1
Ethylbenzene	1.876	1.828	1.868	1.901	1.986	1.892	3.1
o-Xylene	0.647	0.674	0.690	0.682	0.712	0.681	3.5
m,p-Xylene	0.725	0.711	0.730	0.751	0.777	0.739	3.5
Styrene	0.862	0.939	1.015	1.031	1.068	0.983	8.4
Bromoform	0.185	0.222	0.209	0.223	0.218	0.211	7.5
Isopropylbenzene	1.842	1.822	1.900	1.928	2.053	1.909	4.8
1,1,2,2-Tetrachloroethane	0.131	0.158	0.146	0.152	0.153	0.148	7.0
1,3-Dichlorobenzene	1.555	1.548	1.498	1.507	1.539	1.529	1.7
1,4-Dichlorobenzene	1.563	1.518	1.449	1.467	1.506	1.500	3.0
1,2-Dichlorobenzene	1.231	1.265	1.206	1.202	1.228	1.226	2.0
1,2-Dibromo-3-Chloropropane	0.035	0.047	0.044	0.045	0.044	0.043	10.3
1,2,4-Trichlorobenzene	0.723	0.800	0.789	0.832	0.865	0.802	6.7
1,2,3-Trichlorobenzene	0.511	0.601	0.588	0.606	0.627	0.587	7.6

6C - FORM VI VOA-3  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Instrument ID: J.i Calibration Date(s): 10/19/2010 10/19/2010  
 Heated Purge: (Y/N) N Calibration Time(s): 1424 1602  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
Vinyl Chloride-d3	0.360	0.394	0.368	0.370	0.363	0.371	3.7
Chloroethane-d5	0.276	0.301	0.283	0.287	0.284	0.286	3.3
1,1-Dichloroethene-d2	0.562	0.575	0.568	0.567	0.580	0.571	1.2
2-Butanone-d5	0.017	0.023	0.021	0.023	0.023	0.021	11.9
Chloroform-d	0.505	0.530	0.512	0.526	0.526	0.520	2.0
1,2-Dichloroethane-d4	0.162	0.197	0.166	0.177	0.174	0.175	7.7
Benzene-d6	1.484	1.495	1.476	1.446	1.530	1.486	2.1
1,2-Dichloropropane-d6	0.426	0.420	0.407	0.343	0.406	0.400	8.2
Toluene-d8	1.384	1.362	1.410	1.400	1.450	1.401	2.3
trans-1,3-Dichloropropene-d4	0.250	0.288	0.300	0.309	0.313	0.292	8.7
2-Hexanone-d5	0.018	0.027	0.027	0.030	0.029	0.026	17.9
1,1,2,2-Tetrachloroethane-d2	0.114	0.159	0.140	0.153	0.149	0.143	12.2
1,2-Dichlorobenzene-d4	0.783	0.759	0.749	0.755	0.775	0.764	1.8

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Instrument ID: J.i Calibration Date: 10/28/2010 Time: 1813  
 Lab File Id: JBTH02.D Init. Calib. Date(s): 10/19/2010 10/19/2010  
 EPA Sample No. (VSTD####): VSTD005JI Init. Calib. Time(s): 1424 1602  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20(mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.506	0.537	0.010	6.1	40.0
Chloromethane	0.378	0.400	0.010	5.8	40.0
Vinyl chloride	0.404	0.408	0.010	1.1	30.0
Bromomethane	0.224	0.258	0.100	14.9	30.0
Chloroethane	0.232	0.240	0.010	3.3	40.0
Trichlorofluoromethane	0.596	0.673	0.010	13.0	40.0
1,1-Dichloroethene	0.287	0.308	0.100	7.5	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.333	0.364	0.010	9.4	40.0
Acetone	0.015	0.015	0.010	0.9	40.0
Carbon disulfide	0.785	0.819	0.010	4.4	40.0
Methyl acetate	0.040	0.035	0.010	-11.9	40.0
Methylene Chloride	0.245	0.262	0.010	7.1	40.0
trans-1,2-Dichloroethene	0.313	0.334	0.010	6.6	40.0
Methyl tert-butyl ether	0.381	0.366	0.010	-4.0	40.0
1,1-Dichloroethane	0.506	0.519	0.200	2.5	30.0
cis-1,2-Dichloroethene	0.303	0.320	0.010	5.7	40.0
2-Butanone	0.022	0.019	0.010	-13.2	40.0
Bromochloromethane	0.102	0.108	0.050	6.0	30.0
Chloroform	0.496	0.549	0.200	10.8	30.0
1,1,1-Trichloroethane	0.680	0.734	0.100	7.8	30.0
Cyclohexane	0.651	0.585	0.010	-10.1	40.0
Carbon tetrachloride	0.638	0.686	0.100	7.5	30.0
Benzene	1.563	1.555	0.400	-0.5	30.0
1,2-Dichloroethane	0.215	0.226	0.100	4.8	30.0
Trichloroethene	0.418	0.446	0.300	6.6	30.0
Methylcyclohexane	0.513	0.446	0.010	-12.9	40.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Instrument ID: J.i Calibration Date: 10/28/2010 Time: 1813  
 Lab File Id: JBTH02.D Init. Calib. Date(s): 10/19/2010 10/19/2010  
 EPA Sample No. (VSTD####): VSTD005JI Init. Calib. Time(s): 1424 1602  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20(mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.303	0.291	0.010	-4.0	40.0
Bromodichloromethane	0.378	0.395	0.200	4.6	30.0
cis-1,3-Dichloropropene	0.446	0.429	0.200	-3.6	30.0
4-Methyl-2-pentanone	0.071	0.058	0.010	-18.2	40.0
Toluene	1.636	1.663	0.400	1.6	30.0
trans-1,3-Dichloropropene	0.327	0.328	0.100	0.2	30.0
1,1,2-Trichloroethane	0.161	0.159	0.100	-1.1	30.0
Tetrachloroethene	0.383	0.384	0.100	0.2	30.0
2-Hexanone	0.045	0.037	0.010	-18.8	40.0
Dibromochloromethane	0.217	0.230	0.100	6.1	30.0
1,2-Dibromoethane	0.147	0.144	0.010	-1.8	40.0
Chlorobenzene	1.004	1.019	0.500	1.5	30.0
Ethylbenzene	1.892	1.944	0.100	2.8	30.0
o-Xylene	0.681	0.693	0.300	1.7	30.0
m,p-Xylene	0.739	0.780	0.300	5.5	30.0
Styrene	0.983	1.046	0.300	6.4	30.0
Bromoform	0.211	0.218	0.050	3.1	30.0
Isopropylbenzene	1.909	2.001	0.010	4.8	40.0
1,1,2,2-Tetrachloroethane	0.148	0.142	0.100	-3.9	30.0
1,3-Dichlorobenzene	1.529	1.631	0.400	6.6	30.0
1,4-Dichlorobenzene	1.500	1.600	0.400	6.6	30.0
1,2-Dichlorobenzene	1.226	1.310	0.400	6.8	30.0
1,2-Dibromo-3-Chloropropane	0.043	0.042	0.010	-1.5	40.0
1,2,4-Trichlorobenzene	0.802	0.878	0.200	9.5	30.0
1,2,3-Trichlorobenzene	0.587	0.650	0.200	10.8	30.0

7C - FORM VII VOA-3  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Instrument ID: J.i Calibration Date: 10/28/2010 Time: 1813  
 Lab File Id: JBTH02.D Init. Calib. Date(s): 10/19/2010 10/19/2010  
 EPA Sample No. (VSTD####): VSTD005JI Init. Calib. Time(s): 1424 1602  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20(mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.371	0.377	0.010	1.5	30.0
Chloroethane-d5	0.286	0.305	0.010	6.4	40.0
1,1-Dichloroethene-d2	0.571	0.610	0.010	6.9	30.0
2-Butanone-d5	0.021	0.018	0.010	-13.6	40.0
Chloroform-d	0.520	0.569	0.010	9.5	30.0
1,2-Dichloroethane-d4	0.175	0.184	0.010	4.9	30.0
Benzene-d6	1.486	1.496	0.010	0.7	30.0
1,2-Dichloropropane-d6	0.400	0.378	0.010	-5.5	40.0
Toluene-d8	1.401	1.432	0.010	2.2	30.0
trans-1,3-Dichloropropene-d4	0.292	0.290	0.010	-0.8	30.0
2-Hexanone-d5	0.026	0.022	0.010	-17.0	40.0
1,1,2,2-Tetrachloroethane-d2	0.143	0.137	0.010	-4.3	30.0
1,2-Dichlorobenzene-d4	0.764	0.789	0.010	3.3	30.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Instrument ID: J.i Calibration Date: 10/29/2010 Time: 0319  
 Lab File Id: JBTH23.D Init. Calib. Date(s): 10/19/2010 10/19/2010  
 EPA Sample No. (VSTD####): VSTD005IJ Init. Calib. Time(s): 1424 1602  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20(mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.506	0.539	0.010	6.6	50.0
Chloromethane	0.378	0.368	0.010	-2.5	50.0
Vinyl chloride	0.404	0.412	0.010	2.0	50.0
Bromomethane	0.224	0.235	0.010	5.0	50.0
Chloroethane	0.232	0.238	0.010	2.5	50.0
Trichlorofluoromethane	0.596	0.719	0.010	20.7	50.0
1,1-Dichloroethene	0.287	0.326	0.010	13.8	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.333	0.361	0.010	8.4	50.0
Acetone	0.015	0.015	0.010	-0.5	50.0
Carbon disulfide	0.785	0.850	0.010	8.4	50.0
Methyl acetate	0.040	0.033	0.010	-17.7	50.0
Methylene Chloride	0.245	0.270	0.010	10.5	50.0
trans-1,2-Dichloroethene	0.313	0.337	0.010	7.5	50.0
Methyl tert-butyl ether	0.381	0.378	0.010	-0.6	50.0
1,1-Dichloroethane	0.506	0.524	0.010	3.7	50.0
cis-1,2-Dichloroethene	0.303	0.322	0.010	6.1	50.0
2-Butanone	0.022	0.020	0.010	-10.2	50.0
Bromochloromethane	0.102	0.111	0.010	9.6	50.0
Chloroform	0.496	0.563	0.010	13.5	50.0
1,1,1-Trichloroethane	0.680	0.771	0.010	13.4	50.0
Cyclohexane	0.651	0.556	0.010	-14.6	50.0
Carbon tetrachloride	0.638	0.720	0.010	12.8	50.0
Benzene	1.563	1.576	0.010	0.9	50.0
1,2-Dichloroethane	0.215	0.231	0.010	7.4	50.0
Trichloroethene	0.418	0.425	0.010	1.6	50.0
Methylcyclohexane	0.513	0.429	0.010	-16.4	50.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Instrument ID: J.i Calibration Date: 10/29/2010 Time: 0319  
 Lab File Id: JBTH23.D Init. Calib. Date(s): 10/19/2010 10/19/2010  
 EPA Sample No. (VSTD####): VSTD005IJ Init. Calib. Time(s): 1424 1602  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20(mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF <sub>5.0</sub>	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.303	0.271	0.010	-10.7	50.0
Bromodichloromethane	0.378	0.418	0.010	10.5	50.0
cis-1,3-Dichloropropene	0.446	0.454	0.010	1.9	50.0
4-Methyl-2-pentanone	0.071	0.060	0.010	-15.2	50.0
Toluene	1.636	1.707	0.010	4.3	50.0
trans-1,3-Dichloropropene	0.327	0.324	0.010	-0.9	50.0
1,1,2-Trichloroethane	0.161	0.161	0.010	0.1	50.0
Tetrachloroethene	0.383	0.399	0.010	4.0	50.0
2-Hexanone	0.045	0.041	0.010	-9.0	50.0
Dibromochloromethane	0.217	0.246	0.010	13.4	50.0
1,2-Dibromoethane	0.147	0.157	0.010	6.8	50.0
Chlorobenzene	1.004	1.047	0.010	4.2	50.0
Ethylbenzene	1.892	1.956	0.010	3.4	50.0
o-Xylene	0.681	0.741	0.010	8.8	50.0
m,p-Xylene	0.739	0.806	0.010	9.1	50.0
Styrene	0.983	1.086	0.010	10.5	50.0
Bromoform	0.211	0.219	0.010	3.6	50.0
Isopropylbenzene	1.909	2.027	0.010	6.2	50.0
1,1,2,2-Tetrachloroethane	0.148	0.149	0.010	0.5	50.0
1,3-Dichlorobenzene	1.529	1.575	0.010	3.0	50.0
1,4-Dichlorobenzene	1.500	1.550	0.010	3.3	50.0
1,2-Dichlorobenzene	1.226	1.279	0.010	4.3	50.0
1,2-Dibromo-3-Chloropropane	0.043	0.048	0.010	12.3	50.0
1,2,4-Trichlorobenzene	0.802	0.854	0.010	6.5	50.0
1,2,3-Trichlorobenzene	0.587	0.625	0.010	6.5	50.0

7C - FORM VII VOA-3  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Instrument ID: J.i Calibration Date: 10/29/2010 Time: 0319  
 Lab File Id: JBTH23.D Init. Calib. Date(s): 10/19/2010 10/19/2010  
 EPA Sample No. (VSTD####): VSTD005IJ Init. Calib. Time(s): 1424 1602  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20(mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.371	0.373	0.010	0.6	50.0
Chloroethane-d5	0.286	0.303	0.010	6.0	50.0
1,1-Dichloroethene-d2	0.571	0.630	0.010	10.4	50.0
2-Butanone-d5	0.021	0.019	0.010	-11.9	50.0
Chloroform-d	0.520	0.596	0.010	14.7	50.0
1,2-Dichloroethane-d4	0.175	0.198	0.010	13.0	50.0
Benzene-d6	1.486	1.529	0.010	2.9	50.0
1,2-Dichloropropane-d6	0.400	0.396	0.010	-1.1	50.0
Toluene-d8	1.401	1.465	0.010	4.5	50.0
trans-1,3-Dichloropropene-d4	0.292	0.301	0.010	3.1	50.0
2-Hexanone-d5	0.026	0.024	0.010	-8.3	50.0
1,1,2,2-Tetrachloroethane-d2	0.143	0.151	0.010	5.7	50.0
1,2-Dichlorobenzene-d4	0.764	0.804	0.010	5.2	50.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only



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

EPA SAMPLE NO.

VBLKJI

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-8695/3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBTH03.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 10/28/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.5	J
75-15-0	Carbon disulfide	0.14	J
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.048	J
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.060	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VBLKJI

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-8695/3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBTH03.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 10/28/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.15	J
87-61-6	1,2,3-Trichlorobenzene	0.22	J

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKJI

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-8695/3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBTH03.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 10/28/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	3.0	X J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2183-4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBTH22.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 10/29/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2183-4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBTH22.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 10/29/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2183  
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2183-4  
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBTH22.D  
Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
% Moisture: not dec. Date Analyzed: 10/29/2010  
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	3.1	B X J
02	E9667961	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

## ANALYTICAL REPORT

Job Number: 200-2245-1

SDG Number: 200-2245

Job Description: Montgomery City (200-2245)

Contract Number: 8E-00302

For:

Argonne National Laboratory

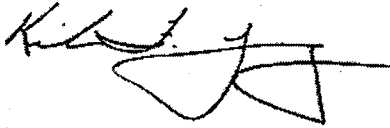
9700 South Cass Avenue

Building 203

Office B-149

Argonne, IL 60439

Attention: Mr. Clyde Dennis



Approved for release.  
Kirk F Young  
Project Manager I  
11/5/2010 4:45 PM

---

Kirk F Young  
Project Manager I  
kirk.young@testamericainc.com  
11/05/2010

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

TestAmerica Laboratories, Inc.

TestAmerica Burlington 30 Community Drive, Suite 11, South Burlington, VT 05403

Tel (802) 660-1990 Fax (802) 660-1919 [www.testamericainc.com](http://www.testamericainc.com)



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## CASE NARRATIVE

**Client: Argonne National Laboratory**

**Project: Montgomery City (200-2245)**

**Report Number: 200-2245-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### **Receipt**

The samples were received on 10/29/2010. 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, as received, were not acid preserved. On that basis, the laboratory did provide for the analytical work to be performed within seven days of sample collection.

### **SOM01.2 Volatile Organics (Trace Level Water)**

A storage blank was prepared for volatile organics analysis, and stored in association with the storage of the samples. That storage blank, identified as VHBLK01, was carried through the holding period with the samples, and analyzed.

Sample MCSB01S-W-32411 was analyzed at a dilution based on the results of preliminary screening. An additional, dilution analysis was performed on that sample in order to provide for quantification within the range of calibrated instrument response. Both sets of results for the analysis of sample MCSB01S-W-32411 are included in this submittal. The sample containers for sample MCSB22-W-32409 contained sediment. In providing for the analysis of that sample it was necessary to introduce a relatively small dilution in preparing the test volume for analysis.

Each of the analyses associated with the sample set exhibited an acceptable internal standard performance. There was an acceptable recovery of each deuterated monitoring compound (DMC) in the analysis of the method blank and instrument blank associated with the analytical work, and in the analysis of the storage blank associated with the sample set. The analysis of the samples in this sample set did meet the technical acceptance criteria specific to DMC recoveries, although not all DMC recoveries were within the control range in each analysis. The technical acceptance criteria does provide for the recovery of up to three DMCs to fall outside of the control range in the analysis of field samples. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. Trace concentrations of acetone, carbon disulfide, trans-1,2-dichloroethene, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, and 1,2,3-trichlorobenzene were identified in the analysis of the method blank associated with the analytical work. The concentration of each compound in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant method blank analysis. Trace concentrations of acetone, chloroform, and carbon tetrachloride were identified in the analysis of the instrument blank associated with the analytical work. The

concentration of each compound in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant instrument blank analysis. A trace concentration of carbon tetrachloride was identified in the analysis of the storage blank associated with the sample set. The concentration of carbon tetrachloride in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant storage blank analysis. Present in the method blank, instrument blank, and storage blank analyses was a non-target constituent that represents a compound that is related to the DMC formulation. The fact that the presence of this compound is not within the laboratory's control is at issue. The derived results for that compound have been qualified with an "X" qualifier to reflect the source of the contamination.

The responses for each of the target analytes met the relative standard deviation criterion in the initial calibration. The response for each target analyte met the percent difference criterion in the continuing calibration check acquisition. The response for each target analyte met the 50.0 percent difference criterion in the closing calibration check acquisition.

The primary quantitation mass for methylcyclohexane that is specified in the Statement of Work is mass 83. The laboratory did identify a contribution to mass 83 from 1,2-dichloropropane-d<sub>6</sub>, one of the deuterated monitoring compounds (DMCs). The laboratory did change the primary quantitation mass assignment to mass 55 for the quantification of methylcyclohexane.

Manual integration was employed in deriving certain of the analytical results. The values that have been derived from manual integration are qualified on the quantitation reports. Extracted ion current profiles for each manual integration are included in the data package, and further documented in the Sample Preparation section of this submittal.

## DATA REPORTING QUALIFIERS

Client: Argonne National Laboratory

Job Number: 200-2245-1

Sdg Number: 200-2245

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	E	Compound concentration exceeds the upper level of the calibration range of the instrument for that specific analysis.
	J	Indicates an Estimated Value for TICs
	J	Indicates an estimated value.
	D	Sample was analyzed at a higher dilution factor.
	X	See case narrative notes for explanation of the 'X' flag
	*	Surrogate exceeds the control limit
	B	The analyte was found in an associated blank, as well as in the sample.







# **Shipping and Receiving Documents**



## Login Sample Receipt Check List

Client: Argonne National Laboratory

Job Number: 200-2245-1

SDG Number: 200-2245

**Login Number: 2245**  
**Creator: Matot, Wade M**  
**List Number: 1**

**List Source: TestAmerica Burlington**

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.5 °C IR gun ID 96, CF= -1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	Incomplete sample IDs on sample containers.
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	No sampling times listed on COC.
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") diameter.	True	
If necessary, staff have been informed of any short hold time or quick needs	True	TAT
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

## Sample Login Acknowledgement

## Job 200-2245-1

Client Job Description: Montgomery City (200-2245)  
 Purchase Order #: 8E-00302  
 Work Order #: 8E-00302  
 Project Manager: Kirk F Young  
 Job Due Date: 11/12/2010  
 Job TAT: 14 Days  
 Max Deliverable Level: IV

Report To: Argonne National Laboratory  
 Jorge Alvarado  
 9700 South Cass Avenue  
 Building 203  
 Office B-149  
 Argonne, IL 60439

Bill To: Argonne National Laboratory  
 Accounts Payable  
 Chief Financial Offices  
 9700 S. Cass Ave.  
 Building 201  
 Argonne, IL 60439

Earliest Deliverable Due: 11/12/2010

## Login 200-2245

Sample Receipt: 10/29/2010 10:10:00 AM  
 Method of Delivery: FedEx Priority Overnight

Number of Coolers: 1  
 Cooler Temperature(s) (°C) 5.5

Lab Sample #	Client Sample ID	Date Sampled	Matrix	Rpt Basis	Dry / Wet **
Method	Method Description / Work Location				
200-2245-1	MCSB22-W-32409	10/28/2010 12:00:00 AM	Water	Total	Wet
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab				
200-2245-2	MCSB01S-W-32411	10/28/2010 12:00:00 AM	Water	Total	Wet
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab				
200-2245-3	MCQCTB-W-32414	10/28/2010 12:00:00 AM	Water	Total	Wet
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab				
200-2245-4	VHBLK01	10/29/2010 4:25:00 PM	Water	Total	Wet
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab				

\* Method on-hold

\*\* Wet/Dry indicates whether the reported results will be corrected for moisture content, and based on sample Wet weight or Dry weight. 11/05/2010 Page 1 of 1

## METHODOLOGY SUMMARY

Laboratory: TestAmerica Laboratories

Project No:

Location: South Burlington, Vermont

SDG No: 200-2245

### VOA

Volatile Organics Trace - USEPA CLP SOM01.2

2A - FORM II VOA-1  
 WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON

Contract: 8E-00302

Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLKJT	104	104	84	93	98	103	108
02	MCQCTB-W-32414	107	110	87	104	105	108	110
03	MCSB22-W-32409	105	105	84	193 *	102	113	107
04	MCSB01S-W-3241 1	106	106	88	200 *	189 *	112	118
05	VIBLKJN	105	108	86	98	105	111	106
06	MCSB01S-W-3241 1DL	102	106	83	97	103	105	107
07	VHBLK01	107	107	87	94	104	114	111

VDMC1 (VCL) = Vinyl Chloride-d3  
 VDMC2 (CLA) = Chloroethane-d5  
 VDMC3 (DCE) = 1,1-Dichloroethene-d2  
 VDMC4 (BUT) = 2-Butanone-d5  
 VDMC5 (CLF) = Chloroform-d  
 VDMC6 (DCA) = 1,2-Dichloroethane-d4  
 VDMC7 (BEN) = Benzene-d6

QC LIMITS  
 (65-131)  
 (71-131)  
 (55-104)  
 (49-155)  
 (78-121)  
 (78-129)  
 (77-124)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits

2B - FORM II VOA-2  
WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON

Contract: 8E-00302

Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (TCA) #	VDMC13 (DCZ) #	OTHER	TOT OUT
01	VBLKJT	104	110	106	106	99	109		0
02	MCQCTB-W-32414	109	110	111	115	104	113		0
03	MCSB22-W-32409	103	108	107	220 *	103	111		2
04	MCSB01S-W-3241 1	109	113	113	229 *	102	114		3
05	VIBLKJN	105	107	110	102	100	115		0
06	MCSB01S-W-3241 1DL	103	109	111	99	100	113		0
07	VHBLK01	110	113	108	101	106	113		0

VDMC8 (DPA) = 1,2-Dichloropropane-d6  
VDMC9 (TOL) = Toluene-d8  
VDMC10 (TDP) = trans-1,3-Dichloropropene-d4  
VDMC11 (HEX) = 2-Hexanone-d5  
VDMC12 (TCA) = 1,1,2,2-Tetrachloroethane-d2  
VDMC13 (DCZ) = 1,2-Dichlorobenzene-d4

QC LIMITS  
(79-124)  
(77-121)  
(73-121)  
(28-135)  
(73-125)  
(80-131)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJT

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Lab File ID: JBVD04.D Lab Sample ID: MB 200-9020/4  
 Instrument ID: J.i  
 Matrix: (SOIL/SED/WATER) Water Date Analyzed: 11/03/2010  
 Level: (TRACE or LOW/MED) TRACE Time Analyzed: 0911  
 GC Column: DB-624 ID: 0.20 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MCQCTB-W-324 14	200-2245-3	JBVD09.D	1150
02	MCSB22-W-324 09	200-2245-1	JBVD10.D	1215
03	MCSB01S-W-32 411	200-2245-2	JBVD12.D	1305
04	VIBLKJN	VIBLK 200-9020/13	JBVD13.D	1330
05	MCSB01S-W-32 411DL	200-2245-2	JBVD15.D	1421
06	VHBLK01	200-2245-4	JBVD16.D	1456

COMMENTS: \_\_\_\_\_

5A - FORM V VOA  
 VOLATILE ORGANICS INSTRUMENT  
 PERFORMANCE CHECK  
 BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJP

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Lab File Id: JBV02.D BFB Injection Date: 11/01/2010  
 Instrument Id: J.i BFB Injection Time: 1059  
 GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.1
75	30.0 - 80.0% of mass 95	51.7
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.5 ( 0.5)1
174	50.0 - 120% of mass 95	89.3
175	5.0 - 9.0% of mass 174	6.4 ( 7.2)1
176	95.0 - 101% of mass 174	85.2 ( 95.4)1
177	5.0 - 9.0% of mass 176	6.2 ( 7.2)2

1 - Value is %mass 174

2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0.5JP	IC 200-8873/4	JBV04.D	11/01/2010	1144
02	VSTD001JP	IC 200-8873/5	JBV05.D	11/01/2010	1210
03	VSTD005JP	ICIS 200-8873/6	JBV06.D	11/01/2010	1235
04	VSTD010JP	IC 200-8873/7	JBV07.D	11/01/2010	1301
05	VSTD020JP	IC 200-8873/8	JBV08.D	11/01/2010	1326

5A - FORM V VOA  
 VOLATILE ORGANICS INSTRUMENT  
 PERFORMANCE CHECK  
 BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJT

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Lab File Id: JBVD01.D BFB Injection Date: 11/03/2010  
 Instrument Id: J.i BFB Injection Time: 0759  
 GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.1
75	30.0 - 80.0% of mass 95	51.1
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.4 ( 0.4)1
174	50.0 - 120% of mass 95	93.9
175	5.0 - 9.0% of mass 174	6.9 ( 7.4)1
176	95.0 - 101% of mass 174	91.0 ( 96.9)1
177	5.0 - 9.0% of mass 176	6.6 ( 7.3)2

1 - Value is %mass 174

2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005JT	CCVIS 200-9020/3	JBVD03.D	11/03/2010	0845
02	VBLKJT	MB 200-9020/4	JBVD04.D	11/03/2010	0911
03	MCQCTB-W-3 2414	200-2245-3	JBVD09.D	11/03/2010	1150
04	MCSB22-W-3 2409	200-2245-1	JBVD10.D	11/03/2010	1215
05	MCSB01S-W- 32411	200-2245-2	JBVD12.D	11/03/2010	1305
06	VIBLKJN	VIBLK 200-9020/13	JBVD13.D	11/03/2010	1330
07	MCSB01S-W- 32411DL	200-2245-2	JBVD15.D	11/03/2010	1421
08	VHBLK01	200-2245-4	JBVD16.D	11/03/2010	1456
09	VSTD005TJ	CCVC 200-9020/24	JBVD24.D	11/03/2010	1817



8A - FORM VIII VOA  
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 GC Column: DB-624 ID: 0.20 (mm) Init. Calib. Date(s): 11/01/2010 11/01/2010  
 EPA Sample No. (VSTD#####): VSTD005JT Date Analyzed: 11/03/2010  
 Lab File ID (Standard): JBVD03.D Time Analyzed: 0845  
 Instrument ID: J.i Heated Purge: (Y/N) N

	IS1 (CBZ)		IS2 (DFB)		IS3 (DCB)	
	AREA	#	RT	AREA	#	RT
12 HOUR STD	266501		8.96	332836		5.59
UPPER LIMIT	373101		9.29	465970		5.92
LOWER LIMIT	159901		8.63	199702		5.26
EPA SAMPLE NO.						
01 VBLKJT	251398		8.96	324999		5.59
02 MCQCTB-W-32414	238428		8.96	301924		5.59
03 MCSB22-W-32409	243359		8.96	307039		5.59
04 MCSB01S-W-3241 1	241938		8.96	317682		5.59
05 VIBLKJN	248365		8.96	310024		5.59
06 MCSB01S-W-3241 1DL	247281		8.96	313720		5.59
07 VHBLK01	208299		8.96	269880		5.59

IS1 (CBZ) = Chlorobenzene-d5  
 IS2 (DFB) = 1,4-Difluorobenzene  
 IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 140% (Trace Volatiles) of internal standard area  
 AREA LOWER LIMIT = 60% (Trace Volatiles) of internal standard area  
 RT UPPER LIMIT = + 0.33 (Trace Volatiles) minutes of internal standard RT  
 RT LOWER LIMIT = - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside contract required QC limits with an asterisk.

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

EPA SAMPLE NO.

MCQCTB-W-32414

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2245-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD09.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 10/29/2010  
 % Moisture: not dec. Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.17	J
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	12	B
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.085	J
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCQCTB-W-32414

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2245-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD09.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 10/29/2010  
 % Moisture: not dec. Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.29	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.087	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.053	J
179601-23-1	m,p-Xylene	0.11	J
100-42-5	Styrene	0.27	J
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCQCTB-W-32414

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2245-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD09.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 10/29/2010  
 % Moisture: not dec. Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	3.2	B X J
02		Unknown	7.88	0.76	J
03		Unknown siloxane derivative	10.71	0.60	J
04	E9667961	Total Alkanes	N/A		

1EPA-designated Registry Number.

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

EPA SAMPLE NO.

MCSB01S-W-32411

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2245-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD12.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 10/29/2010  
 % Moisture: not dec. Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 15.7  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	7.8	U
74-87-3	Chloromethane	7.8	U
75-01-4	Vinyl chloride	7.8	U
74-83-9	Bromomethane	7.8	U
75-00-3	Chloroethane	7.8	U
75-69-4	Trichlorofluoromethane	7.8	U
75-35-4	1,1-Dichloroethene	7.8	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	7.8	U
67-64-1	Acetone	78	U
75-15-0	Carbon disulfide	7.8	U
79-20-9	Methyl acetate	7.8	U
75-09-2	Methylene Chloride	13	
156-60-5	trans-1,2-Dichloroethene	7.8	U
1634-04-4	Methyl tert-butyl ether	7.8	U
75-34-3	1,1-Dichloroethane	7.8	U
156-59-2	cis-1,2-Dichloroethene	7.8	U
78-93-3	2-Butanone	78	U
74-97-5	Bromochloromethane	7.8	U
67-66-3	Chloroform	1800	E
71-55-6	1,1,1-Trichloroethane	7.8	U
110-82-7	Cyclohexane	7.8	U
56-23-5	Carbon tetrachloride	11000	E
71-43-2	Benzene	7.8	U
107-06-2	1,2-Dichloroethane	14	

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCSB01S-W-32411

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2245-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD12.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 10/29/2010  
 % Moisture: not dec. Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 15.7  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	7.8	U
108-87-2	Methylcyclohexane	7.8	U
78-87-5	1,2-Dichloropropane	7.8	U
75-27-4	Bromodichloromethane	7.8	U
10061-01-5	cis-1,3-Dichloropropene	7.8	U
108-10-1	4-Methyl-2-pentanone	78	U
108-88-3	Toluene	7.8	U
10061-02-6	trans-1,3-Dichloropropene	7.8	U
79-00-5	1,1,2-Trichloroethane	7.8	U
127-18-4	Tetrachloroethene	6.1	J
591-78-6	2-Hexanone	78	U
124-48-1	Dibromochloromethane	7.8	U
106-93-4	1,2-Dibromoethane	7.8	U
108-90-7	Chlorobenzene	7.8	U
100-41-4	Ethylbenzene	7.8	U
95-47-6	o-Xylene	7.8	U
179601-23-1	m,p-Xylene	7.8	U
100-42-5	Styrene	7.8	U
75-25-2	Bromoform	7.8	U
98-82-8	Isopropylbenzene	7.8	U
79-34-5	1,1,2,2-Tetrachloroethane	7.8	U
541-73-1	1,3-Dichlorobenzene	7.8	U
106-46-7	1,4-Dichlorobenzene	7.8	U
95-50-1	1,2-Dichlorobenzene	7.8	U
96-12-8	1,2-Dibromo-3-Chloropropene	7.8	U
120-82-1	1,2,4-Trichlorobenzene	7.8	U
87-61-6	1,2,3-Trichlorobenzene	7.8	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCSB01S-W-32411

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2245-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD12.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 10/29/2010  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 15.7  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	48	B X J
02	E9667961	Total Alkanes	N/A		

1EPA-designated Registry Number.

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

EPA SAMPLE NO.

MCSB01S-W-32411DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2245-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD15.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 10/29/2010  
 % Moisture: not dec. Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 846.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	420	U
74-87-3	Chloromethane	420	U
75-01-4	Vinyl chloride	420	U
74-83-9	Bromomethane	420	U
75-00-3	Chloroethane	420	U
75-69-4	Trichlorofluoromethane	420	U
75-35-4	1,1-Dichloroethene	420	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	420	U
67-64-1	Acetone	4200	U
75-15-0	Carbon disulfide	420	U
79-20-9	Methyl acetate	420	U
75-09-2	Methylene Chloride	420	U
156-60-5	trans-1,2-Dichloroethene	420	U
1634-04-4	Methyl tert-butyl ether	420	U
75-34-3	1,1-Dichloroethane	420	U
156-59-2	cis-1,2-Dichloroethene	420	U
78-93-3	2-Butanone	4200	U
74-97-5	Bromochloromethane	420	U
67-66-3	Chloroform	1800	D
71-55-6	1,1,1-Trichloroethane	420	U
110-82-7	Cyclohexane	420	U
56-23-5	Carbon tetrachloride	10000	D
71-43-2	Benzene	420	U
107-06-2	1,2-Dichloroethane	420	U

Report 1,4-Dioxane for Low-Medium VOA analysis only



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

EPA SAMPLE NO.  
MCSB01S-W-32411DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2245-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD15.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 10/29/2010  
 % Moisture: not dec. Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 846.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	420	U
108-87-2	Methylcyclohexane	420	U
78-87-5	1,2-Dichloropropane	420	U
75-27-4	Bromodichloromethane	420	U
10061-01-5	cis-1,3-Dichloropropene	420	U
108-10-1	4-Methyl-2-pentanone	4200	U
108-88-3	Toluene	420	U
10061-02-6	trans-1,3-Dichloropropene	420	U
79-00-5	1,1,2-Trichloroethane	420	U
127-18-4	Tetrachloroethene	420	U
591-78-6	2-Hexanone	4200	U
124-48-1	Dibromochloromethane	420	U
106-93-4	1,2-Dibromoethane	420	U
108-90-7	Chlorobenzene	420	U
100-41-4	Ethylbenzene	420	U
95-47-6	o-Xylene	420	U
179601-23-1	m,p-Xylene	420	U
100-42-5	Styrene	420	U
75-25-2	Bromoform	420	U
98-82-8	Isopropylbenzene	420	U
79-34-5	1,1,2,2-Tetrachloroethane	420	U
541-73-1	1,3-Dichlorobenzene	420	U
106-46-7	1,4-Dichlorobenzene	420	U
95-50-1	1,2-Dichlorobenzene	420	U
96-12-8	1,2-Dibromo-3-Chloropropane	420	U
120-82-1	1,2,4-Trichlorobenzene	420	U
87-61-6	1,2,3-Trichlorobenzene	420	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
 MCSB01S-W-32411DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2245-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD15.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 10/29/2010  
 % Moisture: not dec. Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 846.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	2500	B X D J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

MCSB22-W-32409

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2245-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD10.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 10/29/2010  
 % Moisture: not dec. Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.1  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	0.55	U
74-87-3	Chloromethane	0.55	U
75-01-4	Vinyl chloride	0.55	U
74-83-9	Bromomethane	0.55	U
75-00-3	Chloroethane	0.55	U
75-69-4	Trichlorofluoromethane	0.55	U
75-35-4	1,1-Dichloroethene	0.55	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	U
67-64-1	Acetone	1.5	J B
75-15-0	Carbon disulfide	0.55	U
79-20-9	Methyl acetate	0.55	U
75-09-2	Methylene Chloride	0.11	J
156-60-5	trans-1,2-Dichloroethene	0.55	U
1634-04-4	Methyl tert-butyl ether	0.55	U
75-34-3	1,1-Dichloroethane	0.55	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	2-Butanone	5.5	U
74-97-5	Bromochloromethane	0.55	U
67-66-3	Chloroform	0.32	J
71-55-6	1,1,1-Trichloroethane	0.55	U
110-82-7	Cyclohexane	0.55	U
56-23-5	Carbon tetrachloride	9.5	
71-43-2	Benzene	0.55	U
107-06-2	1,2-Dichloroethane	0.55	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCSB22-W-32409

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2245-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD10.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 10/29/2010  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.1  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	0.55	U
108-87-2	Methylcyclohexane	0.55	U
78-87-5	1,2-Dichloropropane	0.55	U
75-27-4	Bromodichloromethane	0.55	U
10061-01-5	cis-1,3-Dichloropropene	0.55	U
108-10-1	4-Methyl-2-pentanone	5.5	U
108-88-3	Toluene	0.55	U
10061-02-6	trans-1,3-Dichloropropene	0.55	U
79-00-5	1,1,2-Trichloroethane	0.55	U
127-18-4	Tetrachloroethene	0.55	U
591-78-6	2-Hexanone	5.5	U
124-48-1	Dibromochloromethane	0.55	U
106-93-4	1,2-Dibromoethane	0.55	U
108-90-7	Chlorobenzene	0.55	U
100-41-4	Ethylbenzene	0.55	U
95-47-6	o-Xylene	0.55	U
179601-23-1	m,p-Xylene	0.55	U
100-42-5	Styrene	0.55	U
75-25-2	Bromoform	0.55	U
98-82-8	Isopropylbenzene	0.55	U
79-34-5	1,1,2,2-Tetrachloroethane	0.55	U
541-73-1	1,3-Dichlorobenzene	0.55	U
106-46-7	1,4-Dichlorobenzene	0.55	U
95-50-1	1,2-Dichlorobenzene	0.55	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.55	U
120-82-1	1,2,4-Trichlorobenzene	0.55	U
87-61-6	1,2,3-Trichlorobenzene	0.55	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCSB22-W-32409

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2245-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD10.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 10/29/2010  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.1  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	3.3	B X J
02	E9667961	Total Alkanes	N/A		

1EPA-designated Registry Number.

6A - FORM VI VOA-1  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Instrument ID: J.i Calibration Date(s): 11/01/2010 11/01/2010  
 Heated Purge: (Y/N) N Calibration Time(s): 1144 1326  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
Dichlorodifluoromethane	0.469	0.453	0.458	0.463	0.444	0.458	2.1
Chloromethane	0.368	0.365	0.337	0.346	0.331	0.350	4.8
Vinyl chloride	0.365	0.371	0.364	0.360	0.352	0.362	1.9
Bromomethane	0.226	0.214	0.207	0.219	0.218	0.217	3.3
Chloroethane	0.226	0.212	0.208	0.210	0.201	0.211	4.2
Trichlorofluoromethane	0.543	0.570	0.538	0.543	0.546	0.548	2.3
1,1-Dichloroethene	0.244	0.256	0.259	0.269	0.257	0.257	3.5
1,1,2-Trichloro- 1,2,2-trifluoroethane	0.286	0.287	0.291	0.291	0.284	0.288	1.0
Acetone	0.014	0.015	0.012	0.012	0.012	0.013	10.1
Carbon disulfide	0.814	0.752	0.706	0.717	0.707	0.739	6.2
Methyl acetate	0.046	0.036	0.036	0.036	0.034	0.038	12.2
Methylene Chloride	0.257	0.243	0.235	0.226	0.226	0.238	5.4
trans-1,2-Dichloroethene	0.296	0.296	0.299	0.303	0.289	0.296	1.8
Methyl tert-butyl ether	0.343	0.318	0.331	0.338	0.340	0.334	3.0
1,1-Dichloroethane	0.471	0.507	0.475	0.482	0.464	0.480	3.4
cis-1,2-Dichloroethene	0.283	0.315	0.285	0.290	0.288	0.292	4.4
2-Butanone	0.020	0.020	0.021	0.021	0.021	0.020	3.5
Bromochloromethane	0.076	0.090	0.089	0.094	0.092	0.088	8.2
Chloroform	0.496	0.483	0.490	0.490	0.475	0.487	1.6
1,1,1-Trichloroethane	0.659	0.656	0.617	0.626	0.622	0.636	3.1
Cyclohexane	0.555	0.551	0.544	0.561	0.551	0.552	1.2
Carbon tetrachloride	0.590	0.636	0.579	0.591	0.579	0.595	4.0
Benzene	1.498	1.446	1.403	1.431	1.414	1.439	2.6
1,2-Dichloroethane	0.227	0.203	0.202	0.210	0.203	0.209	5.1
Trichloroethene	0.410	0.386	0.373	0.383	0.369	0.384	4.1
Methylcyclohexane	0.409	0.393	0.415	0.434	0.426	0.416	3.8

Report 1,4-Dioxane for Low-Medium VOA analysis only

6B - FORM VI VOA-2  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Instrument ID: J.i Calibration Date(s): 11/01/2010 11/01/2010  
 Heated Purge: (Y/N) N Calibration Time(s): 1144 1326  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

LAB FILE ID: \_\_\_\_\_ RRF0.5 = JBV04.D RRF1.0 = JBV05.D  
 RRF5.0 = JBV06.D RRF10 = JBV07.D RRF20 = JBV08.D

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
1,2-Dichloropropane	0.290	0.278	0.269	0.272	0.262	0.274	3.8
Bromodichloromethane	0.373	0.357	0.348	0.354	0.354	0.357	2.7
cis-1,3-Dichloropropene	0.357	0.431	0.378	0.420	0.418	0.401	7.9
4-Methyl-2-pentanone	0.058	0.060	0.061	0.063	0.063	0.061	3.5
Toluene	1.479	1.491	1.462	1.512	1.505	1.490	1.4
trans-1,3-Dichloropropene	0.289	0.308	0.295	0.311	0.316	0.304	3.7
1,1,2-Trichloroethane	0.141	0.148	0.138	0.142	0.139	0.142	2.9
Tetrachloroethene	0.335	0.326	0.318	0.330	0.329	0.327	2.0
2-Hexanone	0.035	0.039	0.038	0.041	0.042	0.039	6.9
Dibromochloromethane	0.194	0.189	0.195	0.200	0.208	0.197	3.7
1,2-Dibromoethane	0.125	0.132	0.124	0.132	0.134	0.129	3.5
Chlorobenzene	0.945	0.904	0.904	0.924	0.916	0.919	1.9
Ethylbenzene	1.619	1.657	1.689	1.771	1.786	1.704	4.2
o-Xylene	0.589	0.608	0.626	0.652	0.648	0.625	4.2
m,p-Xylene	0.689	0.668	0.696	0.708	0.711	0.694	2.5
Styrene	0.800	0.885	0.941	0.986	0.991	0.921	8.7
Bromoform	0.186	0.192	0.184	0.193	0.187	0.188	2.1
Isopropylbenzene	1.532	1.608	1.737	1.838	1.844	1.712	8.1
1,1,2,2-Tetrachloroethane	0.127	0.128	0.126	0.131	0.132	0.129	2.0
1,3-Dichlorobenzene	1.419	1.392	1.384	1.402	1.405	1.400	1.0
1,4-Dichlorobenzene	1.467	1.370	1.338	1.377	1.398	1.390	3.4
1,2-Dichlorobenzene	1.152	1.139	1.117	1.106	1.112	1.125	1.7
1,2-Dibromo-3-Chloropropane	0.045	0.037	0.039	0.040	0.040	0.040	7.0
1,2,4-Trichlorobenzene	0.742	0.707	0.731	0.738	0.762	0.736	2.7
1,2,3-Trichlorobenzene	0.513	0.508	0.528	0.558	0.536	0.529	3.7

6C - FORM VI VOA-3  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Instrument ID: J.i Calibration Date(s): 11/01/2010 11/01/2010  
 Heated Purge: (Y/N) N Calibration Time(s): 1144 1326  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
Vinyl Chloride-d3	0.319	0.331	0.327	0.333	0.319	0.326	2.1
Chloroethane-d5	0.264	0.257	0.258	0.259	0.258	0.259	1.1
1,1-Dichloroethene-d2	0.506	0.517	0.515	0.525	0.514	0.515	1.3
2-Butanone-d5	0.019	0.019	0.019	0.020	0.019	0.019	1.7
Chloroform-d	0.535	0.522	0.513	0.512	0.498	0.516	2.7
1,2-Dichloroethane-d4	0.183	0.163	0.165	0.169	0.164	0.169	4.9
Benzene-d6	1.425	1.404	1.331	1.360	1.338	1.372	3.0
1,2-Dichloropropane-d6	0.378	0.318	0.311	0.317	0.303	0.325	9.2
Toluene-d8	1.128	1.288	1.264	1.293	1.273	1.249	5.5
trans-1,3-Dichloropropene-d4	0.236	0.275	0.268	0.272	0.279	0.266	6.4
2-Hexanone-d5	0.018	0.021	0.023	0.023	0.024	0.022	12.2
1,1,2,2-Tetrachloroethane-d2	0.122	0.144	0.127	0.132	0.130	0.131	6.2
1,2-Dichlorobenzene-d4	0.761	0.698	0.675	0.695	0.694	0.705	4.7

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only



7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Instrument ID: J.i Calibration Date: 11/03/2010 Time: 0845  
 Lab File Id: JBVD03.D Init. Calib. Date(s): 11/01/2010 11/01/2010  
 EPA Sample No. (VSTD####): VSTD005JT Init. Calib. Time(s): 1144 1326  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20(mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.458	0.471	0.010	2.9	40.0
Chloromethane	0.350	0.339	0.010	-3.0	40.0
Vinyl chloride	0.362	0.357	0.010	-1.5	30.0
Bromomethane	0.217	0.221	0.100	1.8	30.0
Chloroethane	0.211	0.208	0.010	-1.6	40.0
Trichlorofluoromethane	0.548	0.572	0.010	4.4	40.0
1,1-Dichloroethene	0.257	0.271	0.100	5.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.288	0.300	0.010	4.4	40.0
Acetone	0.013	0.013	0.010	1.0	40.0
Carbon disulfide	0.739	0.723	0.010	-2.2	40.0
Methyl acetate	0.038	0.037	0.010	-1.6	40.0
Methylene Chloride	0.238	0.237	0.010	0.0	40.0
trans-1,2-Dichloroethene	0.296	0.297	0.010	0.3	40.0
Methyl tert-butyl ether	0.334	0.345	0.010	3.3	40.0
1,1-Dichloroethane	0.480	0.477	0.200	-0.6	30.0
cis-1,2-Dichloroethene	0.292	0.290	0.010	-0.9	40.0
2-Butanone	0.020	0.020	0.010	-4.2	40.0
Bromochloromethane	0.088	0.095	0.050	7.8	30.0
Chloroform	0.487	0.506	0.200	3.9	30.0
1,1,1-Trichloroethane	0.636	0.656	0.100	3.0	30.0
Cyclohexane	0.552	0.553	0.010	0.1	40.0
Carbon tetrachloride	0.595	0.603	0.100	1.3	30.0
Benzene	1.439	1.423	0.400	-1.1	30.0
1,2-Dichloroethane	0.209	0.213	0.100	1.7	30.0
Trichloroethene	0.384	0.381	0.300	-0.7	30.0
Methylcyclohexane	0.416	0.424	0.010	2.0	40.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Instrument ID: J.i Calibration Date: 11/03/2010 Time: 0845  
 Lab File Id: JBVD03.D Init. Calib. Date(s): 11/01/2010 11/01/2010  
 EPA Sample No. (VSTD####): VSTD005JT Init. Calib. Time(s): 1144 1326  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20(mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.274	0.256	0.010	-6.8	40.0
Bromodichloromethane	0.357	0.370	0.200	3.6	30.0
cis-1,3-Dichloropropene	0.401	0.418	0.200	4.4	30.0
4-Methyl-2-pentanone	0.061	0.062	0.010	1.2	40.0
Toluene	1.490	1.494	0.400	0.3	30.0
trans-1,3-Dichloropropene	0.304	0.315	0.100	3.8	30.0
1,1,2-Trichloroethane	0.142	0.135	0.100	-4.4	30.0
Tetrachloroethene	0.327	0.348	0.100	6.2	30.0
2-Hexanone	0.039	0.041	0.010	4.4	40.0
Dibromochloromethane	0.197	0.205	0.100	3.7	30.0
1,2-Dibromoethane	0.129	0.133	0.010	2.7	40.0
Chlorobenzene	0.919	0.932	0.500	1.5	30.0
Ethylbenzene	1.704	1.750	0.100	2.7	30.0
o-Xylene	0.625	0.659	0.300	5.4	30.0
m,p-Xylene	0.694	0.717	0.300	3.3	30.0
Styrene	0.921	0.963	0.300	4.6	30.0
Bromoform	0.188	0.187	0.050	-0.6	30.0
Isopropylbenzene	1.712	1.776	0.010	3.7	40.0
1,1,2,2-Tetrachloroethane	0.129	0.131	0.100	1.5	30.0
1,3-Dichlorobenzene	1.400	1.415	0.400	1.0	30.0
1,4-Dichlorobenzene	1.390	1.424	0.400	2.5	30.0
1,2-Dichlorobenzene	1.125	1.155	0.400	2.6	30.0
1,2-Dibromo-3-Chloropropane	0.040	0.034	0.010	-15.9	40.0
1,2,4-Trichlorobenzene	0.736	0.763	0.200	3.7	30.0
1,2,3-Trichlorobenzene	0.529	0.522	0.200	-1.2	30.0

7C - FORM VII VOA-3  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Instrument ID: J.i Calibration Date: 11/03/2010 Time: 0845  
 Lab File Id: JBVD03.D Init. Calib. Date(s): 11/01/2010 11/01/2010  
 EPA Sample No. (VSTD####): VSTD005JT Init. Calib. Time(s): 1144 1326  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20(mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.326	0.332	0.010	1.8	30.0
Chloroethane-d5	0.259	0.268	0.010	3.5	40.0
1,1-Dichloroethene-d2	0.515	0.546	0.010	5.8	30.0
2-Butanone-d5	0.019	0.019	0.010	-0.3	40.0
Chloroform-d	0.516	0.508	0.010	-1.5	30.0
1,2-Dichloroethane-d4	0.169	0.171	0.010	1.4	30.0
Benzene-d6	1.372	1.361	0.010	-0.8	30.0
1,2-Dichloropropane-d6	0.325	0.355	0.010	9.1	40.0
Toluene-d8	1.249	1.322	0.010	5.9	30.0
trans-1,3-Dichloropropene-d4	0.266	0.282	0.010	6.1	30.0
2-Hexanone-d5	0.022	0.022	0.010	2.7	40.0
1,1,2,2-Tetrachloroethane-d2	0.131	0.132	0.010	1.2	30.0
1,2-Dichlorobenzene-d4	0.705	0.721	0.010	2.3	30.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Instrument ID: J.i Calibration Date: 11/03/2010 Time: 1817  
 Lab File Id: JBVD24.D Init. Calib. Date(s): 11/01/2010 11/01/2010  
 EPA Sample No. (VSTD####): VSTD005TJ Init. Calib. Time(s): 1144 1326  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20(mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.458	0.508	0.010	11.0	50.0
Chloromethane	0.350	0.373	0.010	6.7	50.0
Vinyl chloride	0.362	0.391	0.010	7.9	50.0
Bromomethane	0.217	0.231	0.010	6.8	50.0
Chloroethane	0.211	0.233	0.010	10.1	50.0
Trichlorofluoromethane	0.548	0.611	0.010	11.5	50.0
1,1-Dichloroethene	0.257	0.288	0.010	11.9	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.288	0.335	0.010	16.6	50.0
Acetone	0.013	0.013	0.010	0.9	50.0
Carbon disulfide	0.739	0.787	0.010	6.5	50.0
Methyl acetate	0.038	0.042	0.010	11.4	50.0
Methylene Chloride	0.238	0.255	0.010	7.3	50.0
trans-1,2-Dichloroethene	0.296	0.323	0.010	9.1	50.0
Methyl tert-butyl ether	0.334	0.344	0.010	3.0	50.0
1,1-Dichloroethane	0.480	0.510	0.010	6.2	50.0
cis-1,2-Dichloroethene	0.292	0.323	0.010	10.4	50.0
2-Butanone	0.020	0.021	0.010	1.4	50.0
Bromochloromethane	0.088	0.099	0.010	11.9	50.0
Chloroform	0.487	0.529	0.010	8.7	50.0
1,1,1-Trichloroethane	0.636	0.694	0.010	9.1	50.0
Cyclohexane	0.552	0.576	0.010	4.2	50.0
Carbon tetrachloride	0.595	0.653	0.010	9.7	50.0
Benzene	1.439	1.509	0.010	4.9	50.0
1,2-Dichloroethane	0.209	0.220	0.010	5.3	50.0
Trichloroethene	0.384	0.407	0.010	5.9	50.0
Methylcyclohexane	0.416	0.437	0.010	5.2	50.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Instrument ID: J.i Calibration Date: 11/03/2010 Time: 1817  
 Lab File Id: JBVD24.D Init. Calib. Date(s): 11/01/2010 11/01/2010  
 EPA Sample No. (VSTD####): VSTD005TJ Init. Calib. Time(s): 1144 1326  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20(mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.274	0.285	0.010	4.0	50.0
Bromodichloromethane	0.357	0.377	0.010	5.5	50.0
cis-1,3-Dichloropropene	0.401	0.433	0.010	8.0	50.0
4-Methyl-2-pentanone	0.061	0.061	0.010	0.6	50.0
Toluene	1.490	1.578	0.010	5.9	50.0
trans-1,3-Dichloropropene	0.304	0.318	0.010	4.7	50.0
1,1,2-Trichloroethane	0.142	0.150	0.010	5.6	50.0
Tetrachloroethene	0.327	0.368	0.010	12.4	50.0
2-Hexanone	0.039	0.039	0.010	0.4	50.0
Dibromochloromethane	0.197	0.209	0.010	6.0	50.0
1,2-Dibromoethane	0.129	0.135	0.010	4.4	50.0
Chlorobenzene	0.919	0.965	0.010	5.1	50.0
Ethylbenzene	1.704	1.863	0.010	9.3	50.0
o-Xylene	0.625	0.683	0.010	9.3	50.0
m,p-Xylene	0.694	0.757	0.010	9.1	50.0
Styrene	0.921	1.013	0.010	10.0	50.0
Bromoform	0.188	0.189	0.010	0.2	50.0
Isopropylbenzene	1.712	1.869	0.010	9.2	50.0
1,1,2,2-Tetrachloroethane	0.129	0.132	0.010	2.6	50.0
1,3-Dichlorobenzene	1.400	1.493	0.010	6.6	50.0
1,4-Dichlorobenzene	1.390	1.468	0.010	5.6	50.0
1,2-Dichlorobenzene	1.125	1.176	0.010	4.5	50.0
1,2-Dibromo-3-Chloropropane	0.040	0.039	0.010	-3.9	50.0
1,2,4-Trichlorobenzene	0.736	0.755	0.010	2.5	50.0
1,2,3-Trichlorobenzene	0.529	0.546	0.010	3.3	50.0

7C - FORM VII VOA-3  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Instrument ID: J.i Calibration Date: 11/03/2010 Time: 1817  
 Lab File Id: JBVD24.D Init. Calib. Date(s): 11/01/2010 11/01/2010  
 EPA Sample No. (VSTD####): VSTD005TJ Init. Calib. Time(s): 1144 1326  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20(mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.326	0.355	0.010	9.0	50.0
Chloroethane-d5	0.259	0.294	0.010	13.4	50.0
1,1-Dichloroethene-d2	0.515	0.583	0.010	13.1	50.0
2-Butanone-d5	0.019	0.020	0.010	2.5	50.0
Chloroform-d	0.516	0.555	0.010	7.5	50.0
1,2-Dichloroethane-d4	0.169	0.185	0.010	9.6	50.0
Benzene-d6	1.372	1.446	0.010	5.4	50.0
1,2-Dichloropropane-d6	0.325	0.332	0.010	2.1	50.0
Toluene-d8	1.249	1.350	0.010	8.1	50.0
trans-1,3-Dichloropropene-d4	0.266	0.274	0.010	3.1	50.0
2-Hexanone-d5	0.022	0.022	0.010	0.0	50.0
1,1,2,2-Tetrachloroethane-d2	0.131	0.136	0.010	3.8	50.0
1,2-Dichlorobenzene-d4	0.705	0.742	0.010	5.3	50.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

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

EPA SAMPLE NO.

VBLKJT

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-9020/4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD04.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.5	J
75-15-0	Carbon disulfide	0.098	J
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.033	J
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VBLKJT

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-9020/4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD04.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.044	J
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.10	J
87-61-6	1,2,3-Trichlorobenzene	0.17	J



1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKJT

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-9020/4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD04.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	2.9	X J
02	E9667961	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2245-4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD16.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.074	J
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2245-4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD16.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2245-4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD16.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	3.0	B X J
02	E9667961	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

VIBLKJN

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-9020/13  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD13.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.0	J B
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.11	J
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.27	J
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VIBLKJN

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-9020/13  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD13.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VIBLKJN

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2245  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-9020/13  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBVD13.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 11/03/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	3.0	B X J
02	E9667961	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

## ANALYTICAL REPORT

Job Number: 200-2520-1

SDG Number: 200-2520

Job Description: Montgomery City (200-2520)

Contract Number: 8E-00302

For:

Argonne National Laboratory

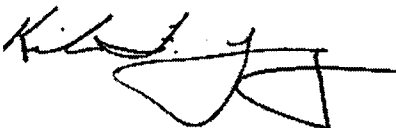
9700 South Cass Avenue

Building 203

Office B-149

Argonne, IL 60439

Attention: Mr. Clyde Dennis



Approved for release.  
Kirk F Young  
Project Manager I  
11/29/2010 1:05 PM

---

Kirk F Young  
Project Manager I  
kirk.young@testamericainc.com  
11/29/2010

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory



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## CASE NARRATIVE

**Client: Argonne National Laboratory**

**Project: Montgomery City (200-2520)**

**Report Number: 200-2520-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### **Receipt**

The samples were received on 11/16/2010. 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, as received, were not acid preserved. On that basis, the laboratory did provide for the analytical work to be performed within seven days of sample collection.

### **SOM01.2 Volatile Organics (Trace Level Water)**

A storage blank was prepared for volatile organics analysis, and stored in association with the storage of the samples. That storage blank, identified as VHBLK01, was carried through the holding period with the samples, and analyzed.

Sample MCSB17D-W-32422 was analyzed at a dilution based on the results of preliminary screening. An additional, more concentrated analysis was performed on the sample in order to provide for a lower reporting limit for those analytes that were not identified in the primary analysis. Both sets of results for the analysis of sample MCSB17D-W-32422 are included in this submittal.

Each of the analyses associated with the sample set exhibited an acceptable internal standard performance. There was an acceptable recovery of each deuterated monitoring compound (DMC) in the analysis of the method blank and instrument blank associated with the analytical work, and in the analysis of the storage blank associated with the sample set. The analysis of the samples in this sample set did meet the technical acceptance criteria specific to DMC recoveries, although not all DMC recoveries were within the control range in each analysis. The technical acceptance criteria does provide for the recovery of up to three DMCs to fall outside of the control range in the analysis of field samples. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. Trace concentrations of acetone, carbon disulfide, 1,2,4-trichlorobenzene, and 1,2,3-trichlorobenzene were identified in the analysis of the method blank associated with the analytical work. The concentration of each compound in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant method blank analysis. A trace concentration of carbon tetrachloride was identified in the analysis of the instrument blank associated with the analytical work. The concentration of carbon tetrachloride in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant storage

blank analysis. A trace concentration of acetone was identified in the analysis of the storage blank associated with the sample set. The concentration of acetone in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant storage blank analysis. Present in the method blank, instrument blank, and storage blank analyses was a non-target constituent that represents a compound that is related to the DMC formulation. The fact that the presence of this compound is not within the laboratory's control is at issue. The derived results for that compound have been qualified with an "X" qualifier to reflect the source of the contamination.

The responses for each of the target analytes met the relative standard deviation criterion in the initial calibration. The response for each target analyte met the percent difference criterion in the continuing calibration check acquisition. The response for each target analyte met the 50.0 percent difference criterion in the closing calibration check acquisition.

The primary quantitation mass for methylcyclohexane that is specified in the Statement of Work is mass 83. The laboratory did identify a contribution to mass 83 from 1,2-dichloropropane-d<sub>6</sub>, one of the deuterated monitoring compounds (DMCs). The laboratory did change the primary quantitation mass assignment to mass 55 for the quantification of methylcyclohexane.

Manual integration was employed in deriving certain of the analytical results. The values that have been derived from manual integration are qualified on the quantitation reports. Extracted ion current profiles for each manual integration are included in the data package, and further documented in the Sample Preparation section of this submittal.

## DATA REPORTING QUALIFIERS

Client: Argonne National Laboratory

Job Number: 200-2520-1  
Sdg Number: 200-2520

<u>Lab Section</u>	<u>Qualifier</u>	<u>Description</u>
GC/MS VOA		
	U	Analyzed for but not detected.
	E	Compound concentration exceeds the upper level of the calibration range of the instrument for that specific analysis.
	J	Indicates an Estimated Value for TICs
	J	Indicates an estimated value.
	D	Sample was analyzed at a higher dilution factor.
	X	See case narrative notes for explanation of the 'X' flag
	*	Surrogate exceeds the control limit
	B	The analyte was found in an associated blank, as well as in the sample.





**Wilmington Facility**  
**Internal Chain of Custody Log (ICOC)**

Client Information:  
 Log # 200-2520 Method: SOM#1.2-Vol-1F  
 Client: Argonne National Labs LAB IDs: 200-2520-3

Samples associated with this log in were placed into storage on 11/16/10 (Date) 1021 (Time<sup>2</sup>) by: [Signature] Sample Custodian Signature  
 Storage Location: Box Fridge A shelf 15 Specify storage location (refrigerator, freezer or lab location) for original sample containers  
 Storage Condition:  Refrigeration  Frozen Ambient

Sample Type Original Prepared <sup>1</sup>	Lab ID(s)	Transfer Date	Transfer Time <sup>2</sup>	Purpose of Transfer		Relinquished By:	Received By:	Storage Location Prepared Sample <sup>1</sup>
				Prep	Analysis			
✓	3	11-16-10	1550	✓		<u>[Signature]</u>	<u>[Signature]</u>	<u>VOA Prep</u>
✓	3	11-16-10	1620			<u>[Signature]</u>	<u>[Signature]</u>	<u>VOA Fridge</u>
✓	"	11/19/10	1750	✓		<u>[Signature]</u>	<u>[Signature]</u>	<u>Analysis</u>
✓	"	11/19/10	1800		✓	<u>[Signature]</u>	<u>[Signature]</u>	<u>Storage</u>
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# Shipping and Receiving Documents

## Login Sample Receipt Check List

Client: Argonne National Laboratory

Job Number: 200-2520-1  
SDG Number: 200-2520

**Login Number: 2520**  
**Creator: Marion, Greg T**  
**List Number: 1**

**List Source: TestAmerica Burlington**

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	NO SEAL NUMBERS
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7°C IR GUN ID 96/CF= -1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	False	Sample volumes unpreserved.
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	

## Sample Login Acknowledgement

## Job 200-2520-1

<b>Client Job Description:</b>	Montgomery City (200-2520)	<b>Report To:</b>	Argonne National Laboratory
<b>Purchase Order #:</b>	8E-00302		Jorge Alvarado
<b>Work Order #:</b>	8E-00302		9700 South Cass Avenue
<b>Project Manager:</b>	Kirk F Young		Building 203
<b>Job Due Date:</b>	11/30/2010		Office B-149
<b>Job TAT:</b>	14 Days		Argonne, IL 60439
<b>Max Deliverable Level:</b>	IV	<b>Bill To:</b>	Argonne National Laboratory
			Accounts Payable
<b>Earliest Deliverable Due:</b>	11/30/2010		Chief Financial Offices
			9700 S. Cass Ave.
			Building 201
			Argonne, IL 60439

## Login 200-2520

<b>Sample Receipt:</b>	11/16/2010 9:40:00 AM	<b>Number of Coolers:</b>	1
<b>Method of Delivery:</b>	FedEx Priority Overnight	<b>Cooler Temperature(s) (C°):</b>	2.7

Lab Sample #	Client Sample ID	Date Sampled	Matrix	Rpt Basis	Dry / Wet **
Method	Method Description / Work Location				
200-2520-1	MCSB17D-W-32422	11/15/2010 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-2520-2	MCQCTB-W-32429	11/15/2010 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-2520-3	VHBLK01	11/16/2010 10:10:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet

\* Method on-hold

\*\* Wet/Dry indicates whether the reported results will be corrected for moisture content, and based on sample Wet weight or Dry

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## METHODOLOGY SUMMARY

Laboratory: TestAmerica Laboratories

Project No:

Location: South Burlington, Vermont

SDG No: 200-2520

### VOA

Volatile Organics Trace - USEPA CLP SOM01.2

2A - FORM II VOA-1  
 WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON

Contract: 8E-00302

Lab Code: STLV

Case No.: MONTGO Mod. Ref No.:

SDG No.: 200-2520

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLKJI	107	108	80	90	103	106	117
02	MCSB17D-W-3242 2DL	102	103	77	89	101	93	109
03	MCSB17D-W-3242 2	102	102	80	138	103	89	106
04	VIBLKJS	101	101	79	90	102	96	110
05	MCQCTB-W-32429	100	103	77	89	100	97	108
06	VHBLK01	102	103	78	89	100	94	109

VDMC1 (VCL) = Vinyl Chloride-d3  
 VDMC2 (CLA) = Chloroethane-d5  
 VDMC3 (DCE) = 1,1-Dichloroethene-d2  
 VDMC4 (BUT) = 2-Butanone-d5  
 VDMC5 (CLF) = Chloroform-d  
 VDMC6 (DCA) = 1,2-Dichloroethane-d4  
 VDMC7 (BEN) = Benzene-d6

QC LIMITS

(65-131)  
 (71-131)  
 (55-104)  
 (49-155)  
 (78-121)  
 (78-129)  
 (77-124)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits

2B - FORM II VOA-2  
 WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON

Contract: 8E-00302

Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_

SDG No.: 200-2520

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (TCA) #	VDMC13 (DCZ) #	OTHER	TOT OUT
01	VBLKJI	103	113	101	105	100	111		0
02	MCSB17D-W-3242 2DL	100	107	96	98	94	103		0
03	MCSB17D-W-3242 2	102	112	99	142 *	95	108		1
04	VIBLKJS	97	108	99	95	91	104		0
05	MCQCTB-W-32429	94	105	97	97	90	107		0
06	VHBLK01	98	109	97	100	92	105		0

QC LIMITS

VDMC8 (DPA) = 1,2-Dichloropropane-d6	(79-124)
VDMC9 (TOL) = Toluene-d8	(77-121)
VDMC10 (TDP) = trans-1,3-Dichloropropene-d4	(73-121)
VDMC11 (HEX) = 2-Hexanone-d5	(28-135)
VDMC12 (TCA) = 1,1,2,2-Tetrachloroethane-d2	(73-125)
VDMC13 (DCZ) = 1,2-Dichlorobenzene-d4	(80-131)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJI

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Lab File ID: JBYC03.D Lab Sample ID: MB 200-9931/3  
 Instrument ID: J.i  
 Matrix: (SOIL/SED/WATER) Water Date Analyzed: 11/19/2010  
 Level: (TRACE or LOW/MED) TRACE Time Analyzed: 1823  
 GC Column: DB-624 ID: 0.20 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MCSB17D-W-32 422DL	200-2520-1	JBYC14.D	2314
02	MCSB17D-W-32 422	200-2520-1	JBYC15.D	2340
03	VIBLKJS	VIBLK 200-9931/16	JBYC16.D	0006
04	MCQCTB-W-324 29	200-2520-2	JBYC17.D	0032
05	VHBLK01	200-2520-3	JBYC18.D	0058

COMMENTS: \_\_\_\_\_

5A - FORM V VOA  
VOLATILE ORGANICS INSTRUMENT  
PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJF

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
Lab File Id: JBY01.D BFB Injection Date: 11/17/2010  
Instrument Id: J.i BFB Injection Time: 1320  
GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.5
75	30.0 - 80.0% of mass 95	50.3
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.7 ( 0.8)1
174	50.0 - 120% of mass 95	89.3
175	5.0 - 9.0% of mass 174	6.9 ( 7.7)1
176	95.0 - 101% of mass 174	85.4 ( 95.7)1
177	5.0 - 9.0% of mass 176	5.7 ( 6.6)2

1 - Value is %mass 174

2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0.5JF	IC 200-9773/4	JBY04.D	11/17/2010	1444
02	VSTD001JF	IC 200-9773/5	JBY05.D	11/17/2010	1510
03	VSTD005JF	ICIS 200-9773/6	JBY06.D	11/17/2010	1536
04	VSTD010JF	IC 200-9773/7	JBY07.D	11/17/2010	1601
05	VSTD020JF	IC 200-9773/8	JBY08.D	11/17/2010	1627



5A - FORM V VOA  
VOLATILE ORGANICS INSTRUMENT  
PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJI

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
Lab File Id: JBYC01.D BFB Injection Date: 11/19/2010  
Instrument Id: J.i BFB Injection Time: 1738  
GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.4
75	30.0 - 80.0% of mass 95	51.5
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.4 ( 0.5)1
174	50.0 - 120% of mass 95	95.0
175	5.0 - 9.0% of mass 174	7.4 ( 7.8)1
176	95.0 - 101% of mass 174	91.3 ( 96.1)1
177	5.0 - 9.0% of mass 176	6.2 ( 6.8)2

1 - Value is %mass 174                      2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005JI	CCVIS 200-9931/2	JBYC02.D	11/19/2010	1758
02	VBLKJI	MB 200-9931/3	JBYC03.D	11/19/2010	1823
03	MCSB17D-W-32422DL	200-2520-1	JBYC14.D	11/19/2010	2314
04	MCSB17D-W-32422	200-2520-1	JBYC15.D	11/19/2010	2340
05	VIBLKJS	VIBLK 200-9931/16	JBYC16.D	11/20/2010	0006
06	MCQCTB-W-32429	200-2520-2	JBYC17.D	11/20/2010	0032
07	VHBLK01	200-2520-3	JBYC18.D	11/20/2010	0058
08	VSTD005IJ	CCVC 200-9931/21	JBYC21.D	11/20/2010	0215

8A - FORM VIII VOA  
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 GC Column: DB-624 ID: 0.20 (mm) Init. Calib. Date(s): 11/17/2010 11/17/2010  
 EPA Sample No. (VSTD#####): VSTD005JI Date Analyzed: 11/19/2010  
 Lab File ID (Standard): JBYC02.D Time Analyzed: 1758  
 Instrument ID: J.i Heated Purge: (Y/N) N

	IS1 (CBZ)		IS2 (DFB)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	271159	8.95	323237	5.58	136228	11.78
UPPER LIMIT	379623	9.28	452532	5.91	190719	12.11
LOWER LIMIT	162695	8.62	193942	5.25	81737	11.45
EPA SAMPLE NO.						
01 VBLKJI	227903	8.95	281866	5.58	109400	11.79
02 MCSB17D-W-3242 2DL	228857	8.95	285594	5.59	111802	11.79
03 MCSB17D-W-3242 2	232733	8.95	287833	5.58	111028	11.79
04 VIBLKJS	228439	8.95	279217	5.59	109384	11.79
05 MCQCTB-W-32429	228405	8.95	275189	5.58	108363	11.79
06 VHBLK01	234201	8.95	287991	5.59	110689	11.79

IS1 (CBZ) = Chlorobenzene-d5  
 IS2 (DFB) = 1,4-Difluorobenzene  
 IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 140% (Trace Volatiles) of internal standard area  
 AREA LOWER LIMIT = 60% (Trace Volatiles) of internal standard area  
 RT UPPER LIMIT = + 0.33 (Trace Volatiles) minutes of internal standard RT  
 RT LOWER LIMIT = - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside contract required QC limits with an asterisk.

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

EPA SAMPLE NO.

MCQCTB-W-32429

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2520-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC17.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 11/16/2010  
 % Moisture: not dec. Date Analyzed: 11/20/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	2.4	J B
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.048	J
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCQCTB-W-32429

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2520-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC17.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 11/16/2010  
 % Moisture: not dec. Date Analyzed: 11/20/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.14	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.091	J
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCQCTB-W-32429

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2520-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC17.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 11/16/2010  
 % Moisture: not dec. Date Analyzed: 11/20/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	3.1	B X J
02	E9667961	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

MCSB17D-W-32422

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2520-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC15.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 11/16/2010  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 11/19/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 5.5  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	2.8	U
74-87-3	Chloromethane	2.8	U
75-01-4	Vinyl chloride	2.8	U
74-83-9	Bromomethane	2.8	U
75-00-3	Chloroethane	2.8	U
75-69-4	Trichlorofluoromethane	2.8	U
75-35-4	1,1-Dichloroethene	2.8	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.8	U
67-64-1	Acetone	28	U
75-15-0	Carbon disulfide	2.8	U
79-20-9	Methyl acetate	2.8	U
75-09-2	Methylene Chloride	2.8	U
156-60-5	trans-1,2-Dichloroethene	2.8	U
1634-04-4	Methyl tert-butyl ether	2.8	U
75-34-3	1,1-Dichloroethane	2.8	U
156-59-2	cis-1,2-Dichloroethene	2.8	U
78-93-3	2-Butanone	28	U
74-97-5	Bromochloromethane	2.8	U
67-66-3	Chloroform	27	
71-55-6	1,1,1-Trichloroethane	2.8	U
110-82-7	Cyclohexane	2.8	U
56-23-5	Carbon tetrachloride	1100	E
71-43-2	Benzene	2.8	U
107-06-2	1,2-Dichloroethane	1.6	J

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCSB17D-W-32422

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2520-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC15.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 11/16/2010  
 % Moisture: not dec. Date Analyzed: 11/19/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 5.5  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	2.8	U
108-87-2	Methylcyclohexane	2.8	U
78-87-5	1,2-Dichloropropane	2.8	U
75-27-4	Bromodichloromethane	2.8	U
10061-01-5	cis-1,3-Dichloropropene	2.8	U
108-10-1	4-Methyl-2-pentanone	28	U
108-88-3	Toluene	2.8	U
10061-02-6	trans-1,3-Dichloropropene	2.8	U
79-00-5	1,1,2-Trichloroethane	2.8	U
127-18-4	Tetrachloroethene	2.8	U
591-78-6	2-Hexanone	28	U
124-48-1	Dibromochloromethane	2.8	U
106-93-4	1,2-Dibromoethane	2.8	U
108-90-7	Chlorobenzene	2.8	U
100-41-4	Ethylbenzene	2.8	U
95-47-6	o-Xylene	2.8	U
179601-23-1	m,p-Xylene	2.8	U
100-42-5	Styrene	2.8	U
75-25-2	Bromoform	2.8	U
98-82-8	Isopropylbenzene	2.8	U
79-34-5	1,1,2,2-Tetrachloroethane	2.8	U
541-73-1	1,3-Dichlorobenzene	2.8	U
106-46-7	1,4-Dichlorobenzene	2.8	U
95-50-1	1,2-Dichlorobenzene	2.8	U
96-12-8	1,2-Dibromo-3-Chloropropane	2.8	U
120-82-1	1,2,4-Trichlorobenzene	2.8	U
87-61-6	1,2,3-Trichlorobenzene	2.8	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCSB17D-W-32422

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2520-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC15.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 11/16/2010  
 % Moisture: not dec. Date Analyzed: 11/19/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 5.5  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	18	B X J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.



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

EPA SAMPLE NO.  
MCSB17D-W-32422DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2520-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC14.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 11/16/2010  
 % Moisture: not dec. Date Analyzed: 11/19/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 67.7  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	34	U
74-87-3	Chloromethane	34	U
75-01-4	Vinyl chloride	34	U
74-83-9	Bromomethane	34	U
75-00-3	Chloroethane	34	U
75-69-4	Trichlorofluoromethane	34	U
75-35-4	1,1-Dichloroethene	34	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	34	U
67-64-1	Acetone	340	U
75-15-0	Carbon disulfide	34	U
79-20-9	Methyl acetate	34	U
75-09-2	Methylene Chloride	34	U
156-60-5	trans-1,2-Dichloroethene	34	U
1634-04-4	Methyl tert-butyl ether	34	U
75-34-3	1,1-Dichloroethane	34	U
156-59-2	cis-1,2-Dichloroethene	34	U
78-93-3	2-Butanone	340	U
74-97-5	Bromochloromethane	34	U
67-66-3	Chloroform	32	J D
71-55-6	1,1,1-Trichloroethane	34	U
110-82-7	Cyclohexane	34	U
56-23-5	Carbon tetrachloride	930	D
71-43-2	Benzene	34	U
107-06-2	1,2-Dichloroethane	34	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.  
MCSB17D-W-32422DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2520-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC14.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 11/16/2010  
 % Moisture: not dec. Date Analyzed: 11/19/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 67.7  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	34	U
108-87-2	Methylcyclohexane	34	U
78-87-5	1,2-Dichloropropane	34	U
75-27-4	Bromodichloromethane	34	U
10061-01-5	cis-1,3-Dichloropropene	34	U
108-10-1	4-Methyl-2-pentanone	340	U
108-88-3	Toluene	34	U
10061-02-6	trans-1,3-Dichloropropene	34	U
79-00-5	1,1,2-Trichloroethane	34	U
127-18-4	Tetrachloroethene	34	U
591-78-6	2-Hexanone	340	U
124-48-1	Dibromochloromethane	34	U
106-93-4	1,2-Dibromoethane	34	U
108-90-7	Chlorobenzene	34	U
100-41-4	Ethylbenzene	34	U
95-47-6	o-Xylene	34	U
179601-23-1	m,p-Xylene	34	U
100-42-5	Styrene	34	U
75-25-2	Bromoform	34	U
98-82-8	Isopropylbenzene	34	U
79-34-5	1,1,2,2-Tetrachloroethane	34	U
541-73-1	1,3-Dichlorobenzene	34	U
106-46-7	1,4-Dichlorobenzene	34	U
95-50-1	1,2-Dichlorobenzene	34	U
96-12-8	1,2-Dibromo-3-Chloropropane	34	U
120-82-1	1,2,4-Trichlorobenzene	34	U
87-61-6	1,2,3-Trichlorobenzene	34	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
 MCSB17D-W-32422DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2520-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC14.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 11/16/2010  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 11/19/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 67.7  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	210	B X D J
02	E9667961	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2520-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC18.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 11/16/2010  
 % Moisture: not dec. Date Analyzed: 11/20/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	0.99	J B
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2520-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC18.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 11/16/2010  
 % Moisture: not dec. Date Analyzed: 11/20/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2520-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC18.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 11/16/2010  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 11/20/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	3.1	B X J
02	E9667961	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

6A - FORM VI VOA-1  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Instrument ID: J.i Calibration Date(s): 11/17/2010 11/17/2010  
 Heated Purge: (Y/N) N Calibration Time(s): 1444 1627  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
Dichlorodifluoromethane	0.458	0.532	0.503	0.465	0.451	0.482	7.2
Chloromethane	0.392	0.410	0.405	0.359	0.334	0.380	8.6
Vinyl chloride	0.378	0.402	0.394	0.357	0.342	0.375	6.8
Bromomethane	0.248	0.274	0.272	0.256	0.258	0.262	4.3
Chloroethane	0.224	0.241	0.247	0.222	0.223	0.231	5.0
Trichlorofluoromethane	0.569	0.608	0.607	0.562	0.571	0.583	3.8
1,1-Dichloroethene	0.248	0.304	0.297	0.276	0.285	0.282	7.8
1,1,2-Trichloro- 1,2,2-trifluoroethane	0.280	0.353	0.350	0.317	0.324	0.325	9.1
Acetone	0.021	0.020	0.018	0.015	0.014	0.018	17.2
Carbon disulfide	0.746	0.783	0.747	0.691	0.684	0.730	5.7
Methyl acetate	0.052	0.053	0.044	0.040	0.040	0.046	14.0
Methylene Chloride	0.221	0.245	0.222	0.205	0.202	0.219	7.8
trans-1,2-Dichloroethene	0.270	0.281	0.279	0.261	0.259	0.270	3.8
Methyl tert-butyl ether	0.310	0.349	0.344	0.318	0.326	0.329	5.1
1,1-Dichloroethane	0.419	0.467	0.438	0.425	0.412	0.432	5.1
cis-1,2-Dichloroethene	0.270	0.274	0.284	0.269	0.260	0.271	3.1
2-Butanone	0.016	0.022	0.025	0.023	0.023	0.022	14.8
Bromochloromethane	0.077	0.103	0.092	0.091	0.095	0.091	10.4
Chloroform	0.391	0.466	0.449	0.425	0.421	0.431	6.7
1,1,1-Trichloroethane	0.525	0.590	0.561	0.534	0.514	0.545	5.6
Cyclohexane	0.529	0.578	0.541	0.512	0.487	0.530	6.4
Carbon tetrachloride	0.479	0.527	0.524	0.498	0.477	0.501	4.8
Benzene	1.245	1.329	1.270	1.218	1.211	1.254	3.8
1,2-Dichloroethane	0.203	0.205	0.209	0.201	0.197	0.203	2.2
Trichloroethene	0.313	0.375	0.353	0.331	0.326	0.340	7.2
Methylcyclohexane	0.385	0.429	0.431	0.399	0.385	0.406	5.6

Report 1,4-Dioxane for Low-Medium VOA analysis only

6B - FORM VI VOA-2  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Instrument ID: J.i Calibration Date(s): 11/17/2010 11/17/2010  
 Heated Purge: (Y/N) N Calibration Time(s): 1444 1627  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
LAB FILE ID: _____	RRF0.5 = <u>JBY04.D</u>	RRF1.0 = <u>JBY05.D</u>					
RRF5.0 = <u>JBY06.D</u>	RRF10 = <u>JBY07.D</u>	RRF20 = <u>JBY08.D</u>					
1,2-Dichloropropane	0.264	0.257	0.266	0.238	0.229	0.251	6.6
Bromodichloromethane	0.304	0.321	0.343	0.318	0.311	0.319	4.6
cis-1,3-Dichloropropene	0.376	0.400	0.404	0.359	0.354	0.379	6.0
4-Methyl-2-pentanone	0.072	0.083	0.079	0.074	0.075	0.077	5.6
Toluene	1.324	1.522	1.493	1.474	1.492	1.461	5.4
trans-1,3-Dichloropropene	0.223	0.304	0.292	0.281	0.290	0.278	11.3
1,1,2-Trichloroethane	0.155	0.153	0.148	0.135	0.138	0.146	6.0
Tetrachloroethene	0.300	0.337	0.334	0.317	0.320	0.322	4.6
2-Hexanone	0.040	0.053	0.052	0.049	0.052	0.049	10.9
Dibromochloromethane	0.178	0.194	0.206	0.204	0.209	0.198	6.5
1,2-Dibromoethane	0.125	0.138	0.144	0.136	0.136	0.136	5.1
Chlorobenzene	0.827	0.926	0.938	0.896	0.896	0.897	4.8
Ethylbenzene	1.502	1.665	1.735	1.729	1.772	1.681	6.4
o-Xylene	0.580	0.646	0.646	0.667	0.685	0.645	6.2
m,p-Xylene	0.647	0.706	0.717	0.722	0.724	0.703	4.6
Styrene	0.813	0.919	1.019	1.045	1.086	0.976	11.3
Bromoform	0.151	0.174	0.191	0.193	0.193	0.180	10.2
Isopropylbenzene	1.524	1.732	1.845	1.881	1.938	1.784	9.2
1,1,2,2-Tetrachloroethane	0.140	0.133	0.143	0.137	0.138	0.138	2.7
1,3-Dichlorobenzene	1.353	1.436	1.495	1.429	1.416	1.425	3.6
1,4-Dichlorobenzene	1.394	1.400	1.459	1.403	1.404	1.412	1.9
1,2-Dichlorobenzene	0.970	1.137	1.171	1.150	1.144	1.114	7.3
1,2-Dibromo-3-Chloropropane	0.044	0.045	0.040	0.036	0.037	0.040	9.8
1,2,4-Trichlorobenzene	0.661	0.719	0.752	0.732	0.729	0.718	4.8
1,2,3-Trichlorobenzene	0.439	0.523	0.514	0.506	0.501	0.496	6.7



6C - FORM VI VOA-3  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Instrument ID: J.i Calibration Date(s): 11/17/2010 11/17/2010  
 Heated Purge: (Y/N) N Calibration Time(s): 1444 1627  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

LAB FILE ID: _____	RRF0.5 = <u>JBY04.D</u>	RRF1.0 = <u>JBY05.D</u>
RRF5.0 = <u>JBY06.D</u>	RRF10 = <u>JBY07.D</u>	RRF20 = <u>JBY08.D</u>

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
Vinyl Chloride-d3	0.337	0.362	0.347	0.317	0.304	0.333	6.9
Chloroethane-d5	0.312	0.329	0.316	0.289	0.282	0.305	6.4
1,1-Dichloroethene-d2	0.545	0.606	0.602	0.568	0.574	0.579	4.4
2-Butanone-d5	0.023	0.024	0.025	0.022	0.023	0.023	4.3
Chloroform-d	0.450	0.472	0.487	0.464	0.453	0.465	3.3
1,2-Dichloroethane-d4	0.175	0.177	0.171	0.160	0.160	0.169	4.7
Benzene-d6	1.225	1.265	1.255	1.183	1.161	1.218	3.7
1,2-Dichloropropane-d6	0.313	0.310	0.352	0.328	0.310	0.322	5.6
Toluene-d8	1.128	1.296	1.302	1.259	1.278	1.252	5.7
trans-1,3-Dichloropropene-d4	0.229	0.255	0.254	0.263	0.259	0.252	5.4
2-Hexanone-d5	0.019	0.023	0.025	0.024	0.025	0.023	10.1
1,1,2,2-Tetrachloroethane-d2	0.137	0.127	0.141	0.141	0.139	0.137	4.4
1,2-Dichlorobenzene-d4	0.687	0.743	0.747	0.698	0.719	0.719	3.7

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Instrument ID: J.i Calibration Date: 11/19/2010 Time: 1758  
 Lab File Id: JBVC02.D Init. Calib. Date(s): 11/17/2010 11/17/2010  
 EPA Sample No. (VSTD####): VSTD005JI Init. Calib. Time(s): 1444 1627  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20(mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.482	0.505	0.010	4.9	40.0
Chloromethane	0.380	0.378	0.010	-0.5	40.0
Vinyl chloride	0.375	0.355	0.010	-5.3	30.0
Bromomethane	0.262	0.269	0.100	2.8	30.0
Chloroethane	0.231	0.215	0.010	-7.2	40.0
Trichlorofluoromethane	0.583	0.553	0.010	-5.2	40.0
1,1-Dichloroethene	0.282	0.280	0.100	-0.8	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.325	0.328	0.010	1.1	40.0
Acetone	0.018	0.013	0.010	-24.1	40.0
Carbon disulfide	0.730	0.688	0.010	-5.7	40.0
Methyl acetate	0.046	0.038	0.010	-16.2	40.0
Methylene Chloride	0.219	0.214	0.010	-2.3	40.0
trans-1,2-Dichloroethene	0.270	0.264	0.010	-2.2	40.0
Methyl tert-butyl ether	0.329	0.290	0.010	-12.0	40.0
1,1-Dichloroethane	0.432	0.416	0.200	-3.8	30.0
cis-1,2-Dichloroethene	0.271	0.266	0.010	-2.1	40.0
2-Butanone	0.022	0.020	0.010	-8.7	40.0
Bromochloromethane	0.091	0.095	0.050	4.0	30.0
Chloroform	0.431	0.421	0.200	-2.3	30.0
1,1,1-Trichloroethane	0.545	0.546	0.100	0.2	30.0
Cyclohexane	0.530	0.526	0.010	-0.6	40.0
Carbon tetrachloride	0.501	0.508	0.100	1.3	30.0
Benzene	1.254	1.277	0.400	1.8	30.0
1,2-Dichloroethane	0.203	0.179	0.100	-11.8	30.0
Trichloroethene	0.340	0.354	0.300	4.1	30.0
Methylcyclohexane	0.406	0.406	0.010	0.1	40.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Instrument ID: J.i Calibration Date: 11/19/2010 Time: 1758  
 Lab File Id: JBYC02.D Init. Calib. Date(s): 11/17/2010 11/17/2010  
 EPA Sample No. (VSTD####): VSTD005JI Init. Calib. Time(s): 1444 1627  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20(mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.251	0.240	0.010	-4.3	40.0
Bromodichloromethane	0.319	0.317	0.200	-0.7	30.0
cis-1,3-Dichloropropene	0.379	0.334	0.200	-11.9	30.0
4-Methyl-2-pentanone	0.077	0.066	0.010	-13.3	40.0
Toluene	1.461	1.463	0.400	0.1	30.0
trans-1,3-Dichloropropene	0.278	0.268	0.100	-3.5	30.0
1,1,2-Trichloroethane	0.146	0.132	0.100	-9.1	30.0
Tetrachloroethene	0.322	0.336	0.100	4.5	30.0
2-Hexanone	0.049	0.043	0.010	-12.2	40.0
Dibromochloromethane	0.198	0.192	0.100	-3.3	30.0
1,2-Dibromoethane	0.136	0.128	0.010	-5.8	40.0
Chlorobenzene	0.897	0.918	0.500	2.3	30.0
Ethylbenzene	1.681	1.694	0.100	0.8	30.0
o-Xylene	0.645	0.645	0.300	0.1	30.0
m,p-Xylene	0.703	0.713	0.300	1.4	30.0
Styrene	0.976	0.965	0.300	-1.2	30.0
Bromoform	0.180	0.169	0.050	-6.2	30.0
Isopropylbenzene	1.784	1.843	0.010	3.3	40.0
1,1,2,2-Tetrachloroethane	0.138	0.126	0.100	-8.6	30.0
1,3-Dichlorobenzene	1.425	1.480	0.400	3.8	30.0
1,4-Dichlorobenzene	1.412	1.422	0.400	0.7	30.0
1,2-Dichlorobenzene	1.114	1.141	0.400	2.4	30.0
1,2-Dibromo-3-Chloropropane	0.040	0.032	0.010	-20.1	40.0
1,2,4-Trichlorobenzene	0.718	0.734	0.200	2.3	30.0
1,2,3-Trichlorobenzene	0.496	0.495	0.200	-0.2	30.0

7C - FORM VII VOA-3  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Instrument ID: J.i Calibration Date: 11/19/2010 Time: 1758  
 Lab File Id: JBYC02.D Init. Calib. Date(s): 11/17/2010 11/17/2010  
 EPA Sample No. (VSTD####): VSTD005JI Init. Calib. Time(s): 1444 1627  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF <sub>5.0</sub>	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.333	0.328	0.010	-1.5	30.0
Chloroethane-d5	0.305	0.286	0.010	-6.2	40.0
1,1-Dichloroethene-d2	0.579	0.564	0.010	-2.7	30.0
2-Butanone-d5	0.023	0.019	0.010	-16.8	40.0
Chloroform-d	0.465	0.461	0.010	-1.0	30.0
1,2-Dichloroethane-d4	0.169	0.151	0.010	-10.1	30.0
Benzene-d6	1.218	1.220	0.010	0.2	30.0
1,2-Dichloropropane-d6	0.322	0.331	0.010	2.8	40.0
Toluene-d8	1.252	1.280	0.010	2.2	30.0
trans-1,3-Dichloropropene-d4	0.252	0.248	0.010	-1.7	30.0
2-Hexanone-d5	0.023	0.021	0.010	-10.2	40.0
1,1,2,2-Tetrachloroethane-d2	0.137	0.127	0.010	-6.9	30.0
1,2-Dichlorobenzene-d4	0.719	0.723	0.010	0.6	30.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Instrument ID: J.i Calibration Date: 11/20/2010 Time: 0215  
 Lab File Id: JBYC21.D Init. Calib. Date(s): 11/17/2010 11/17/2010  
 EPA Sample No. (VSTD####): VSTD005IJ Init. Calib. Time(s): 1444 1627  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.482	0.479	0.010	-0.6	50.0
Chloromethane	0.380	0.347	0.010	-8.8	50.0
Vinyl chloride	0.375	0.353	0.010	-5.7	50.0
Bromomethane	0.262	0.244	0.010	-6.6	50.0
Chloroethane	0.231	0.233	0.010	0.5	50.0
Trichlorofluoromethane	0.583	0.588	0.010	0.8	50.0
1,1-Dichloroethene	0.282	0.292	0.010	3.6	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.325	0.321	0.010	-1.0	50.0
Acetone	0.018	0.014	0.010	-23.1	50.0
Carbon disulfide	0.730	0.693	0.010	-5.0	50.0
Methyl acetate	0.046	0.037	0.010	-18.9	50.0
Methylene Chloride	0.219	0.214	0.010	-2.2	50.0
trans-1,2-Dichloroethene	0.270	0.268	0.010	-0.6	50.0
Methyl tert-butyl ether	0.329	0.304	0.010	-7.8	50.0
1,1-Dichloroethane	0.432	0.419	0.010	-3.1	50.0
cis-1,2-Dichloroethene	0.271	0.268	0.010	-1.2	50.0
2-Butanone	0.022	0.021	0.010	-2.5	50.0
Bromochloromethane	0.091	0.094	0.010	2.7	50.0
Chloroform	0.431	0.428	0.010	-0.5	50.0
1,1,1-Trichloroethane	0.545	0.551	0.010	1.2	50.0
Cyclohexane	0.530	0.508	0.010	-4.0	50.0
Carbon tetrachloride	0.501	0.504	0.010	0.5	50.0
Benzene	1.254	1.253	0.010	-0.1	50.0
1,2-Dichloroethane	0.203	0.186	0.010	-8.2	50.0
Trichloroethene	0.340	0.342	0.010	0.6	50.0
Methylcyclohexane	0.406	0.398	0.010	-2.0	50.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Instrument ID: J.i Calibration Date: 11/20/2010 Time: 0215  
 Lab File Id: JBYC21.D Init. Calib. Date(s): 11/17/2010 11/17/2010  
 EPA Sample No. (VSTD####): VSTD005IJ Init. Calib. Time(s): 1444 1627  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20(mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.251	0.232	0.010	-7.3	50.0
Bromodichloromethane	0.319	0.304	0.010	-4.7	50.0
cis-1,3-Dichloropropene	0.379	0.351	0.010	-7.2	50.0
4-Methyl-2-pentanone	0.077	0.070	0.010	-8.3	50.0
Toluene	1.461	1.456	0.010	-0.3	50.0
trans-1,3-Dichloropropene	0.278	0.266	0.010	-4.4	50.0
1,1,2-Trichloroethane	0.146	0.143	0.010	-1.5	50.0
Tetrachloroethene	0.322	0.343	0.010	6.5	50.0
2-Hexanone	0.049	0.045	0.010	-8.5	50.0
Dibromochloromethane	0.198	0.197	0.010	-0.6	50.0
1,2-Dibromoethane	0.136	0.135	0.010	-0.6	50.0
Chlorobenzene	0.897	0.925	0.010	3.1	50.0
Ethylbenzene	1.681	1.709	0.010	1.7	50.0
o-Xylene	0.645	0.664	0.010	3.0	50.0
m,p-Xylene	0.703	0.709	0.010	0.8	50.0
Styrene	0.976	0.984	0.010	0.7	50.0
Bromoform	0.180	0.169	0.010	-6.4	50.0
Isopropylbenzene	1.784	1.832	0.010	2.7	50.0
1,1,2,2-Tetrachloroethane	0.138	0.133	0.010	-3.6	50.0
1,3-Dichlorobenzene	1.425	1.448	0.010	1.6	50.0
1,4-Dichlorobenzene	1.412	1.412	0.010	0.0	50.0
1,2-Dichlorobenzene	1.114	1.144	0.010	2.7	50.0
1,2-Dibromo-3-Chloropropane	0.040	0.035	0.010	-12.9	50.0
1,2,4-Trichlorobenzene	0.718	0.671	0.010	-6.5	50.0
1,2,3-Trichlorobenzene	0.496	0.463	0.010	-6.7	50.0

7C - FORM VII VOA-3  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Instrument ID: J.i Calibration Date: 11/20/2010 Time: 0215  
 Lab File Id: JBYC21.D Init. Calib. Date(s): 11/17/2010 11/17/2010  
 EPA Sample No. (VSTD####): VSTD005IJ Init. Calib. Time(s): 1444 1627  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20(mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.333	0.317	0.010	-5.0	50.0
Chloroethane-d5	0.305	0.294	0.010	-3.9	50.0
1,1-Dichloroethene-d2	0.579	0.562	0.010	-3.0	50.0
2-Butanone-d5	0.023	0.021	0.010	-10.5	50.0
Chloroform-d	0.465	0.473	0.010	1.7	50.0
1,2-Dichloroethane-d4	0.169	0.162	0.010	-4.0	50.0
Benzene-d6	1.218	1.210	0.010	-0.7	50.0
1,2-Dichloropropane-d6	0.322	0.330	0.010	2.5	50.0
Toluene-d8	1.252	1.277	0.010	1.9	50.0
trans-1,3-Dichloropropene-d4	0.252	0.238	0.010	-5.7	50.0
2-Hexanone-d5	0.023	0.022	0.010	-4.6	50.0
1,1,2,2-Tetrachloroethane-d2	0.137	0.133	0.010	-2.8	50.0
1,2-Dichlorobenzene-d4	0.719	0.705	0.010	-1.9	50.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

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

EPA SAMPLE NO.

VBLKJI

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-9931/3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC03.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 11/19/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	2.2	J
75-15-0	Carbon disulfide	0.13	J
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

SOM01.2 (4/2007)



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

EPA SAMPLE NO.

VBLKJI

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-9931/3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC03.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 11/19/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.12	J
87-61-6	1,2,3-Trichlorobenzene	0.21	J

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKJI

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-9931/3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC03.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 11/19/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	3.4	X J
02	E9667961	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

VIBLKJS

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-9931/16  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC16.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 11/20/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.10	J
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VIBLKJS

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-9931/16  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC16.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 11/20/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VIBLKJS

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2520  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-9931/16  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JBYC16.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 11/20/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	Unknown	6.92	3.2	B X J
02	E9667961 Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

## ANALYTICAL REPORT

Job Number: 200-2822-1

SDG Number: 200-2822

Job Description: Montgomery City (200-2822)

Contract Number: 8E-00302

For:

Argonne National Laboratory

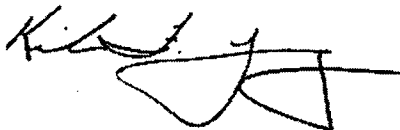
9700 South Cass Avenue

Building 203

Office B-149

Argonne, IL 60439

Attention: Mr. Clyde Dennis



Approved for release.  
Kirk F Young  
Project Manager I  
12/13/2010 10:48 AM

---

Kirk F Young

Project Manager I

kirk.young@testamericainc.com

12/13/2010

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

TestAmerica Laboratories, Inc.

TestAmerica Burlington 30 Community Drive, Suite 11, South Burlington, VT 05403

Tel (802) 660-1990 Fax (802) 660-1919 [www.testamericainc.com](http://www.testamericainc.com)



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## CASE NARRATIVE

**Client: Argonne National Laboratory**

**Project: Montgomery City (200-2822)**

**Report Number: 200-2822-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### **Receipt**

The samples were received on 12/07/2010. 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, as received, were not acid preserved. On that basis, the laboratory did provide for the analytical work to be performed within seven days of sample collection.

### **SOM01.2 Volatile Organics (Trace Level Water)**

A storage blank was prepared for volatile organics analysis, and stored in association with the storage of the samples. That storage blank, identified as VHBLK01, was carried through the holding period with the samples, and analyzed.

One of the two vials for sample MCSB48D-W-32502 froze in transit, and the vial was compromised. The laboratory did prepare two test volumes from the remaining vial. As a result, the primary analysis of sample MCSB48D-W-32502 was performed at a 1.1-fold dilution.

Sample MCSB48D-W-32509 was analyzed at a dilution based on the results of preliminary screening. An additional, more concentrated analysis was performed on the sample in order to provide for a lower reporting limit for those analytes that were not identified in the primary analysis. Both sets of results for the analysis of sample MCSB48D-W-32509 are included in this submittal.

Each of the analyses associated with the sample set exhibited an acceptable internal standard performance. There was an acceptable recovery of each deuterated monitoring compound (DMC) in the analysis of the method blank and instrument blank associated with the analytical work, and in the analysis of the storage blank associated with the sample set. The analysis of the samples in this sample set did meet the technical acceptance criteria specific to DMC recoveries, although not all DMC recoveries were within the control range in each analysis. The technical acceptance criteria does provide for the recovery of up to three DMCs to fall outside of the control range in the analysis of field samples. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. Trace concentrations of acetone and carbon disulfide were identified in the analysis of the method blank associated with the analytical work. The concentration of each compound in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant method blank analysis.

Trace concentrations of acetone, chloroform, and carbon tetrachloride were identified in the analysis of the instrument blank associated with the analytical work. The concentration of each compound in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant instrument blank analysis. The analysis of the storage blank associated with the sample set was free of analyte contamination. Present in the method blank, instrument blank, and storage blank analyses was a non-target constituent that represents a compound that is related to the DMC formulation. The fact that the presence of this compound is not within the laboratory's control is at issue. The derived results for that compound have been qualified with an "X" qualifier to reflect the source of the contamination.

The responses for each of the target analytes met the relative standard deviation criterion in the initial calibration. The response for each target analyte met the percent difference criterion in the continuing calibration check acquisition. The response for each target analyte met the 50.0 percent difference criterion in the closing calibration check acquisition.

The primary quantitation mass for methylcyclohexane that is specified in the Statement of Work is mass 83. The laboratory did identify a contribution to mass 83 from 1,2-dichloropropane-d<sub>6</sub>, one of the deuterated monitoring compounds (DMCs). The laboratory did change the primary quantitation mass assignment to mass 55 for the quantification of methylcyclohexane.

Manual integration was employed in deriving certain of the analytical results. The values that have been derived from manual integration are qualified on the quantitation reports. Extracted ion current profiles for each manual integration are included in the data package, and further documented in the Sample Preparation section of this submittal.

## DATA REPORTING QUALIFIERS

Client: Argonne National Laboratory

Job Number: 200-2822-1

Sdg Number: 200-2822

<u>Lab Section</u>	<u>Qualifier</u>	<u>Description</u>
GC/MS VOA		
	U	Analyzed for but not detected.
	E	Compound concentration exceeds the upper level of the calibration range of the instrument for that specific analysis.
	J	Indicates an Estimated Value for TICs
	J	Indicates an estimated value.
	D	Sample was analyzed at a higher dilution factor.
	X	See case narrative notes for explanation of the 'X' flag
	*	Surrogate exceeds the control limit
	B	The analyte was found in an associated blank, as well as in the sample.
	N	This flag indicates the presumptive evidence of a compound.







# **Shipping and Receiving Documents**

**1 From**

Sender's FedEx Account Number: 0604-0352-0

Sender's Name: B SEDIVY Phone: 402-424-5144

Company: ALCONINE NATIONAL LAB

Address: 4101 PROGRESSIVE AVE #1C

City: LINCOLN State: NE ZIP: 68514

2 Your Internal Billing Reference: 8AT27-SS 1C7

3 To Recipient's Name: Kate Young Phone: 402-400-1940

Company: TECHNION

Address: 2500 S. 17th St

City: Lincoln State: NE ZIP: 68502

Dep't./Room/Store/Room: Dep't 400

Address: 2500 S. 17th St

City: Lincoln State: NE ZIP: 68502



8736 0120 2763

**4a Express Package Service** \* To most locations.

FedEx Priority Overnight Next business morning, Friday through Saturday.  
 FedEx Standard Overnight Next business afternoon, Saturday Delivery NOT available.  
 FedEx 2Day Second business day, Thursday through Saturday.  
 FedEx Express Saver Third business day, Saturday Delivery NOT available.

**4b Express Freight Service** \*\* To most locations.

FedEx 1Day Freight Packages over 150 lbs.  
 FedEx 2Day Freight Second business day, Thursday through Saturday.  
 FedEx 3Day Freight Third business day, Saturday Delivery NOT available.

**5 Packaging** \* Declared value limit \$500.

FedEx Envelope\*  
 FedEx Pak\* Includes FedEx Small Pak and FedEx Cargo Pak.  
 FedEx Tube  
 FedEx Box  
 Other

**6 Special Handling and Delivery Signature Options**

**03 SATURDAY DELIVERY**

No Signature Required Package may be left without obtaining a signature for delivery.  
 Direct Signature Someone at recipient's address may sign for delivery. Fee applies.  
 Indirect Signature Recipient's address is not available. Someone at a neighboring address may sign for delivery. Fee applies.

Yes attached Shipper's Declaration not required. (S.S.'s Declaration not required)  
 No 04 Day Ice Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

**7 Payment Bill to:**

Sender Account No. & Statement  
 Recipient  
 Third Party  
 Credit Card  
 Cash/Check

Total Packages: 1 Total Weight: 3.06 lbs.

Your liability is limited to \$100 unless you declare a higher value. See the current FedEx Service Guide for details.

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## Login Sample Receipt Check List

Client: Argonne National Laboratory

Job Number: 200-2822-1  
SDG Number: 200-2822

**Login Number: 2822**  
**Creator: Marion, Greg T**  
**List Number: 1**

**List Source: TestAmerica Burlington**

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	NO SEAL NUMBERS
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6°C IR GUN ID 96/CF= -1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	One vial for sample MCSB42D-W-32502 was broken in transit.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	False	Samples were recieved in unpreserved vials.
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	

## Sample Login Acknowledgement

## Job 200-2822-1

<b>Client Job Description:</b>	Montgomery City (200-2822)	<b>Report To:</b>	Argonne National Laboratory
<b>Purchase Order #:</b>	8E-00302		Jorge Alvarado
<b>Work Order #:</b>	8E-00302		9700 South Cass Avenue
<b>Project Manager:</b>	Kirk F Young		Building 203
<b>Job Due Date:</b>	12/21/2010		Office B-149
<b>Job TAT:</b>	14 Days		Argonne, IL 60439
<b>Max Deliverable Level:</b>	IV	<b>Bill To:</b>	Argonne National Laboratory
			Accounts Payable
<b>Earliest Deliverable Due:</b>	12/21/2010		Chief Financial Offices
			9700 S. Cass Ave.
			Building 201
			Argonne, IL 60439

## Login 200-2822

<b>Sample Receipt:</b>	12/7/2010 11:10:00 AM	<b>Number of Coolers:</b>	1
<b>Method of Delivery:</b>	FedEx Priority Overnight	<b>Cooler Temperature(s) (C°):</b>	2.6

Lab Sample #	Client Sample ID	Date Sampled	Matrix	Rpt Basis	Dry / Wet **
Method	Method Description / Work Location				
200-2822-1	MCSB42D-W-32502	12/6/2010 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-2822-2	MCSB48D-W-32509	12/6/2010 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-2822-3	MCQCTB-W-32594	12/6/2010 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-2822-4	VHBLK01	12/7/2010 2:05:00 PM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet

\* Method on-hold

\*\* Wet/Dry indicates whether the reported results will be corrected for moisture content, based on sample Wet weight or Dry

## METHODOLOGY SUMMARY

Laboratory: TestAmerica Laboratories

Project No:

Location: South Burlington, Vermont

SDG No: 200-2822

### VOA

Volatile Organics Trace - USEPA CLP SOM01.2

2A - FORM II VOA-1  
 WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLKJU	97	98	83	100	100	106	108
02	MCQCTB-W-32594	102	99	87	93	102	106	109
03	MCSB42D-W-3250 2	104	106	87	207 *	108	111	111
04	MCSB48D-W-3250 9DL	100	99	84	184 *	106	104	109
05	MCSB48D-W-3250 9	96	96	81	170 *	154 *	107	108
06	VHBLK01	104	107	87	99	106	111	111

		QC LIMITS
VDMC1	(VCL) = Vinyl Chloride-d3	(65-131)
VDMC2	(CLA) = Chloroethane-d5	(71-131)
VDMC3	(DCE) = 1,1-Dichloroethene-d2	(55-104)
VDMC4	(BUT) = 2-Butanone-d5	(49-155)
VDMC5	(CLF) = Chloroform-d	(78-121)
VDMC6	(DCA) = 1,2-Dichloroethane-d4	(78-129)
VDMC7	(BEN) = Benzene-d6	(77-124)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits

2B - FORM II VOA-2  
 WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (TCA) #	VDMC13 (DCZ) #	OTHER	TOT OUT
01	VBLKJU	101	104	102	104	96	105		0
02	MCQCTB-W-32594	101	105	100	98	99	101		0
03	MCSB42D-W-3250 2	105	107	104	229 *	105	110		2
04	MCSB48D-W-3250 9DL	101	105	105	206 *	100	103		2
05	MCSB48D-W-3250 9	101	105	102	199 *	94	103		3
06	VHBLK01	104	109	101	104	94	107		0

		QC LIMITS
VDMC8	(DPA) = 1,2-Dichloropropane-d6	(79-124)
VDMC9	(TOL) = Toluene-d8	(77-121)
VDMC10	(TDP) = trans-1,3-Dichloropropene-d4	(73-121)
VDMC11	(HEX) = 2-Hexanone-d5	(28-135)
VDMC12	(TCA) = 1,1,2,2-Tetrachloroethane-d2	(73-125)
VDMC13	(DCZ) = 1,2-Dichlorobenzene-d4	(80-131)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJU

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Lab File ID: JCEA05.D Lab Sample ID: MB 200-10872/5  
 Instrument ID: J.i  
 Matrix: (SOIL/SED/WATER) Water Date Analyzed: 12/09/2010  
 Level: (TRACE or LOW/MED) TRACE Time Analyzed: 1031  
 GC Column: DB-624 ID: 0.20 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MCQCTB-W-325 94	200-2822-3	JCEA06.D	1108
02	MCSB42D-W-32 502	200-2822-1	JCEA07.D	1134
03	MCSB48D-W-32 509DL	200-2822-2	JCEA08.D	1159
04	MCSB48D-W-32 509	200-2822-2	JCEA09.D	1224
05	VIBLKJH	VIBLK 200-10872/10	JCEA10.D	1249
06	VHBLK01	200-2822-4	JCEA11.D	1314

COMMENTS:

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5A - FORM V VOA  
VOLATILE ORGANICS INSTRUMENT  
PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJT

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
Lab File Id: JCE01.D BFB Injection Date: 12/08/2010  
Instrument Id: J.i BFB Injection Time: 1348  
GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.6
75	30.0 - 80.0% of mass 95	49.7
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.2
173	Less than 2.0% of mass 174	0.9 ( 1.0)1
174	50.0 - 120% of mass 95	91.1
175	5.0 - 9.0% of mass 174	7.5 ( 8.2)1
176	95.0 - 101% of mass 174	88.5 ( 97.2)1
177	5.0 - 9.0% of mass 176	5.5 ( 6.2)2

1 - Value is %mass 174

2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0.5JT	IC 200-10823/3	JCE03.D	12/08/2010	1433
02	VSTD001JT	IC 200-10823/4	JCE04.D	12/08/2010	1458
03	VSTD005JT	ICIS 200-10823/5	JCE05.D	12/08/2010	1524
04	VSTD010JT	IC 200-10823/6	JCE06.D	12/08/2010	1549
05	VSTD020JT	IC 200-10823/7	JCE07.D	12/08/2010	1614

5A - FORM V VOA  
 VOLATILE ORGANICS INSTRUMENT  
 PERFORMANCE CHECK  
 BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJU

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Lab File Id: JCEA01.D BFB Injection Date: 12/09/2010  
 Instrument Id: J.i BFB Injection Time: 0857  
 GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.7
75	30.0 - 80.0% of mass 95	49.8
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	1.3 ( 1.3)1
174	50.0 - 120% of mass 95	93.5
175	5.0 - 9.0% of mass 174	6.7 ( 7.1)1
176	95.0 - 101% of mass 174	89.6 ( 95.7)1
177	5.0 - 9.0% of mass 176	6.0 ( 6.7)2

1 - Value is %mass 174

2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005JU	CCVIS 200-10872/3	JCEA03.D	12/09/2010	0941
02	VBLKJU	MB 200-10872/5	JCEA05.D	12/09/2010	1031
03	MCQCTB-W-3 2594	200-2822-3	JCEA06.D	12/09/2010	1108
04	MCSB42D-W- 32502	200-2822-1	JCEA07.D	12/09/2010	1134
05	MCSB48D-W- 32509DL	200-2822-2	JCEA08.D	12/09/2010	1159
06	MCSB48D-W- 32509	200-2822-2	JCEA09.D	12/09/2010	1224
07	VIBLKJH	VIBLK 200-10872/10	JCEA10.D	12/09/2010	1249
08	VHBLK01	200-2822-4	JCEA11.D	12/09/2010	1314
09	VSTD005UJ	CCVC 200-10872/12	JCEA12.D	12/09/2010	1350



8A - FORM VIII VOA  
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 GC Column: DB-624 ID: 0.20 (mm) Init. Calib. Date(s): 12/08/2010 12/08/2010  
 EPA Sample No. (VSTD#####): VSTD005JU Date Analyzed: 12/09/2010  
 Lab File ID (Standard): JCEA03.D Time Analyzed: 0941  
 Instrument ID: J.i Heated Purge: (Y/N) N

	IS1 (CBZ)		IS2 (DFB)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	247739	8.94	309965	5.58	121678	11.76
UPPER LIMIT	346835	9.27	433951	5.91	170349	12.09
LOWER LIMIT	148643	8.61	185979	5.25	73007	11.43
EPA SAMPLE NO.						
01 VBLKJU	229215	8.94	289795	5.58	110295	11.76
02 MCQCTB-W-32594	233144	8.94	288159	5.57	111623	11.76
03 MCSB42D-W-3250	238269	8.94	294383	5.58	113751	11.76
04 MCSB48D-W-3250	235357	8.94	292149	5.58	114936	11.76
9DL						
05 MCSB48D-W-3250	245184	8.94	308437	5.58	118041	11.77
9						
06 VIBLKJH	234503	8.94	288309	5.58	110102	11.77
07 VHBLK01	236486	8.94	293432	5.58	112310	11.76

IS1 (CBZ) = Chlorobenzene-d5  
 IS2 (DFB) = 1,4-Difluorobenzene  
 IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 140% (Trace Volatiles) of internal standard area  
 AREA LOWER LIMIT = 60% (Trace Volatiles) of internal standard area  
 RT UPPER LIMIT = + 0.33 (Trace Volatiles) minutes of internal standard RT  
 RT LOWER LIMIT = - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside contract required QC limits with an asterisk.

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

EPA SAMPLE NO.

MCQCTB-W-32594

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2822-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA06.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 12/07/2010  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	2.9	J B
75-15-0	Carbon disulfide	0.12	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCQCTB-W-32594

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2822-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA06.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 12/07/2010  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.26	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.10	J
179601-23-1	m,p-Xylene	0.053	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.054	J
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCQCTB-W-32594

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2822-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA06.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 12/07/2010  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.0	X J
02	127-63-9	Diphenyl sulfone	14.69	13	J N
03	127-63-9	Diphenyl sulfone	15.49	0.67	J N
04	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.  
MCSB42D-W-32502

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2822-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA07.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 12/07/2010  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.1  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.55	U
74-87-3	Chloromethane	0.55	U
75-01-4	Vinyl chloride	0.55	U
74-83-9	Bromomethane	0.55	U
75-00-3	Chloroethane	0.55	U
75-69-4	Trichlorofluoromethane	0.55	U
75-35-4	1,1-Dichloroethene	0.55	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.55	U
67-64-1	Acetone	4.1	J B
75-15-0	Carbon disulfide	0.18	J B
79-20-9	Methyl acetate	0.55	U
75-09-2	Methylene Chloride	0.092	J
156-60-5	trans-1,2-Dichloroethene	0.55	U
1634-04-4	Methyl tert-butyl ether	0.55	U
75-34-3	1,1-Dichloroethane	0.55	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	2-Butanone	1.4	J
74-97-5	Bromochloromethane	0.55	U
67-66-3	Chloroform	4.9	
71-55-6	1,1,1-Trichloroethane	0.55	U
110-82-7	Cyclohexane	0.55	U
56-23-5	Carbon tetrachloride	7.8	
71-43-2	Benzene	0.15	J
107-06-2	1,2-Dichloroethane	0.55	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCSB42D-W-32502

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2822-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA07.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 12/07/2010  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.1  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.55	U
108-87-2	Methylcyclohexane	0.55	U
78-87-5	1,2-Dichloropropane	0.55	U
75-27-4	Bromodichloromethane	0.55	U
10061-01-5	cis-1,3-Dichloropropene	0.55	U
108-10-1	4-Methyl-2-pentanone	5.5	U
108-88-3	Toluene	1.8	
10061-02-6	trans-1,3-Dichloropropene	0.55	U
79-00-5	1,1,2-Trichloroethane	0.55	U
127-18-4	Tetrachloroethene	0.55	U
591-78-6	2-Hexanone	5.5	U
124-48-1	Dibromochloromethane	0.55	U
106-93-4	1,2-Dibromoethane	0.55	U
108-90-7	Chlorobenzene	0.55	U
100-41-4	Ethylbenzene	0.074	J
95-47-6	o-Xylene	0.057	J
179601-23-1	m,p-Xylene	0.13	J
100-42-5	Styrene	0.073	J
75-25-2	Bromoform	0.55	U
98-82-8	Isopropylbenzene	0.076	J
79-34-5	1,1,2,2-Tetrachloroethane	0.55	U
541-73-1	1,3-Dichlorobenzene	0.55	U
106-46-7	1,4-Dichlorobenzene	0.55	U
95-50-1	1,2-Dichlorobenzene	0.55	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.55	U
120-82-1	1,2,4-Trichlorobenzene	0.55	U
87-61-6	1,2,3-Trichlorobenzene	0.55	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCSB42D-W-32502

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2822-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA07.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 12/07/2010  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.1  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.6	B X J
02	E966796 1	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

MCSB48D-W-32509

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2822-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA09.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 12/07/2010  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 3.5  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	1.8	U
74-87-3	Chloromethane	1.8	U
75-01-4	Vinyl chloride	1.8	U
74-83-9	Bromomethane	1.8	U
75-00-3	Chloroethane	1.8	U
75-69-4	Trichlorofluoromethane	1.8	U
75-35-4	1,1-Dichloroethene	1.8	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.8	U
67-64-1	Acetone	5.6	J B
75-15-0	Carbon disulfide	1.8	U
79-20-9	Methyl acetate	1.8	U
75-09-2	Methylene Chloride	1.3	J
156-60-5	trans-1,2-Dichloroethene	1.8	U
1634-04-4	Methyl tert-butyl ether	1.8	U
75-34-3	1,1-Dichloroethane	1.8	U
156-59-2	cis-1,2-Dichloroethene	1.8	U
78-93-3	2-Butanone	18	U
74-97-5	Bromochloromethane	1.8	U
67-66-3	Chloroform	260	E
71-55-6	1,1,1-Trichloroethane	1.8	U
110-82-7	Cyclohexane	1.8	U
56-23-5	Carbon tetrachloride	450	E
71-43-2	Benzene	1.8	U
107-06-2	1,2-Dichloroethane	0.90	J

Report 1,4-Dioxane for Low-Medium VOA analysis only



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

EPA SAMPLE NO.

MCSB48D-W-32509

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2822-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA09.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 12/07/2010  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 3.5  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.20	J
108-87-2	Methylcyclohexane	1.8	U
78-87-5	1,2-Dichloropropane	1.8	U
75-27-4	Bromodichloromethane	1.8	U
10061-01-5	cis-1,3-Dichloropropene	1.8	U
108-10-1	4-Methyl-2-pentanone	18	U
108-88-3	Toluene	0.67	J
10061-02-6	trans-1,3-Dichloropropene	1.8	U
79-00-5	1,1,2-Trichloroethane	1.8	U
127-18-4	Tetrachloroethene	12	
591-78-6	2-Hexanone	18	U
124-48-1	Dibromochloromethane	1.8	U
106-93-4	1,2-Dibromoethane	1.8	U
108-90-7	Chlorobenzene	1.8	U
100-41-4	Ethylbenzene	1.8	U
95-47-6	o-Xylene	1.8	U
179601-23-1	m,p-Xylene	1.8	U
100-42-5	Styrene	1.8	U
75-25-2	Bromoform	1.8	U
98-82-8	Isopropylbenzene	1.8	U
79-34-5	1,1,2,2-Tetrachloroethane	1.8	U
541-73-1	1,3-Dichlorobenzene	1.8	U
106-46-7	1,4-Dichlorobenzene	1.8	U
95-50-1	1,2-Dichlorobenzene	1.8	U
96-12-8	1,2-Dibromo-3-Chloropropane	1.8	U
120-82-1	1,2,4-Trichlorobenzene	1.8	U
87-61-6	1,2,3-Trichlorobenzene	1.8	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
 MCSB48D-W-32509

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2822-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA09.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 12/07/2010  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 3.5  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	10	B X J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

MCSB48D-W-32509DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2822-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA08.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 12/07/2010  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 40.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	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
75-35-4	1,1-Dichloroethene	20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	20	U
67-64-1	Acetone	200	U
75-15-0	Carbon disulfide	2.7	J D B
79-20-9	Methyl acetate	20	U
75-09-2	Methylene Chloride	20	U
156-60-5	trans-1,2-Dichloroethene	20	U
1634-04-4	Methyl tert-butyl ether	20	U
75-34-3	1,1-Dichloroethane	20	U
156-59-2	cis-1,2-Dichloroethene	20	U
78-93-3	2-Butanone	200	U
74-97-5	Bromochloromethane	20	U
67-66-3	Chloroform	300	D
71-55-6	1,1,1-Trichloroethane	20	U
110-82-7	Cyclohexane	20	U
56-23-5	Carbon tetrachloride	490	D
71-43-2	Benzene	20	U
107-06-2	1,2-Dichloroethane	20	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.  
MCSB48D-W-32509DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2822-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA08.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 12/07/2010  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 40.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	20	U
108-87-2	Methylcyclohexane	20	U
78-87-5	1,2-Dichloropropane	20	U
75-27-4	Bromodichloromethane	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
108-10-1	4-Methyl-2-pentanone	200	U
108-88-3	Toluene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
79-00-5	1,1,2-Trichloroethane	20	U
127-18-4	Tetrachloroethene	12	J D
591-78-6	2-Hexanone	200	U
124-48-1	Dibromochloromethane	20	U
106-93-4	1,2-Dibromoethane	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
95-47-6	o-Xylene	20	U
179601-23-1	m,p-Xylene	20	U
100-42-5	Styrene	20	U
75-25-2	Bromoform	20	U
98-82-8	Isopropylbenzene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
95-50-1	1,2-Dichlorobenzene	20	U
96-12-8	1,2-Dibromo-3-Chloropropane	20	U
120-82-1	1,2,4-Trichlorobenzene	20	U
87-61-6	1,2,3-Trichlorobenzene	20	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
 MCSB48D-W-32509DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2822-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA08.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 12/07/2010  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 40.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	120	B X D J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

6A - FORM VI VOA-1  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Instrument ID: J.i Calibration Date(s): 12/08/2010 12/08/2010  
 Heated Purge: (Y/N) N Calibration Time(s): 1433 1614  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

LAB FILE ID: \_\_\_\_\_ RRF0.5 = JCE03.D RRF1.0 = JCE04.D  
 RRF5.0 = JCE05.D RRF10 = JCE06.D RRF20 = JCE07.D

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
Dichlorodifluoromethane	0.522	0.492	0.500	0.476	0.467	0.491	4.3
Chloromethane	0.454	0.407	0.414	0.390	0.375	0.408	7.4
Vinyl chloride	0.420	0.396	0.406	0.385	0.376	0.397	4.4
Bromomethane	0.192	0.176	0.194	0.197	0.213	0.194	6.9
Chloroethane	0.213	0.241	0.232	0.217	0.225	0.226	5.0
Trichlorofluoromethane	0.579	0.547	0.565	0.534	0.555	0.556	3.0
1,1-Dichloroethene	0.286	0.289	0.285	0.273	0.273	0.281	2.7
1,1,2-Trichloro- 1,2,2-trifluoroethane	0.328	0.335	0.327	0.311	0.319	0.324	2.8
Acetone	0.021	0.017	0.016	0.015	0.015	0.017	17.0
Carbon disulfide	0.896	0.858	0.849	0.791	0.811	0.841	4.9
Methyl acetate	0.056	0.041	0.040	0.037	0.039	0.043	17.5
Methylene Chloride	0.229	0.234	0.237	0.227	0.224	0.230	2.3
trans-1,2-Dichloroethene	0.280	0.306	0.305	0.292	0.291	0.295	3.7
Methyl tert-butyl ether	0.340	0.347	0.348	0.333	0.329	0.339	2.5
1,1-Dichloroethane	0.471	0.471	0.479	0.464	0.458	0.469	1.7
cis-1,2-Dichloroethene	0.291	0.293	0.297	0.276	0.278	0.287	3.3
2-Butanone	0.026	0.022	0.024	0.022	0.022	0.023	7.6
Bromochloromethane	0.108	0.098	0.091	0.091	0.094	0.096	7.3
Chloroform	0.479	0.470	0.479	0.455	0.461	0.469	2.3
1,1,1-Trichloroethane	0.600	0.601	0.618	0.590	0.606	0.603	1.7
Cyclohexane	0.642	0.625	0.640	0.598	0.603	0.622	3.3
Carbon tetrachloride	0.543	0.555	0.572	0.567	0.564	0.560	2.1
Benzene	1.464	1.425	1.454	1.384	1.389	1.423	2.6
1,2-Dichloroethane	0.193	0.201	0.192	0.190	0.184	0.192	3.3
Trichloroethene	0.394	0.372	0.386	0.371	0.374	0.379	2.7
Methylcyclohexane	0.456	0.447	0.460	0.455	0.457	0.455	1.0

Report 1,4-Dioxane for Low-Medium VOA analysis only

6B - FORM VI VOA-2  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Instrument ID: J.i Calibration Date(s): 12/08/2010 12/08/2010  
 Heated Purge: (Y/N) N Calibration Time(s): 1433 1614  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
LAB FILE ID: _____	RRF0.5 = <u>JCE03.D</u>	RRF1.0 = <u>JCE04.D</u>					
RRF5.0 = <u>JCE05.D</u>	RRF10 = <u>JCE06.D</u>	RRF20 = <u>JCE07.D</u>					
1,2-Dichloropropane	0.290	0.256	0.280	0.258	0.267	0.270	5.4
Bromodichloromethane	0.334	0.347	0.345	0.338	0.341	0.341	1.5
cis-1,3-Dichloropropene	0.389	0.368	0.405	0.392	0.397	0.390	3.5
4-Methyl-2-pentanone	0.070	0.066	0.070	0.067	0.068	0.068	2.5
Toluene	1.494	1.448	1.580	1.529	1.526	1.515	3.2
trans-1,3-Dichloropropene	0.253	0.247	0.286	0.280	0.282	0.270	6.6
1,1,2-Trichloroethane	0.140	0.148	0.147	0.141	0.140	0.143	2.8
Tetrachloroethene	0.314	0.366	0.362	0.341	0.350	0.347	6.0
2-Hexanone	0.042	0.042	0.046	0.045	0.045	0.044	3.8
Dibromochloromethane	0.198	0.182	0.213	0.204	0.208	0.201	5.9
1,2-Dibromoethane	0.147	0.125	0.133	0.130	0.131	0.133	6.2
Chlorobenzene	0.948	0.935	0.941	0.907	0.907	0.928	2.1
Ethylbenzene	1.736	1.702	1.822	1.776	1.778	1.763	2.6
o-Xylene	0.630	0.654	0.688	0.651	0.660	0.657	3.2
m,p-Xylene	0.695	0.718	0.749	0.699	0.710	0.714	3.0
Styrene	0.907	0.945	1.009	0.974	1.006	0.968	4.4
Bromoform	0.179	0.207	0.206	0.201	0.196	0.198	5.7
Isopropylbenzene	1.754	1.824	1.880	1.832	1.873	1.833	2.8
1,1,2,2-Tetrachloroethane	0.121	0.134	0.130	0.126	0.125	0.127	3.8
1,3-Dichlorobenzene	1.488	1.422	1.538	1.447	1.433	1.466	3.3
1,4-Dichlorobenzene	1.548	1.552	1.459	1.380	1.385	1.465	5.7
1,2-Dichlorobenzene	1.126	1.194	1.204	1.126	1.097	1.149	4.1
1,2-Dibromo-3-Chloropropane	0.027	0.040	0.038	0.036	0.036	0.035	13.6
1,2,4-Trichlorobenzene	0.704	0.678	0.740	0.716	0.720	0.712	3.2
1,2,3-Trichlorobenzene	0.519	0.455	0.520	0.499	0.496	0.498	5.3

6C - FORM VI VOA-3  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Instrument ID: J.i Calibration Date(s): 12/08/2010 12/08/2010  
 Heated Purge: (Y/N) N Calibration Time(s): 1433 1614  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

LAB FILE ID: _____	RRF0.5 = <u>JCE03.D</u>	RRF1.0 = <u>JCE04.D</u>
RRF5.0 = <u>JCE05.D</u>	RRF10 = <u>JCE06.D</u>	RRF20 = <u>JCE07.D</u>

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
Vinyl Chloride-d3	0.396	0.346	0.356	0.338	0.335	0.354	6.9
Chloroethane-d5	0.295	0.311	0.289	0.278	0.274	0.290	5.1
1,1-Dichloroethene-d2	0.557	0.556	0.573	0.544	0.551	0.556	1.9
2-Butanone-d5	0.023	0.022	0.022	0.022	0.021	0.022	4.3
Chloroform-d	0.542	0.469	0.481	0.464	0.462	0.484	6.9
1,2-Dichloroethane-d4	0.147	0.152	0.155	0.147	0.145	0.149	2.8
Benzene-d6	1.288	1.315	1.330	1.275	1.278	1.297	1.9
1,2-Dichloropropane-d6	0.301	0.346	0.365	0.295	0.298	0.321	10.2
Toluene-d8	1.286	1.205	1.309	1.240	1.252	1.258	3.2
trans-1,3-Dichloropropene-d4	0.238	0.237	0.238	0.241	0.249	0.241	2.0
2-Hexanone-d5	0.020	0.020	0.024	0.023	0.024	0.022	8.7
1,1,2,2-Tetrachloroethane-d2	0.122	0.131	0.124	0.127	0.124	0.126	2.5
1,2-Dichlorobenzene-d4	0.742	0.683	0.743	0.680	0.659	0.701	5.5

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only



7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Instrument ID: J.i Calibration Date: 12/09/2010 Time: 0941  
 Lab File Id: JCEA03.D Init. Calib. Date(s): 12/08/2010 12/08/2010  
 EPA Sample No. (VSTD####): VSTD005JU Init. Calib. Time(s): 1433 1614  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.491	0.495	0.010	0.7	40.0
Chloromethane	0.408	0.408	0.010	0.1	40.0
Vinyl chloride	0.397	0.407	0.010	2.7	30.0
Bromomethane	0.194	0.206	0.100	6.1	30.0
Chloroethane	0.226	0.232	0.010	2.8	40.0
Trichlorofluoromethane	0.556	0.552	0.010	-0.7	40.0
1,1-Dichloroethene	0.281	0.286	0.100	1.5	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.324	0.329	0.010	1.5	40.0
Acetone	0.017	0.015	0.010	-10.6	40.0
Carbon disulfide	0.841	0.837	0.010	-0.5	40.0
Methyl acetate	0.043	0.042	0.010	-0.8	40.0
Methylene Chloride	0.230	0.237	0.010	3.1	40.0
trans-1,2-Dichloroethene	0.295	0.309	0.010	4.9	40.0
Methyl tert-butyl ether	0.339	0.333	0.010	-1.9	40.0
1,1-Dichloroethane	0.469	0.487	0.200	3.8	30.0
cis-1,2-Dichloroethene	0.287	0.289	0.010	0.4	40.0
2-Butanone	0.023	0.022	0.010	-5.3	40.0
Bromochloromethane	0.096	0.091	0.050	-5.8	30.0
Chloroform	0.469	0.469	0.200	0.0	30.0
1,1,1-Trichloroethane	0.603	0.615	0.100	2.1	30.0
Cyclohexane	0.622	0.639	0.010	2.7	40.0
Carbon tetrachloride	0.560	0.566	0.100	1.0	30.0
Benzene	1.423	1.444	0.400	1.5	30.0
1,2-Dichloroethane	0.192	0.189	0.100	-1.5	30.0
Trichloroethene	0.379	0.388	0.300	2.2	30.0
Methylcyclohexane	0.455	0.462	0.010	1.4	40.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Instrument ID: J.i Calibration Date: 12/09/2010 Time: 0941  
 Lab File Id: JCEA03.D Init. Calib. Date(s): 12/08/2010 12/08/2010  
 EPA Sample No. (VSTD####): VSTD005JU Init. Calib. Time(s): 1433 1614  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.270	0.271	0.010	0.4	40.0
Bromodichloromethane	0.341	0.355	0.200	4.1	30.0
cis-1,3-Dichloropropene	0.390	0.379	0.200	-2.8	30.0
4-Methyl-2-pentanone	0.068	0.067	0.010	-2.0	40.0
Toluene	1.515	1.589	0.400	4.9	30.0
trans-1,3-Dichloropropene	0.270	0.279	0.100	3.3	30.0
1,1,2-Trichloroethane	0.143	0.146	0.100	1.7	30.0
Tetrachloroethene	0.347	0.358	0.100	3.2	30.0
2-Hexanone	0.044	0.044	0.010	0.2	40.0
Dibromochloromethane	0.201	0.206	0.100	2.5	30.0
1,2-Dibromoethane	0.133	0.136	0.010	2.1	40.0
Chlorobenzene	0.928	0.940	0.500	1.3	30.0
Ethylbenzene	1.763	1.805	0.100	2.4	30.0
o-Xylene	0.657	0.674	0.300	2.6	30.0
m,p-Xylene	0.714	0.733	0.300	2.7	30.0
Styrene	0.968	1.006	0.300	3.9	30.0
Bromoform	0.198	0.206	0.050	4.2	30.0
Isopropylbenzene	1.833	1.904	0.010	3.9	40.0
1,1,2,2-Tetrachloroethane	0.127	0.122	0.100	-3.6	30.0
1,3-Dichlorobenzene	1.466	1.520	0.400	3.7	30.0
1,4-Dichlorobenzene	1.465	1.451	0.400	-0.9	30.0
1,2-Dichlorobenzene	1.149	1.190	0.400	3.5	30.0
1,2-Dibromo-3-Chloropropane	0.035	0.038	0.010	9.2	40.0
1,2,4-Trichlorobenzene	0.712	0.757	0.200	6.4	30.0
1,2,3-Trichlorobenzene	0.498	0.508	0.200	1.9	30.0

7C - FORM VII VOA-3  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Instrument ID: J.i Calibration Date: 12/09/2010 Time: 0941  
 Lab File Id: JCEA03.D Init. Calib. Date(s): 12/08/2010 12/08/2010  
 EPA Sample No. (VSTD####): VSTD005JU Init. Calib. Time(s): 1433 1614  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.354	0.362	0.010	2.3	30.0
Chloroethane-d5	0.290	0.287	0.010	-0.8	40.0
1,1-Dichloroethene-d2	0.556	0.537	0.010	-3.5	30.0
2-Butanone-d5	0.022	0.021	0.010	-3.2	40.0
Chloroform-d	0.484	0.474	0.010	-2.0	30.0
1,2-Dichloroethane-d4	0.149	0.147	0.010	-1.5	30.0
Benzene-d6	1.297	1.308	0.010	0.8	30.0
1,2-Dichloropropane-d6	0.321	0.364	0.010	13.3	40.0
Toluene-d8	1.258	1.294	0.010	2.8	30.0
trans-1,3-Dichloropropene-d4	0.241	0.244	0.010	1.6	30.0
2-Hexanone-d5	0.022	0.023	0.010	4.6	40.0
1,1,2,2-Tetrachloroethane-d2	0.126	0.123	0.010	-2.3	30.0
1,2-Dichlorobenzene-d4	0.701	0.707	0.010	0.9	30.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Instrument ID: J.i Calibration Date: 12/09/2010 Time: 1350  
 Lab File Id: JCEA12.D Init. Calib. Date(s): 12/08/2010 12/08/2010  
 EPA Sample No. (VSTD####): VSTD005UJ Init. Calib. Time(s): 1433 1614  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF <sub>5.0</sub>	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.491	0.531	0.010	8.1	50.0
Chloromethane	0.408	0.446	0.010	9.2	50.0
Vinyl chloride	0.397	0.438	0.010	10.4	50.0
Bromomethane	0.194	0.235	0.010	21.0	50.0
Chloroethane	0.226	0.251	0.010	11.3	50.0
Trichlorofluoromethane	0.556	0.600	0.010	8.0	50.0
1,1-Dichloroethene	0.281	0.297	0.010	5.4	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.324	0.357	0.010	10.2	50.0
Acetone	0.017	0.017	0.010	-0.7	50.0
Carbon disulfide	0.841	0.872	0.010	3.7	50.0
Methyl acetate	0.043	0.040	0.010	-5.4	50.0
Methylene Chloride	0.230	0.246	0.010	6.8	50.0
trans-1,2-Dichloroethene	0.295	0.320	0.010	8.8	50.0
Methyl tert-butyl ether	0.339	0.352	0.010	3.7	50.0
1,1-Dichloroethane	0.469	0.510	0.010	8.9	50.0
cis-1,2-Dichloroethene	0.287	0.306	0.010	6.6	50.0
2-Butanone	0.023	0.024	0.010	3.0	50.0
Bromochloromethane	0.096	0.099	0.010	2.7	50.0
Chloroform	0.469	0.500	0.010	6.7	50.0
1,1,1-Trichloroethane	0.603	0.639	0.010	6.1	50.0
Cyclohexane	0.622	0.666	0.010	7.1	50.0
Carbon tetrachloride	0.560	0.603	0.010	7.7	50.0
Benzene	1.423	1.490	0.010	4.7	50.0
1,2-Dichloroethane	0.192	0.201	0.010	4.7	50.0
Trichloroethene	0.379	0.403	0.010	6.2	50.0
Methylcyclohexane	0.455	0.488	0.010	7.2	50.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Instrument ID: J.i Calibration Date: 12/09/2010 Time: 1350  
 Lab File Id: JCEA12.D Init. Calib. Date(s): 12/08/2010 12/08/2010  
 EPA Sample No. (VSTD####): VSTD005UJ Init. Calib. Time(s): 1433 1614  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.270	0.276	0.010	2.0	50.0
Bromodichloromethane	0.341	0.365	0.010	7.2	50.0
cis-1,3-Dichloropropene	0.390	0.410	0.010	5.2	50.0
4-Methyl-2-pentanone	0.068	0.068	0.010	-0.2	50.0
Toluene	1.515	1.633	0.010	7.8	50.0
trans-1,3-Dichloropropene	0.270	0.275	0.010	2.0	50.0
1,1,2-Trichloroethane	0.143	0.143	0.010	-0.1	50.0
Tetrachloroethene	0.347	0.374	0.010	7.8	50.0
2-Hexanone	0.044	0.044	0.010	0.5	50.0
Dibromochloromethane	0.201	0.210	0.010	4.7	50.0
1,2-Dibromoethane	0.133	0.136	0.010	2.2	50.0
Chlorobenzene	0.928	0.985	0.010	6.2	50.0
Ethylbenzene	1.763	1.879	0.010	6.6	50.0
o-Xylene	0.657	0.704	0.010	7.2	50.0
m,p-Xylene	0.714	0.776	0.010	8.7	50.0
Styrene	0.968	1.034	0.010	6.8	50.0
Bromoform	0.198	0.195	0.010	-1.5	50.0
Isopropylbenzene	1.833	1.983	0.010	8.2	50.0
1,1,2,2-Tetrachloroethane	0.127	0.126	0.010	-1.1	50.0
1,3-Dichlorobenzene	1.466	1.547	0.010	5.5	50.0
1,4-Dichlorobenzene	1.465	1.465	0.010	0.0	50.0
1,2-Dichlorobenzene	1.149	1.231	0.010	7.1	50.0
1,2-Dibromo-3-Chloropropane	0.035	0.037	0.010	6.2	50.0
1,2,4-Trichlorobenzene	0.712	0.762	0.010	7.0	50.0
1,2,3-Trichlorobenzene	0.498	0.531	0.010	6.6	50.0

7C - FORM VII VOA-3  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Instrument ID: J.i Calibration Date: 12/09/2010 Time: 1350  
 Lab File Id: JCEA12.D Init. Calib. Date(s): 12/08/2010 12/08/2010  
 EPA Sample No. (VSTD####): VSTD005UJ Init. Calib. Time(s): 1433 1614  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.354	0.387	0.010	9.3	50.0
Chloroethane-d5	0.290	0.306	0.010	5.7	50.0
1,1-Dichloroethene-d2	0.556	0.588	0.010	5.7	50.0
2-Butanone-d5	0.022	0.022	0.010	2.0	50.0
Chloroform-d	0.484	0.508	0.010	5.1	50.0
1,2-Dichloroethane-d4	0.149	0.158	0.010	5.7	50.0
Benzene-d6	1.297	1.370	0.010	5.6	50.0
1,2-Dichloropropane-d6	0.321	0.378	0.010	17.6	50.0
Toluene-d8	1.258	1.329	0.010	5.6	50.0
trans-1,3-Dichloropropene-d4	0.241	0.240	0.010	-0.1	50.0
2-Hexanone-d5	0.022	0.024	0.010	7.5	50.0
1,1,2,2-Tetrachloroethane-d2	0.126	0.126	0.010	0.0	50.0
1,2-Dichlorobenzene-d4	0.701	0.739	0.010	5.3	50.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

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

EPA SAMPLE NO.

VBLKJU

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-10872/5  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA05.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.3	J
75-15-0	Carbon disulfide	0.095	J
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VBLKJU

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-10872/5  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA05.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U



1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKJU

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-10872/5  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA05.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.0	X J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2822-4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA11.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2822-4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA11.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-2822-4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA11.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.1	B X J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

VIBLKJH

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-10872/10  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA10.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.7	J B
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.068	J
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.099	J
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VIBLKJH

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-10872/10  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA10.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/kg)	ug/L	
79-01-6	Trichloroethene		0.50	U
108-87-2	Methylcyclohexane		0.50	U
78-87-5	1,2-Dichloropropane		0.50	U
75-27-4	Bromodichloromethane		0.50	U
10061-01-5	cis-1,3-Dichloropropene		0.50	U
108-10-1	4-Methyl-2-pentanone		5.0	U
108-88-3	Toluene		0.50	U
10061-02-6	trans-1,3-Dichloropropene		0.50	U
79-00-5	1,1,2-Trichloroethane		0.50	U
127-18-4	Tetrachloroethene		0.50	U
591-78-6	2-Hexanone		5.0	U
124-48-1	Dibromochloromethane		0.50	U
106-93-4	1,2-Dibromoethane		0.50	U
108-90-7	Chlorobenzene		0.50	U
100-41-4	Ethylbenzene		0.50	U
95-47-6	o-Xylene		0.50	U
179601-23-1	m,p-Xylene		0.50	U
100-42-5	Styrene		0.50	U
75-25-2	Bromoform		0.50	U
98-82-8	Isopropylbenzene		0.50	U
79-34-5	1,1,2,2-Tetrachloroethane		0.50	U
541-73-1	1,3-Dichlorobenzene		0.50	U
106-46-7	1,4-Dichlorobenzene		0.50	U
95-50-1	1,2-Dichlorobenzene		0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane		0.50	U
120-82-1	1,2,4-Trichlorobenzene		0.50	U
87-61-6	1,2,3-Trichlorobenzene		0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VIBLKJH

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-2822  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-10872/10  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCEA10.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 12/09/2010  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.1	B X J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

## ANALYTICAL REPORT

Job Number: 200-3367-1

SDG Number: 200-3367

Job Description: Montgomery City (200-3367)

Contract Number: 8E-00302

For:

Argonne National Laboratory

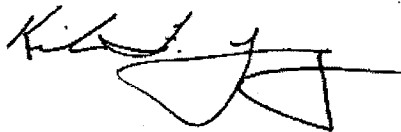
9700 South Cass Avenue

Building 203

Office B-149

Argonne, IL 60439

Attention: Mr. Clyde Dennis



Approved for release.  
Kirk F Young  
Project Manager I  
1/24/2011 2:51 PM

---

Kirk F Young

Project Manager I

kirk.young@testamericainc.com

01/24/2011

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory



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## CASE NARRATIVE

**Client: Argonne National Laboratory**

**Project: Montgomery City (200-3367)**

**Report Number: 200-3367-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed.

Calculations were performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### Receipt

The samples were received on 01/18/2011. 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, as received, were not acid preserved. On that basis, the laboratory did provide for the analytical work to be performed within seven days of sample collection.

### SOM01.2 Volatile Organics (Trace Level Water)

A storage blank was prepared for volatile organics analysis, and stored in association with the storage of the samples. That storage blank, identified as VHBLK01, was carried through the holding period with the samples, and analyzed.

Each sample was analyzed without a dilution. An additional, dilution analysis was performed on sample MCSB47D-W-32609 in order to provide for quantification within the range of calibrated instrument response. Both sets of results for the analysis of sample MCSB47D-W-32609 are included in this submittal.

Each of the analyses associated with the sample set exhibited an acceptable internal standard performance. There was an acceptable recovery of each deuterated monitoring compound (DMC) in the analysis of the method blank associated with the analytical work, and in the analysis of the storage blank associated with the sample set. The analysis of the samples in this sample set did meet the technical acceptance criteria specific to DMC recoveries, although not all DMC recoveries were within the control range in each analysis. The technical acceptance criteria does provide for the recovery of up to three DMCs to fall outside of the control range in the analysis of field samples. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. Trace concentrations of carbon disulfide and methyl tert-butyl ether were identified in the analysis of the method blank associated with the analytical work. The concentration of each compound in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant method blank analysis. A trace concentration of methyl tert-butyl ether was identified in the analysis of the storage blank associated with the sample set. The concentration of methyl tert-butyl ether in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant storage blank analysis. Present in the method blank and storage blank analyses was a non-target constituent that represents a compound that is related to the DMC formulation.

The fact that the presence of this compound is not within the laboratory's control is at issue. The derived results for that compound have been qualified with an "X" qualifier to reflect the source of the contamination.

The responses for each of the target analytes met the relative standard deviation criterion in the initial calibration. The response for each target analyte met the percent difference criterion in each opening/continuing calibration check acquisition. The response for each target analyte met the 50.0 percent difference criterion in each closing calibration check acquisition.

The primary quantitation mass for methylcyclohexane that is specified in the Statement of Work is mass 83. The laboratory did identify a contribution to mass 83 from 1,2-dichloropropane-d<sub>6</sub>, one of the deuterated monitoring compounds (DMCs). The laboratory did change the primary quantitation mass assignment to mass 55 for the quantification of methylcyclohexane.

Manual integration was employed in deriving certain of the analytical results. The values that have been derived from manual integration are qualified on the quantitation reports. Extracted ion current profiles for each manual integration are included in the data package, and further documented in the Sample Preparation section of this submittal.

## DATA REPORTING QUALIFIERS

Client: Argonne National Laboratory

Job Number: 200-3367-1

Sdg Number: 200-3367

<u>Lab Section</u>	<u>Qualifier</u>	<u>Description</u>
GC/MS VOA		
	U	Analyzed for but not detected.
	E	Compound concentration exceeds the upper level of the calibration range of the instrument for that specific analysis.
	J	Indicates an Estimated Value for TICs
	J	Indicates an estimated value.
	D	Sample was analyzed at a higher dilution factor.
	X	See case narrative notes for explanation of the 'X' flag
	*	Surrogate exceeds the control limit
	B	The analyte was found in an associated blank, as well as in the sample.
	N	This flag indicates the presumptive evidence of a compound.

MATRIX: WATER RECEIVING LAB: TEST AMERICA PROJECT/SITE: MONTGOMERY CITY		ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD*		Shipping Container No. Shipping Info: ANL Field Contact (Name & Temporary Phone): 402-465-9021	
SAMPLER(S) (Signature): B Sedivy		ANALYSIS: VOCs		REMARKS	
DATE OF COLLECTION		Number of containers		ANALYSIS	
SAMPLE ID NUMBER(S)		2 2		REMARKS	
1-14-11 "		MCSB47D-W-32609 MCOCTB-W-32618		REMARKS	
<del>                     (The following section is crossed out with a large X)                 </del>					
Relinquished by (Signature) B Sedivy		Received by (Signature)		Relinquished by (Signature)	
Date: 1/17/11		Time: 18:30		Date:	
Relinquished by (Signature)		Received for Laboratory by (Signature)		Date: 1/18/11	
Date:		Time:		Time: 1045	
Remarks:		*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.			
FOR LAB USE ONLY		Argonne National Laboratory, Applied Geosciences & Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439			
Y N		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.			
X X X X		ER660 (4-01)			







# **Shipping and Receiving Documents**

# FedEx Express US Airbill

FedEx Number

8736 0120 2785

0200 Form ID No.

FedEx Retrieval Copy

1 From 1/17/11 Date 0304-035-07

Sender's FedEx Account Number

Sender's Name

Phone

Company

Address

City

State

ZIP

Dept./Room/Suite/Floor

## 2 Your Internal Billing Reference

3 To Recipient's Name

Phone

Company

Address

We cannot deliver to PO, boxes, or MH, ZIP codes.

Dept./Room/Suite/Floor

Address

We cannot deliver to the following: PO, boxes, or MH, ZIP codes, or for continuation of your shipping address

City

State

ZIP

**HOLD Weekday**  
FedEx location address:  
 01  
FedEx First Overnight

**HOLD Saturday**  
REQUIRED: Available only for FedEx Priority Overnight and FedEx 2Day is selected.



### 4a Express Package Service

\* To most locations.

01 **FedEx Priority Overnight**  
Next business morning, Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

02 **FedEx 2Day**  
Second business day, Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

03 **FedEx Express Saver**  
Third business day, Saturday Delivery NOT available.

04 **Express Freight Service**  
\* To most locations.

05 **FedEx Standard Overnight**  
Next business afternoon, Saturday Delivery NOT available.

06 **FedEx First Overnight**  
Earliest business morning delivery in select locations.\*

07 **FedEx 3Day Freight**  
Third business day, Saturday, 06 lbs on NGL available.

08 **FedEx 2Day Freight**  
Second business day, Saturday, 06 lbs on NGL available.

09 **FedEx 1Day Freight**  
Next business day - Friday, shipments will be delivered on Monday unless SATURDAY Delivery is selected.

Packages up to 150 lbs.

Packages over 150 lbs.

FedEx 1Day Freight Double In

FedEx 2Day Freight

FedEx 3Day Freight

FedEx 2Day Freight

FedEx 1Day Freight

FedEx Standard Overnight

FedEx Express Saver

FedEx Priority Overnight

5 Packaging

01 **FedEx Tube**

02 **FedEx Pak\***  
FedEx Large Pak

03 **FedEx Box**

04 **FedEx Tube**

05 **FedEx Tube**

06 **FedEx Tube**

07 **FedEx Tube**

08 **FedEx Tube**

09 **FedEx Tube**

### 6 Special Handling and Delivery Signature Options

10 **No Signature Required**  
Packages may be left without obtaining a signature for delivery.

11 **Direct Signature**  
Someone at recipient's address may sign for delivery. Fee applies.

12 **Indirect Signature**  
Drop-off is available at recipient's address. Signature required at residential delivery only. Fee applies.

13 **Signature Required**  
Signature required at recipient's address. Fee applies.

14 **Signature Required**  
Signature required at recipient's address. Fee applies.

15 **Signature Required**  
Signature required at recipient's address. Fee applies.

16 **Signature Required**  
Signature required at recipient's address. Fee applies.

17 **Signature Required**  
Signature required at recipient's address. Fee applies.

18 **Signature Required**  
Signature required at recipient's address. Fee applies.

19 **Signature Required**  
Signature required at recipient's address. Fee applies.

### 7 Payment Bill to:

1 **Sender** (FedEx Acct. No. or Credit Card No. below)

2 **Recipient**

3 **Third Party**

4 **Credit Card**

5 **Cash/Check**

6 **Cash/Check**

7 **Cash/Check**

8 **Cash/Check**

9 **Cash/Check**

0 **Cash/Check**

**Account No.**

**Account No.**

**Account No.**

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11/24/2011

NOCS

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## Login Sample Receipt Check List

Client: Argonne National Laboratory

Job Number: 200-3367-1

SDG Number: 200-3367

**Login Number: 3367**

**Creator: Keeton, Jamie**

**List Number: 1**

**List Source: TestAmerica Burlington**

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.2 °C IR gun ID 96, CF= -2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	Minor Discrepancies
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	Sample volumes were received unpreserved.
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

## Sample Login Acknowledgement

## Job 200-3367-1

<b>Client Job Description:</b>	Montgomery City (200-3367)	<b>Report To:</b>	Argonne National Laboratory
<b>Purchase Order #:</b>	8E-00302		Jorge Alvarado
<b>Work Order #:</b>	8E-00302		9700 South Cass Avenue
<b>Project Manager:</b>	Kirk F. Young		Building 203
<b>Job Due Date:</b>	2/1/2011		Office B-149
<b>Job TAT:</b>	14 Days		Argonne, IL 60439
<b>Max Deliverable Level:</b>	IV	<b>Bill To:</b>	Argonne National Laboratory
			Accounts Payable
<b>Earliest Deliverable Due:</b>	2/1/2011		Chief Financial Offices
			9700 S. Cass Ave.
			Building 201
			Argonne, IL 60439

## Login 200-3367

<b>Sample Receipt:</b>	1/18/2011 10:45:00 AM	<b>Number of Coolers:</b>	1
<b>Method of Delivery:</b>	FedEx Priority Overnight	<b>Cooler Temperature(s) (C°):</b>	0.2

Lab Sample #	Client Sample ID	Date Sampled	Matrix	Rpt Basis	Dry / Wet **
Method	Method Description / Work Location				
200-3367-1	MCSB47D-W-32609	1/14/2011 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-3367-2	MCQCTB-W-32618	1/14/2011 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-3367-3	VHBLK01	1/14/2011 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet

\* Method on-hold

\*\* Wet/Dry indicates whether the reported results will be corrected for moisture content, and based on sample Wet weight or Dry

## METHODOLOGY SUMMARY

Laboratory: TestAmerica Laboratories

Project No:

Location: South Burlington, Vermont

SDG No: 200-3367

### VOA

Volatile Organics Trace - USEPA CLP SOM01.2

2A - FORM II VOA-1  
 WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON

Contract: 8E-00302

Lab Code: STLV

Case No.: MONTGO Mod. Ref No.:

SDG No.: 200-3367

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLKJV	101	103	79	101	98	99	104
02	MCSB47D-W-3260 9	105	107	81	197 *	106	103	106
03	MCQCTB-W-32618	110	107	83	103	103	107	109
04	MCSB47D-W-3260 9DL	105	104	83	199 *	102	103	105
05	VHBLK01	104	104	81	101	99	104	105

VDMC1 (VCL) = Vinyl Chloride-d3  
 VDMC2 (CLA) = Chloroethane-d5  
 VDMC3 (DCE) = 1,1-Dichloroethene-d2  
 VDMC4 (BUT) = 2-Butanone-d5  
 VDMC5 (CLF) = Chloroform-d  
 VDMC6 (DCA) = 1,2-Dichloroethane-d4  
 VDMC7 (BEN) = Benzene-d6

QC LIMITS

(65-131)  
 (71-131)  
 (55-104)  
 (49-155)  
 (78-121)  
 (78-129)  
 (77-124)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits

2B - FORM II VOA-2  
WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (TCA) #	VDMC13 (DCZ) #	OTHER	TOT OUT
01	VBLKJV	96	106	108	103	93	104		0
02	MCSB47D-W-3260 9	103	109	112	235 *	97	112		2
03	MCQCTB-W-32618	99	110	105	110	98	105		0
04	MCSB47D-W-3260 9DL	95	107	108	221 *	94	103		2
05	VHBLK01	99	106	102	105	96	110		0

VDMC8 (DPA) = 1,2-Dichloropropane-d6  
 VDMC9 (TOL) = Toluene-d8  
 VDMC10 (TDP) = trans-1,3-Dichloropropene-d4  
 VDMC11 (HEX) = 2-Hexanone-d5  
 VDMC12 (TCA) = 1,1,2,2-Tetrachloroethane-d2  
 VDMC13 (DCZ) = 1,2-Dichlorobenzene-d4

QC LIMITS  
 (79-124)  
 (77-121)  
 (73-121)  
 (28-135)  
 (73-125)  
 (80-131)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJV

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Lab File ID: JCIB08.D Lab Sample ID: MB 200-12410/8  
 Instrument ID: J.i  
 Matrix: (SOIL/SED/WATER) Water Date Analyzed: 01/19/2011  
 Level: (TRACE or LOW/MED) TRACE Time Analyzed: 1325  
 GC Column: DB-624 ID: 0.20 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MCSB47D-W-32 609	200-3367-1	JCIB09.D	1403
02	VIBLKJA	VIBLK 200-12410/10	JCIB10.D	1428
03	MCQCTB-W-326 18	200-3367-2	JCIB11.D	1454
04	MCSB47D-W-32 609DL	200-3367-1	JCIB12.D	1520
05	VHBLK01	200-3367-3	JCIB13.D	1545

COMMENTS:

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5A - FORM V VOA  
 VOLATILE ORGANICS INSTRUMENT  
 PERFORMANCE CHECK  
 BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJT

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Lab File Id: JCI01.D BFB Injection Date: 01/14/2011  
 Instrument Id: J.i BFB Injection Time: 1028  
 GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.4
75	30.0 - 80.0% of mass 95	48.3
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	1.4 ( 1.5)1
174	50.0 - 120% of mass 95	91.8
175	5.0 - 9.0% of mass 174	7.2 ( 7.8)1
176	95.0 - 101% of mass 174	92.2 ( 100)1
177	5.0 - 9.0% of mass 176	5.5 ( 5.9)2

1 - Value is %mass 174

2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0.5JT	IC 200-12248/4	JCI04.D	01/14/2011	1139
02	VSTD001JT	IC 200-12248/5	JCI05.D	01/14/2011	1205
03	VSTD005JT	ICIS 200-12248/6	JCI06.D	01/14/2011	1230
04	VSTD010JT	IC 200-12248/7	JCI07.D	01/14/2011	1255
05	VSTD020JT	IC 200-12248/8	JCI08.D	01/14/2011	1320

5A - FORM V VOA  
VOLATILE ORGANICS INSTRUMENT  
PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJV

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
Lab File Id: JCIB03.D BFB Injection Date: 01/19/2011  
Instrument Id: J.i BFB Injection Time: 1124  
GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.3
75	30.0 - 80.0% of mass 95	49.7
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.5 ( 0.6)1
174	50.0 - 120% of mass 95	92.5
175	5.0 - 9.0% of mass 174	6.5 ( 7.0)1
176	95.0 - 101% of mass 174	89.1 ( 96.3)1
177	5.0 - 9.0% of mass 176	5.3 ( 6.0)2

1 - Value is %mass 174

2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005JV	CCVIS 200-12410/6	JCIB06.D	01/19/2011	1233
02	VBLKJV	MB 200-12410/8	JCIB08.D	01/19/2011	1325
03	MCSB47D-W-32609	200-3367-1	JCIB09.D	01/19/2011	1403
04	VIBLKJA	VIBLK 200-12410/10	JCIB10.D	01/19/2011	1428
05	MCQCTB-W-32618	200-3367-2	JCIB11.D	01/19/2011	1454
06	MCSB47D-W-32609DL	200-3367-1	JCIB12.D	01/19/2011	1520
07	VHBLK01	200-3367-3	JCIB13.D	01/19/2011	1545
08	VSTD005VJ	CCVC 200-12410/22	JCIB22.D	01/19/2011	1933

8A - FORM VIII VOA  
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 GC Column: DB-624 ID: 0.20 (mm) Init. Calib. Date(s): 01/14/2011 01/14/2011  
 EPA Sample No. (VSTD#####): VSTD005JV Date Analyzed: 01/19/2011  
 Lab File ID (Standard): JCIB06.D Time Analyzed: 1233  
 Instrument ID: J.i Heated Purge: (Y/N) N

	IS1 (CBZ)		IS2 (DFB)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	253367	8.94	309106	5.59	123884	11.76
UPPER LIMIT	354714	9.27	432748	5.92	173438	12.09
LOWER LIMIT	152020	8.61	185464	5.26	74330	11.43
EPA SAMPLE NO.						
01 VBLKJV	235511	8.94	285101	5.59	109172	11.77
02 MCSB47D-W-3260 9	221812	8.94	274412	5.59	99859	11.77
03 VIBLKJA	229270	8.94	280892	5.59	106748	11.77
04 MCQCTB-W-32618	229637	8.94	273580	5.59	106715	11.77
05 MCSB47D-W-3260 9DL	226592	8.94	273006	5.59	104133	11.77
06 VHBLK01	227649	8.94	277336	5.60	102371	11.77

IS1 (CBZ) = Chlorobenzene-d5  
 IS2 (DFB) = 1,4-Difluorobenzene  
 IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 140% (Trace Volatiles) of internal standard area  
 AREA LOWER LIMIT = 60% (Trace Volatiles) of internal standard area  
 RT UPPER LIMIT = + 0.33 (Trace Volatiles) minutes of internal standard RT  
 RT LOWER LIMIT = - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside contract required QC limits with an asterisk.

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

EPA SAMPLE NO.

MCQCTB-W-32618

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-3367-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB11.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 01/18/2011  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	3.6	J
75-15-0	Carbon disulfide	0.091	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.058	J B
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	1.5	J
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.045	J
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCQCTB-W-32618

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-3367-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB11.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 01/18/2011  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
79-01-6	Trichloroethene	0.083	J
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.31	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.071	J
179601-23-1	m,p-Xylene	0.035	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.040	J
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCQCTB-W-32618

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-3367-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB11.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 01/18/2011  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	3.2	B X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.86	0.50	B J N
03	E966796 <sup>1</sup>	Total Alkanes	N/A	14	J

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

MCSB47D-W-32609

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-3367-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB09.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 01/18/2011  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.6	J
75-15-0	Carbon disulfide	0.17	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.23	J
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.053	J B
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	6.1	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	130	E
71-43-2	Benzene	0.10	J
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCSB47D-W-32609

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-3367-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB09.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 01/18/2011  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.21	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.17	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.061	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U



1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCSB47D-W-32609

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-3367-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB09.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 01/18/2011  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	3.2	B X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.87	1.1	B J N
03		Unknown siloxane derivative	10.69	1.3	B J
04	E966796 <sup>1</sup>	Total Alkanes	N/A	13	J

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

MCSB47D-W-32609DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-3367-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB12.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 01/18/2011  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 8.8  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
75-71-8	Dichlorodifluoromethane	4.4	U
74-87-3	Chloromethane	4.4	U
75-01-4	Vinyl chloride	4.4	U
74-83-9	Bromomethane	4.4	U
75-00-3	Chloroethane	4.4	U
75-69-4	Trichlorofluoromethane	4.4	U
75-35-4	1,1-Dichloroethene	4.4	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	4.4	U
67-64-1	Acetone	44	U
75-15-0	Carbon disulfide	0.74	J B D
79-20-9	Methyl acetate	4.4	U
75-09-2	Methylene Chloride	0.61	J D
156-60-5	trans-1,2-Dichloroethene	4.4	U
1634-04-4	Methyl tert-butyl ether	0.55	J B D
75-34-3	1,1-Dichloroethane	4.4	U
156-59-2	cis-1,2-Dichloroethene	4.4	U
78-93-3	2-Butanone	44	U
74-97-5	Bromochloromethane	4.4	U
67-66-3	Chloroform	6.5	D
71-55-6	1,1,1-Trichloroethane	4.4	U
110-82-7	Cyclohexane	4.4	U
56-23-5	Carbon tetrachloride	110	D
71-43-2	Benzene	4.4	U
107-06-2	1,2-Dichloroethane	4.4	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCSB47D-W-32609DL

Lab Name: TESTAMERICA BURLINGTON

Contract: 8E-00302

Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367

Matrix: (SOIL/SED/WATER) Water

Lab Sample ID: 200-3367-1

Sample wt/vol: 25.0 (g/mL) mL

Lab File ID: JCIB12.D

Level: (TRACE/LOW/MED) TRACE

Date Received: 01/18/2011

% Moisture: not dec.

Date Analyzed: 01/19/2011

GC Column: DB-624 ID: 0.20 (mm)

Dilution Factor: 8.8

Soil Extract Volume: \_\_\_\_\_ (uL)

Soil Aliquot Volume: \_\_\_\_\_ (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	4.4	U
108-87-2	Methylcyclohexane	4.4	U
78-87-5	1,2-Dichloropropane	4.4	U
75-27-4	Bromodichloromethane	4.4	U
10061-01-5	cis-1,3-Dichloropropene	4.4	U
108-10-1	4-Methyl-2-pentanone	44	U
108-88-3	Toluene	4.4	U
10061-02-6	trans-1,3-Dichloropropene	4.4	U
79-00-5	1,1,2-Trichloroethane	4.4	U
127-18-4	Tetrachloroethene	4.4	U
591-78-6	2-Hexanone	44	U
124-48-1	Dibromochloromethane	4.4	U
106-93-4	1,2-Dibromoethane	4.4	U
108-90-7	Chlorobenzene	4.4	U
100-41-4	Ethylbenzene	4.4	U
95-47-6	o-Xylene	4.4	U
179601-23-1	m,p-Xylene	4.4	U
100-42-5	Styrene	4.4	U
75-25-2	Bromoform	4.4	U
98-82-8	Isopropylbenzene	4.4	U
79-34-5	1,1,2,2-Tetrachloroethane	4.4	U
541-73-1	1,3-Dichlorobenzene	4.4	U
106-46-7	1,4-Dichlorobenzene	4.4	U
95-50-1	1,2-Dichlorobenzene	4.4	U
96-12-8	1,2-Dibromo-3-Chloropropane	4.4	U
120-82-1	1,2,4-Trichlorobenzene	4.4	U
87-61-6	1,2,3-Trichlorobenzene	4.4	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
 MCSB47D-W-32609DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-3367-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB12.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 01/18/2011  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 8.8  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	28	B X D
02	E966796 <sup>1</sup>	Total Alkanes	N/A	120	J D

<sup>1</sup>EPA-designated Registry Number.

6A - FORM VI VOA-1  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Instrument ID: J.i Calibration Date(s): 01/14/2011 01/14/2011  
 Heated Purge: (Y/N) N Calibration Time(s): 1139 1320  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
Dichlorodifluoromethane	0.505	0.458	0.419	0.414	0.411	0.441	9.1
Chloromethane	0.412	0.401	0.359	0.373	0.357	0.380	6.5
Vinyl chloride	0.425	0.408	0.357	0.366	0.359	0.383	8.2
Bromomethane	0.224	0.214	0.205	0.207	0.214	0.213	3.5
Chloroethane	0.243	0.215	0.223	0.226	0.223	0.226	4.7
Trichlorofluoromethane	0.632	0.573	0.569	0.580	0.577	0.586	4.4
1,1-Dichloroethene	0.302	0.296	0.284	0.288	0.289	0.292	2.5
1,1,2-Trichloro- 1,2,2-trifluoroethane	0.357	0.343	0.337	0.337	0.339	0.343	2.5
Acetone	0.024	0.018	0.017	0.018	0.016	0.018	16.5
Carbon disulfide	1.056	0.950	0.823	0.819	0.817	0.893	12.0
Methyl acetate	0.051	0.046	0.043	0.045	0.040	0.045	9.7
Methylene Chloride	0.228	0.257	0.223	0.237	0.226	0.234	5.9
trans-1,2-Dichloroethene	0.343	0.312	0.288	0.295	0.292	0.306	7.4
Methyl tert-butyl ether	0.321	0.328	0.327	0.357	0.356	0.338	5.1
1,1-Dichloroethane	0.506	0.498	0.472	0.481	0.467	0.485	3.4
cis-1,2-Dichloroethene	0.264	0.295	0.281	0.291	0.285	0.283	4.1
2-Butanone	0.021	0.024	0.023	0.025	0.024	0.024	7.0
Bromochloromethane	0.090	0.109	0.096	0.104	0.098	0.099	7.0
Chloroform	0.463	0.498	0.476	0.494	0.484	0.483	2.9
1,1,1-Trichloroethane	0.604	0.564	0.594	0.612	0.604	0.596	3.1
Cyclohexane	0.607	0.564	0.579	0.595	0.582	0.586	2.8
Carbon tetrachloride	0.566	0.516	0.545	0.569	0.581	0.555	4.6
Benzene	1.346	1.312	1.369	1.400	1.406	1.367	2.8
1,2-Dichloroethane	0.200	0.213	0.198	0.219	0.209	0.208	4.2
Trichloroethene	0.398	0.365	0.369	0.377	0.362	0.374	3.9
Methylcyclohexane	0.382	0.398	0.424	0.441	0.454	0.420	7.1

Report 1,4-Dioxane for Low-Medium VOA analysis only

6B - FORM VI VOA-2  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Instrument ID: J.i Calibration Date(s): 01/14/2011 01/14/2011  
 Heated Purge: (Y/N) N Calibration Time(s): 1139 1320  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
1,2-Dichloropropane	0.281	0.259	0.268	0.270	0.272	0.270	2.9
Bromodichloromethane	0.318	0.340	0.348	0.357	0.351	0.343	4.5
cis-1,3-Dichloropropene	0.338	0.337	0.385	0.419	0.412	0.378	10.3
4-Methyl-2-pentanone	0.058	0.057	0.063	0.073	0.072	0.065	11.5
Toluene	1.507	1.398	1.496	1.562	1.568	1.506	4.6
trans-1,3-Dichloropropene	0.259	0.210	0.274	0.304	0.307	0.271	14.6
1,1,2-Trichloroethane	0.184	0.174	0.140	0.153	0.147	0.160	11.6
Tetrachloroethene	0.349	0.320	0.344	0.352	0.353	0.344	4.0
2-Hexanone	0.029	0.037	0.041	0.050	0.049	0.041	21.0
Dibromochloromethane	0.179	0.188	0.194	0.225	0.219	0.201	9.9
1,2-Dibromoethane	0.125	0.120	0.129	0.143	0.139	0.131	7.1
Chlorobenzene	0.878	0.891	0.892	0.928	0.924	0.903	2.5
Ethylbenzene	1.508	1.508	1.667	1.780	1.810	1.654	8.7
o-Xylene	0.600	0.561	0.619	0.670	0.665	0.623	7.3
m,p-Xylene	0.685	0.637	0.681	0.724	0.720	0.689	5.2
Styrene	0.778	0.797	0.929	1.021	1.045	0.914	13.5
Bromoform	0.176	0.178	0.201	0.224	0.230	0.202	12.4
Isopropylbenzene	1.493	1.523	1.696	1.824	1.887	1.685	10.4
1,1,2,2-Tetrachloroethane	0.114	0.114	0.125	0.137	0.133	0.125	8.4
1,3-Dichlorobenzene	1.362	1.372	1.404	1.489	1.500	1.426	4.6
1,4-Dichlorobenzene	1.456	1.443	1.407	1.443	1.470	1.444	1.6
1,2-Dichlorobenzene	1.106	1.142	1.144	1.196	1.195	1.157	3.3
1,2-Dibromo-3-Chloropropane	0.032	0.041	0.037	0.036	0.040	0.037	9.6
1,2,4-Trichlorobenzene	0.588	0.620	0.698	0.755	0.756	0.683	11.3
1,2,3-Trichlorobenzene	0.450	0.465	0.468	0.528	0.529	0.488	7.7

6C - FORM VI VOA-3  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Instrument ID: J.i Calibration Date(s): 01/14/2011 01/14/2011  
 Heated Purge: (Y/N) N Calibration Time(s): 1139 1320  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
Vinyl Chloride-d3	0.381	0.337	0.333	0.336	0.328	0.343	6.2
Chloroethane-d5	0.308	0.293	0.262	0.278	0.278	0.284	6.2
1,1-Dichloroethene-d2	0.621	0.621	0.608	0.625	0.641	0.623	1.9
2-Butanone-d5	0.025	0.024	0.023	0.026	0.024	0.025	5.1
Chloroform-d	0.563	0.508	0.500	0.514	0.503	0.517	5.0
1,2-Dichloroethane-d4	0.210	0.179	0.167	0.181	0.171	0.182	9.4
Benzene-d6	1.374	1.291	1.307	1.372	1.362	1.341	2.9
1,2-Dichloropropane-d6	0.313	0.348	0.305	0.371	0.358	0.339	8.5
Toluene-d8	1.187	1.189	1.275	1.314	1.323	1.257	5.2
trans-1,3-Dichloropropene-d4	0.204	0.217	0.238	0.266	0.270	0.239	12.2
2-Hexanone-d5	0.018	0.019	0.023	0.027	0.026	0.022	17.9
1,1,2,2-Tetrachloroethane-d2	0.148	0.121	0.122	0.144	0.136	0.134	9.3
1,2-Dichlorobenzene-d4	0.746	0.754	0.707	0.753	0.750	0.742	2.7

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Instrument ID: J.i Calibration Date: 01/19/2011 Time: 1233  
 Lab File Id: JCIB06.D Init. Calib. Date(s): 01/14/2011 01/14/2011  
 EPA Sample No. (VSTD####): VSTD005JV Init. Calib. Time(s): 1139 1320  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.441	0.436	0.010	-1.2	40.0
Chloromethane	0.380	0.372	0.010	-2.3	40.0
Vinyl chloride	0.383	0.376	0.010	-1.8	30.0
Bromomethane	0.213	0.214	0.100	0.4	30.0
Chloroethane	0.226	0.224	0.010	-0.9	40.0
Trichlorofluoromethane	0.586	0.592	0.010	1.0	40.0
1,1-Dichloroethene	0.292	0.288	0.100	-1.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.343	0.355	0.010	3.6	40.0
Acetone	0.018	0.017	0.010	-9.1	40.0
Carbon disulfide	0.893	0.840	0.010	-6.0	40.0
Methyl acetate	0.045	0.043	0.010	-3.9	40.0
Methylene Chloride	0.234	0.237	0.010	1.2	40.0
trans-1,2-Dichloroethene	0.306	0.303	0.010	-1.0	40.0
Methyl tert-butyl ether	0.338	0.354	0.010	4.8	40.0
1,1-Dichloroethane	0.485	0.495	0.200	2.2	30.0
cis-1,2-Dichloroethene	0.283	0.312	0.010	10.2	40.0
2-Butanone	0.024	0.025	0.010	4.2	40.0
Bromochloromethane	0.099	0.105	0.050	5.5	30.0
Chloroform	0.483	0.511	0.200	5.7	30.0
1,1,1-Trichloroethane	0.596	0.628	0.100	5.5	30.0
Cyclohexane	0.586	0.624	0.010	6.5	40.0
Carbon tetrachloride	0.555	0.616	0.100	10.9	30.0
Benzene	1.367	1.447	0.400	5.9	30.0
1,2-Dichloroethane	0.208	0.203	0.100	-2.0	30.0
Trichloroethene	0.374	0.375	0.300	0.4	30.0
Methylcyclohexane	0.420	0.443	0.010	5.5	40.0

Report 1,4-Dioxane for Low/Medium VOA analysis only



7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Instrument ID: J.i Calibration Date: 01/19/2011 Time: 1233  
 Lab File Id: JCIB06.D Init. Calib. Date(s): 01/14/2011 01/14/2011  
 EPA Sample No. (VSTD####): VSTD005JV Init. Calib. Time(s): 1139 1320  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.270	0.257	0.010	-4.7	40.0
Bromodichloromethane	0.343	0.361	0.200	5.4	30.0
cis-1,3-Dichloropropene	0.378	0.409	0.200	8.1	30.0
4-Methyl-2-pentanone	0.065	0.067	0.010	3.4	40.0
Toluene	1.506	1.574	0.400	4.5	30.0
trans-1,3-Dichloropropene	0.271	0.289	0.100	6.9	30.0
1,1,2-Trichloroethane	0.160	0.149	0.100	-6.8	30.0
Tetrachloroethene	0.344	0.364	0.100	6.1	30.0
2-Hexanone	0.041	0.047	0.010	14.3	40.0
Dibromochloromethane	0.201	0.209	0.100	4.1	30.0
1,2-Dibromoethane	0.131	0.131	0.010	-0.1	40.0
Chlorobenzene	0.903	0.943	0.500	4.5	30.0
Ethylbenzene	1.654	1.790	0.100	8.2	30.0
o-Xylene	0.623	0.674	0.300	8.1	30.0
m,p-Xylene	0.689	0.735	0.300	6.6	30.0
Styrene	0.914	0.998	0.300	9.2	30.0
Bromoform	0.202	0.215	0.050	6.3	30.0
Isopropylbenzene	1.685	1.818	0.010	7.9	40.0
1,1,2,2-Tetrachloroethane	0.125	0.126	0.100	0.8	30.0
1,3-Dichlorobenzene	1.426	1.535	0.400	7.7	30.0
1,4-Dichlorobenzene	1.444	1.477	0.400	2.3	30.0
1,2-Dichlorobenzene	1.157	1.181	0.400	2.1	30.0
1,2-Dibromo-3-Chloropropane	0.037	0.037	0.010	-0.3	40.0
1,2,4-Trichlorobenzene	0.683	0.752	0.200	10.0	30.0
1,2,3-Trichlorobenzene	0.488	0.509	0.200	4.2	30.0

7C - FORM VII VOA-3  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Instrument ID: J.i Calibration Date: 01/19/2011 Time: 1233  
 Lab File Id: JCIB06.D Init. Calib. Date(s): 01/14/2011 01/14/2011  
 EPA Sample No. (VSTD####): VSTD005JV Init. Calib. Time(s): 1139 1320  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.343	0.346	0.010	0.8	30.0
Chloroethane-d5	0.284	0.284	0.010	0.2	40.0
1,1-Dichloroethene-d2	0.623	0.634	0.010	1.7	30.0
2-Butanone-d5	0.025	0.024	0.010	-1.1	40.0
Chloroform-d	0.517	0.526	0.010	1.6	30.0
1,2-Dichloroethane-d4	0.182	0.173	0.010	-4.5	30.0
Benzene-d6	1.341	1.389	0.010	3.6	30.0
1,2-Dichloropropane-d6	0.339	0.380	0.010	12.0	40.0
Toluene-d8	1.257	1.359	0.010	8.1	30.0
trans-1,3-Dichloropropene-d4	0.239	0.254	0.010	6.0	30.0
2-Hexanone-d5	0.022	0.026	0.010	15.0	40.0
1,1,2,2-Tetrachloroethane-d2	0.134	0.128	0.010	-4.4	30.0
1,2-Dichlorobenzene-d4	0.742	0.752	0.010	1.3	30.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Instrument ID: J.i Calibration Date: 01/19/2011 Time: 1933  
 Lab File Id: JCIB22.D Init. Calib. Date(s): 01/14/2011 01/14/2011  
 EPA Sample No. (VSTD####): VSTD005VJ Init. Calib. Time(s): 1139 1320  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.441	0.437	0.010	-1.0	50.0
Chloromethane	0.380	0.401	0.010	5.4	50.0
Vinyl chloride	0.383	0.381	0.010	-0.5	50.0
Bromomethane	0.213	0.218	0.010	2.6	50.0
Chloroethane	0.226	0.235	0.010	4.1	50.0
Trichlorofluoromethane	0.586	0.599	0.010	2.1	50.0
1,1-Dichloroethene	0.292	0.303	0.010	3.8	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.343	0.353	0.010	3.1	50.0
Acetone	0.018	0.017	0.010	-7.7	50.0
Carbon disulfide	0.893	0.847	0.010	-5.2	50.0
Methyl acetate	0.045	0.046	0.010	2.9	50.0
Methylene Chloride	0.234	0.246	0.010	4.9	50.0
trans-1,2-Dichloroethene	0.306	0.306	0.010	-0.1	50.0
Methyl tert-butyl ether	0.338	0.356	0.010	5.4	50.0
1,1-Dichloroethane	0.485	0.500	0.010	3.2	50.0
cis-1,2-Dichloroethene	0.283	0.298	0.010	5.1	50.0
2-Butanone	0.024	0.024	0.010	2.4	50.0
Bromochloromethane	0.099	0.105	0.010	6.1	50.0
Chloroform	0.483	0.509	0.010	5.4	50.0
1,1,1-Trichloroethane	0.596	0.613	0.010	3.0	50.0
Cyclohexane	0.586	0.612	0.010	4.5	50.0
Carbon tetrachloride	0.555	0.585	0.010	5.3	50.0
Benzene	1.367	1.444	0.010	5.7	50.0
1,2-Dichloroethane	0.208	0.219	0.010	5.2	50.0
Trichloroethene	0.374	0.385	0.010	2.9	50.0
Methylcyclohexane	0.420	0.442	0.010	5.2	50.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Instrument ID: J.i Calibration Date: 01/19/2011 Time: 1933  
 Lab File Id: JCIB22.D Init. Calib. Date(s): 01/14/2011 01/14/2011  
 EPA Sample No. (VSTD####): VSTD005VJ Init. Calib. Time(s): 1139 1320  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.270	0.278	0.010	3.2	50.0
Bromodichloromethane	0.343	0.363	0.010	5.9	50.0
cis-1,3-Dichloropropene	0.378	0.406	0.010	7.4	50.0
4-Methyl-2-pentanone	0.065	0.071	0.010	9.5	50.0
Toluene	1.506	1.595	0.010	5.9	50.0
trans-1,3-Dichloropropene	0.271	0.285	0.010	5.2	50.0
1,1,2-Trichloroethane	0.160	0.156	0.010	-2.4	50.0
Tetrachloroethene	0.344	0.358	0.010	4.3	50.0
2-Hexanone	0.041	0.047	0.010	13.6	50.0
Dibromochloromethane	0.201	0.216	0.010	7.6	50.0
1,2-Dibromoethane	0.131	0.139	0.010	5.6	50.0
Chlorobenzene	0.903	0.953	0.010	5.6	50.0
Ethylbenzene	1.654	1.774	0.010	7.2	50.0
o-Xylene	0.623	0.667	0.010	7.0	50.0
m,p-Xylene	0.689	0.733	0.010	6.3	50.0
Styrene	0.914	1.009	0.010	10.4	50.0
Bromoform	0.202	0.208	0.010	3.1	50.0
Isopropylbenzene	1.685	1.818	0.010	7.9	50.0
1,1,2,2-Tetrachloroethane	0.125	0.140	0.010	11.8	50.0
1,3-Dichlorobenzene	1.426	1.502	0.010	5.3	50.0
1,4-Dichlorobenzene	1.444	1.416	0.010	-1.9	50.0
1,2-Dichlorobenzene	1.157	1.203	0.010	4.0	50.0
1,2-Dibromo-3-Chloropropane	0.037	0.039	0.010	5.1	50.0
1,2,4-Trichlorobenzene	0.683	0.735	0.010	7.5	50.0
1,2,3-Trichlorobenzene	0.488	0.502	0.010	2.9	50.0

7C - FORM VII VOA-3  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Instrument ID: J.i Calibration Date: 01/19/2011 Time: 1933  
 Lab File Id: JCIB22.D Init. Calib. Date(s): 01/14/2011 01/14/2011  
 EPA Sample No. (VSTD####): VSTD005VJ Init. Calib. Time(s): 1139 1320  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.343	0.349	0.010	1.8	50.0
Chloroethane-d5	0.284	0.293	0.010	3.2	50.0
1,1-Dichloroethene-d2	0.623	0.655	0.010	5.1	50.0
2-Butanone-d5	0.025	0.025	0.010	3.4	50.0
Chloroform-d	0.517	0.540	0.010	4.3	50.0
1,2-Dichloroethane-d4	0.182	0.177	0.010	-2.5	50.0
Benzene-d6	1.341	1.385	0.010	3.2	50.0
1,2-Dichloropropane-d6	0.339	0.368	0.010	8.5	50.0
Toluene-d8	1.257	1.326	0.010	5.4	50.0
trans-1,3-Dichloropropene-d4	0.239	0.262	0.010	9.6	50.0
2-Hexanone-d5	0.022	0.024	0.010	6.5	50.0
1,1,2,2-Tetrachloroethane-d2	0.134	0.140	0.010	4.6	50.0
1,2-Dichlorobenzene-d4	0.742	0.767	0.010	3.4	50.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

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

EPA SAMPLE NO.

VBLKJV

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-12410/8  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB08.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.13	J
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.067	J
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VBLKJV

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-12410/8  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB08.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKJV

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-12410/8  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB08.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	4.15	3.1	J
02		Unknown	6.92	3.1	X J
03	541-05-9	Cyclotrisiloxane, hexamethyl-	7.86	1.6	J N
04		Unknown siloxane derivative	10.69	1.7	J
05		Unknown	12.89	0.57	J
06	E966796 <sup>1</sup>	Total Alkanes	N/A	13	J

<sup>1</sup>EPA-designated Registry Number.



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

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-3367-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB13.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.061	J B
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-3367-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB13.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-3367-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB13.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	3.2	B X J
02	E966796 <sup>1</sup>	Total Alkanes	N/A	13	J

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

VIBLKJA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-12410/10  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB10.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.094	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.042	J B
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.11	J
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VIBLKJA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-12410/10  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB10.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VIBLKJA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-3367  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-12410/10  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCIB10.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 01/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.92	3.2	B X J
02	E966796 <sup>1</sup>	Total Alkanes	N/A	13	J

<sup>1</sup>EPA-designated Registry Number.

## ANALYTICAL REPORT

Job Number: 200-4605-1

SDG Number: 200-4605

Job Description: Montgomery City (200-4605)

Contract Number: 8E-00302

For:

Argonne National Laboratory

9700 South Cass Avenue

Building 203

Office B-149

Argonne, IL 60439

Attention: Mr. Clyde Dennis



Approved for release.  
Kirk F Young  
Project Manager I  
4/15/2011 8:05 AM

---

Kirk F Young  
Project Manager I  
kirk.young@testamericainc.com  
04/15/2011

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

**TestAmerica Laboratories, Inc.**

TestAmerica Burlington 30 Community Drive, Suite 11, South Burlington, VT 05403

Tel (802) 660-1990 Fax (802) 660-1919 [www.testamericainc.com](http://www.testamericainc.com)



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## **CASE NARRATIVE**

**Client: Argonne National Laboratory**

**Project: Montgomery City (200-4605)**

**Report Number: 200-4605-1**

Enclosed is the data set for the referenced project work. With the exceptions noted as flags or footnotes, standard analytical protocols were followed in performing the analytical work and the applied control limits were met.

Calculations were performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### **Receipt**

The samples were received on 04/08/2011. 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, as received, were not acid preserved. On that basis, the laboratory did provide for the analytical work to be performed within seven days of sample collection.

### **SOM01.2 Volatile Organics (Trace Level Water)**

A storage blank was prepared for volatile organics analysis, and stored in association with the storage of the samples. That storage blank, identified as VHBLK01, was carried through the holding period with the samples, and analyzed.

Samples MCSB1S-W-32879 and MCSB41D-W-23882 were analyzed at a dilution in order to provide quantification within the range of calibrated instrument response. An additional, more concentrated analysis was performed on each of those samples in order to provide for a lower reporting limit for those analytes that were not identified in the primary analysis. Both sets of results for the analysis of samples MCSB1S-W-32879 and MCSB41D-W-23882 are included in this submittal.

Each of the analyses associated with the sample set exhibited an acceptable internal standard performance. There was an acceptable recovery of each deuterated monitoring compound (DMC) in the analysis of the method blank associated with the analytical work, the analysis of each instrument blank, and in the analysis of the storage blank associated with the sample set. The analysis of the samples in this sample set did meet the technical acceptance criteria specific to DMC recoveries, although not all DMC recoveries were within the control range in each analysis. The technical acceptance criteria does provide for the recovery of up to three DMCs to fall outside of the control range in the analysis of field samples. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. Trace concentrations of acetone, carbon disulfide, methylene chloride, trans-1,2-dichloroethene, carbon tetrachloride, tetrachloroethene, 1,2,4-trichlorobenzene, and 1,2,3-trichlorobenzene were identified in the analysis of the method blank associated with the analytical work. The concentration of each compound in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant method blank analysis. Trace concentrations of acetone, carbon disulfide, methylene chloride, and carbon tetrachloride were identified in the analysis of

each instrument blank associated with the analytical work. The concentration of each compound in each analysis was below the established reporting limit, and each analysis did meet the technical acceptance criteria for a compliant instrument blank analysis. Trace concentrations of acetone, carbon disulfide, carbon tetrachloride, and toluene were identified in the analysis of the storage blank associated with the sample set. The concentration of each compound in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant storage blank analysis. Present in the method blank and storage blank analyses was a non-target constituent that represents a compound that is related to the DMC formulation. The fact that the presence of this compound is not within the laboratory's control is at issue. The derived results for that compound have been qualified with an "X" qualifier to reflect the source of the contamination.

The responses for each of the target analytes met the relative standard deviation criterion in the initial calibration. The response for each target analyte met the percent difference criterion in the opening/continuing calibration check acquisition. The response for each target analyte met the 50.0 percent difference criterion in the closing calibration check acquisition.

The primary quantitation mass for methylcyclohexane that is specified in the Statement of Work is mass 83. The laboratory did identify a contribution to mass 83 from 1,2-dichloropropane-d<sub>6</sub>, one of the deuterated monitoring compounds (DMCs). The laboratory did change the primary quantitation mass assignment to mass 55 for the quantification of methylcyclohexane.

Manual integration was employed in deriving certain of the analytical results. The values that have been derived from manual integration are qualified on the quantitation reports. Extracted ion current profiles for each manual integration are included in the data package, and further documented at the end of this submittal.

## DATA REPORTING QUALIFIERS

Client: Argonne National Laboratory

Job Number: 200-4605-1

Sdg Number: 200-4605

<b>Lab Section</b>	<b>Qualifier</b>	<b>Description</b>
GC/MS VOA		
	U	Analyzed for but not detected.
	E	Compound concentration exceeds the upper level of the calibration range of the instrument for that specific analysis.
	J	Indicates an Estimated Value for TICs
	J	Indicates an estimated value.
	D	Sample was analyzed at a higher dilution factor.
	X	See case narrative notes for explanation of the 'X' flag
	*	Surrogate exceeds the control limit
	B	The analyte was found in an associated blank, as well as in the sample.
	N	This flag indicates the presumptive evidence of a compound.







# **Shipping and Receiving Documents**



**Burlington Facility**  
**Internal Chain of Custody Log (ICOC)**  
**Project Information:**

4h. Express Freight Service  FedEx 1 Day Freight  FedEx 2 Day Freight  FedEx Priority Overnight  FedEx Standard Overnight

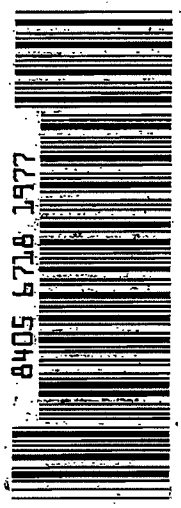
5. Packaging  FedEx Envelope  FedEx Pak  Other

6. Special Handling  SATURDAY Delivery  HOLD Weekday at FedEx Location  Signature Required  Signature Required - Adult Signature  Signature Required - Restricted  Signature Required - Restricted (18+)  Signature Required - Restricted (21+)  Signature Required - Restricted (25+)  Signature Required - Restricted (30+)  Signature Required - Restricted (35+)  Signature Required - Restricted (40+)  Signature Required - Restricted (45+)  Signature Required - Restricted (50+)  Signature Required - Restricted (55+)  Signature Required - Restricted (60+)  Signature Required - Restricted (65+)  Signature Required - Restricted (70+)  Signature Required - Restricted (75+)  Signature Required - Restricted (80+)  Signature Required - Restricted (85+)  Signature Required - Restricted (90+)  Signature Required - Restricted (95+)  Signature Required - Restricted (100+)

7. Payment Bill to:  Shipper  Recipient  Third Party  Other

8. Release Signature  Signature Required  Signature Not Required

Company: ARGONNE NAT LAB  
 Address: 4101 PROGRESSIVE AVE #C  
 City: LINCOLN State: NE ZIP: 68504  
 2 Your Internal Billing Reference: SA727-65-167  
 3 To Recipient's Name: KIRK YOUNG Phone: 802-660-1990  
 Company: TEST AMERICA  
 Address: 30 COMMUNIT DR  
 City: SUITE 11  
 State: VT ZIP: 05403



446

## Login Sample Receipt Checklist

Client: Argonne National Laboratory

Job Number: 200-4605-1

SDG Number: 200-4605

**Login Number: 4605**

**List Source: TestAmerica Burlington**

**List Number: 1**

**Creator: Marion, Greg T**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	NO SEAL NUMBERS
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.4 °C, IR GUN ID 96/CF=0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	Check done at department level as required.

## Sample Login Acknowledgement

## Job 200-4605-1

<b>Client Job Description:</b>	Montgomery City (200-4605)	<b>Report To:</b>	Argonne National Laboratory
<b>Purchase Order #:</b>	8E-00302		Jorge Alvarado
<b>Work Order #:</b>	8E-00302		9700 South Cass Avenue
<b>Project Manager:</b>	Kirk F Young		Building 203
<b>Job Due Date:</b>	4/22/2011		Office B-149
<b>Job TAT:</b>	14 Days		Argonne, IL 60439
<b>Max Deliverable Level:</b>	IV	<b>Bill To:</b>	Argonne National Laboratory
			Accounts Payable
<b>Earliest Deliverable Due:</b>	4/22/2011		Chief Financial Offices
			9700 S. Cass Ave.
			Building 201
			Argonne, IL 60439

## Login 200-4605

<b>Sample Receipt:</b>	4/8/2011 10:20:00 AM	<b>Number of Coolers:</b>	1
<b>Method of Delivery:</b>	FedEx Priority Overnight	<b>Cooler Temperature(s) (C°):</b>	3.4

Lab Sample #	Client Sample ID	Date Sampled	Matrix	Rpt Basis	Dry / Wet **
Method	Method Description / Work Location				
200-4605-1	MCSB1S-W-32879	4/5/2011 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-4605-2	MCSB41D-W-23882	4/5/2011 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-4605-3	MCQCTB-W-32885	4/5/2011 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-4605-4	MCSB38M-W-32889	4/6/2011 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-4605-5	MCSB27D-W-32893	4/6/2011 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-4605-6	MCSB46S-W-32912	4/6/2011 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-4605-7	VHBLK01	4/7/2011 12:10:00 PM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet

\* Method on-hold

\*\* Wet/Dry indicates whether the reported results will be corrected for moisture content, and based on sample Wet weight or Dry

## METHODOLOGY SUMMARY

Laboratory: TestAmerica Laboratories

Project No:

Location: South Burlington, Vermont

SDG No: 200-4605

### VOA

Volatile Organics Trace - USEPA CLP SOM01.2

2A - FORM II VOA-1  
WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON

Contract: 8E-00302

Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLKJX	82	83	69	104	96	106	98
02	MCSB38M-W-3288 9	88	90	72	122	101	113	104
03	MCSB27D-W-3289 3	83	84	69	123	97	110	97
04	MCSB27D-W-3289 3	82	85	69	90	105	112	99
05	MCSB41D-W-2388 2DL	81	82	68	114	105	108	96
06	MCSB1S-W-32879 DL	81	81	69	211 *	98	104	95
07	MCSB1S-W-32879	72	75	61	176 *	188 *	107	102
08	MCSB41D-W-2388 2	84	87	71	189 *	123 *	113	99
09	MCQCTB-W-32885	76	77	64	84	89	101	86
10	VHBLK01	83	83	71	93	97	109	96

VDMC1 (VCL) = Vinyl Chloride-d3  
VDMC2 (CLA) = Chloroethane-d5  
VDMC3 (DCE) = 1,1-Dichloroethene-d2  
VDMC4 (BUT) = 2-Butanone-d5  
VDMC5 (CLF) = Chloroform-d  
VDMC6 (DCA) = 1,2-Dichloroethane-d4  
VDMC7 (BEN) = Benzene-d6

QC LIMITS

(65-131)  
(71-131)  
(55-104)  
(49-155)  
(78-121)  
(78-129)  
(77-124)

# Column to be used to flag recovery values  
\* Values outside of contract required QC limits

2B - FORM II VOA-2  
WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (TCA) #	VDMC13 (DCZ) #	OTHER	TOT OUT
01	VBLKJX	90	100	103	113	101	104		0
02	MCSB38M-W-3288 9	95	107	102	122	105	114		0
03	MCSB27D-W-3289 3	93	101	99	123	101	108		0
04	MCSB27D-W-3289 3	96	97	106	119	113	104		0
05	MCSB41D-W-2388 2DL	86	99	97	119	94	102		0
06	MCSB1S-W-32879 DL	88	99	102	243 *	97	105		2
07	MCSB1S-W-32879	86	96	99	229 *	91	102		3
08	MCSB41D-W-2388 2	90	105	108	229 *	106	105		3
09	MCQCTB-W-32885	78 *	90	94	92	90	93		1
10	VHBLK01	85	101	94	98	93	108		0

VDMC8	(DPA) = 1,2-Dichloropropane-d6	QC LIMITS (79-124)
VDMC9	(TOL) = Toluene-d8	(77-121)
VDMC10	(TDP) = trans-1,3-Dichloropropene-d4	(73-121)
VDMC11	(HEX) = 2-Hexanone-d5	(28-135)
VDMC12	(TCA) = 1,1,2,2-Tetrachloroethane-d2	(73-125)
VDMC13	(DCZ) = 1,2-Dichlorobenzene-d4	(80-131)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits  
 Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJX

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Lab File ID: JCUF03.D Lab Sample ID: MB 200-16411/3  
 Instrument ID: J.i  
 Matrix: (SOIL/SED/WATER) Water Date Analyzed: 04/12/2011  
 Level: (TRACE or LOW/MED) TRACE Time Analyzed: 0811  
 GC Column: DB-624 ID: 0.20 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MCSB38M-W-32 889	200-4605-4	JCUF04.D	0848
02	MCSB27D-W-32 893	200-4605-5	JCUF05.D	0913
03	MCSB27D-W-32 893	200-4605-6	JCUF06.D	0939
04	MCSB41D-W-23 882DL	200-4605-2	JCUF07.D	1004
05	MCSB1S-W-328 79DL	200-4605-1	JCUF08.D	1029
06	MCSB1S-W-328 79	200-4605-1	JCUF09.D	1054
07	VIBLKJX	VIBLK 200-16411/10	JCUF10.D	1120
08	MCSB41D-W-23 882	200-4605-2	JCUF12.D	1210
09	VIBLKJZ	VIBLK 200-16411/13	JCUF13.D	1236
10	MCQCTB-W-328 85	200-4605-3	JCUF14.D	1312
11	VHBLK01	200-4605-7	JCUF15.D	1337

COMMENTS: \_\_\_\_\_

5A - FORM V VOA  
 VOLATILE ORGANICS INSTRUMENT  
 PERFORMANCE CHECK  
 BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJR

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Lab File Id: JCU01.D BFB Injection Date: 03/24/2011  
 Instrument Id: J.i BFB Injection Time: 1324  
 GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.7
75	30.0 - 80.0% of mass 95	52.9
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	0.4 ( 0.5)1
174	50.0 - 120% of mass 95	81.4
175	5.0 - 9.0% of mass 174	7.0 ( 8.6)1
176	95.0 - 101% of mass 174	81.7 ( 100)1
177	5.0 - 9.0% of mass 176	4.6 ( 5.7)2

1 - Value is %mass 174      2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0.5JR	IC 200-15618/3	JCU03.D	03/24/2011	1408
02	VSTD001JR	IC 200-15618/4	JCU04.D	03/24/2011	1433
03	VSTD005JR	ICIS 200-15618/5	JCU05.D	03/24/2011	1459
04	VSTD010JR	IC 200-15618/6	JCU06.D	03/24/2011	1524
05	VSTD020JR	IC 200-15618/7	JCU07.D	03/24/2011	1549



5A - FORM V VOA  
 VOLATILE ORGANICS INSTRUMENT  
 PERFORMANCE CHECK  
 BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJX

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Lab File Id: JCUF01.D BFB Injection Date: 04/12/2011  
 Instrument Id: J.i BFB Injection Time: 0727  
 GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.6
75	30.0 - 80.0% of mass 95	43.7
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	5.9
173	Less than 2.0% of mass 174	0.5 ( 0.5)1
174	50.0 - 120% of mass 95	91.1
175	5.0 - 9.0% of mass 174	6.5 ( 7.2)1
176	95.0 - 101% of mass 174	88.4 ( 97.1)1
177	5.0 - 9.0% of mass 176	5.2 ( 5.9)2

1 - Value is %mass 174

2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005JX	CCVIS 200-16411/2	JCUF02.D	04/12/2011	0746
02	VBLKJX	MB 200-16411/3	JCUF03.D	04/12/2011	0811
03	MCSB38M-W-32889	200-4605-4	JCUF04.D	04/12/2011	0848
04	MCSB27D-W-32893	200-4605-5	JCUF05.D	04/12/2011	0913
05	MCSB27D-W-32893	200-4605-6	JCUF06.D	04/12/2011	0939
06	MCSB41D-W-23882DL	200-4605-2	JCUF07.D	04/12/2011	1004
07	MCSB1S-W-32879DL	200-4605-1	JCUF08.D	04/12/2011	1029
08	MCSB1S-W-32879	200-4605-1	JCUF09.D	04/12/2011	1054
09	VIBLKJX	VIBLK 200-16411/10	JCUF10.D	04/12/2011	1120
10	MCSB41D-W-23882	200-4605-2	JCUF12.D	04/12/2011	1210
11	VIBLKJZ	VIBLK 200-16411/13	JCUF13.D	04/12/2011	1236
12	MCQCTB-W-32885	200-4605-3	JCUF14.D	04/12/2011	1312
13	VHBLK01	200-4605-7	JCUF15.D	04/12/2011	1337
14	VSTD005XJ	CCVC 200-16411/16	JCUF16.D	04/12/2011	1416

8A - FORM VIII VOA  
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 GC Column: DB-624 ID: 0.20 (mm) Init. Calib. Date(s): 03/24/2011 03/24/2011  
 EPA Sample No. (VSTD#####): VSTD005JX Date Analyzed: 04/12/2011  
 Lab File ID (Standard): JCUF02.D Time Analyzed: 0746  
 Instrument ID: J.i Heated Purge: (Y/N) N

	IS1 (CBZ)		IS2 (DFB)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	889677	8.93	1124713	5.58	425395	11.76
UPPER LIMIT	1245548	9.26	1574598	5.91	595553	12.09
LOWER LIMIT	533806	8.60	674828	5.25	255237	11.43
EPA SAMPLE NO.						
01 VBLKJX	834381	8.93	1029934	5.58	390830	11.76
02 MCSB38M-W-3288 9	770417	8.93	970541	5.58	350587	11.76
03 MCSB27D-W-3289 3	783596	8.93	973829	5.58	360781	11.76
04 MCSB27D-W-3289 3	735050	8.93	961375	5.58	341373	11.76
05 MCSB41D-W-2388 2DL	755468	8.93	948452	5.58	345187	11.76
06 MCSB1S-W-32879 DL	717044	8.93	901389	5.58	321566	11.76
07 MCSB1S-W-32879	814521	8.93	1048534	5.58	357979	11.76
08 VIBLKJX	730325	8.93	898454	5.58	330258	11.76
09 MCSB41D-W-2388 2	694054	8.93	864800	5.58	324724	11.76
10 VIBLKJZ	719132	8.93	897728	5.58	323403	11.76
11 MCQCTB-W-32885	755781	8.93	935140	5.58	353844	11.76
12 VHBLK01	726322	8.93	899495	5.58	327620	11.76

IS1 (CBZ) = Chlorobenzene-d5  
 IS2 (DFB) = 1,4-Difluorobenzene  
 IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 140% (Trace Volatiles) of internal standard area  
 AREA LOWER LIMIT = 60% (Trace Volatiles) of internal standard area  
 RT UPPER LIMIT = + 0.33 (Trace Volatiles) minutes of internal standard RT  
 RT LOWER LIMIT = - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside contract required QC limits with an asterisk.

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

EPA SAMPLE NO.

MCQCTB-W-32885

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF14.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/kg)	ug/L	
75-71-8	Dichlorodifluoromethane		0.50	U
74-87-3	Chloromethane		0.50	U
75-01-4	Vinyl chloride		0.50	U
74-83-9	Bromomethane		0.50	U
75-00-3	Chloroethane		0.50	U
75-69-4	Trichlorofluoromethane		0.50	U
75-35-4	1,1-Dichloroethene		0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.50	U
67-64-1	Acetone		11	B
75-15-0	Carbon disulfide		0.052	J B
79-20-9	Methyl acetate		0.50	U
75-09-2	Methylene Chloride		0.50	U
156-60-5	trans-1,2-Dichloroethene		0.50	U
1634-04-4	Methyl tert-butyl ether		0.50	U
75-34-3	1,1-Dichloroethane		0.50	U
156-59-2	cis-1,2-Dichloroethene		0.50	U
78-93-3	2-Butanone		5.0	U
74-97-5	Bromochloromethane		0.50	U
67-66-3	Chloroform		0.50	U
71-55-6	1,1,1-Trichloroethane		0.50	U
110-82-7	Cyclohexane		0.50	U
56-23-5	Carbon tetrachloride		0.041	J B
71-43-2	Benzene		0.031	J
107-06-2	1,2-Dichloroethane		0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCQCTB-W-32885

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF14.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.12	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.073	J
179601-23-1	m,p-Xylene	0.10	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCQCTB-W-32885

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF14.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	4.01	0.52	J
02		Unknown	6.90	3.0	B X J
03	541-05-9	Cyclotrisiloxane, hexamethyl-	7.85	1.2	B J N
04		Unknown siloxane derivative	10.69	1.3	B J
05	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

MCSB1S-W-32879

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF09.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 11.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
75-71-8	Dichlorodifluoromethane	5.5	U
74-87-3	Chloromethane	5.5	U
75-01-4	Vinyl chloride	5.5	U
74-83-9	Bromomethane	5.5	U
75-00-3	Chloroethane	5.5	U
75-69-4	Trichlorofluoromethane	5.5	U
75-35-4	1,1-Dichloroethene	5.5	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.5	U
67-64-1	Acetone	13	J B
75-15-0	Carbon disulfide	0.54	J B
79-20-9	Methyl acetate	5.5	U
75-09-2	Methylene Chloride	15	B
156-60-5	trans-1,2-Dichloroethene	5.5	U
1634-04-4	Methyl tert-butyl ether	5.5	U
75-34-3	1,1-Dichloroethane	5.5	U
156-59-2	cis-1,2-Dichloroethene	5.5	U
78-93-3	2-Butanone	55	U
74-97-5	Bromochloromethane	5.5	U
67-66-3	Chloroform	1600	E
71-55-6	1,1,1-Trichloroethane	5.5	U
110-82-7	Cyclohexane	5.5	U
56-23-5	Carbon tetrachloride	3000	E B
71-43-2	Benzene	5.5	U
107-06-2	1,2-Dichloroethane	11	

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCSB1S-W-32879

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF09.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 11.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	5.5	U
108-87-2	Methylcyclohexane	5.5	U
78-87-5	1,2-Dichloropropane	5.5	U
75-27-4	Bromodichloromethane	5.5	U
10061-01-5	cis-1,3-Dichloropropene	5.5	U
108-10-1	4-Methyl-2-pentanone	55	U
108-88-3	Toluene	0.36	J
10061-02-6	trans-1,3-Dichloropropene	5.5	U
79-00-5	1,1,2-Trichloroethane	5.5	U
127-18-4	Tetrachloroethene	2.4	J B
591-78-6	2-Hexanone	55	U
124-48-1	Dibromochloromethane	5.5	U
106-93-4	1,2-Dibromoethane	5.5	U
108-90-7	Chlorobenzene	5.5	U
100-41-4	Ethylbenzene	5.5	U
95-47-6	o-Xylene	5.5	U
179601-23-1	m, p-Xylene	5.5	U
100-42-5	Styrene	5.5	U
75-25-2	Bromoform	5.5	U
98-82-8	Isopropylbenzene	5.5	U
79-34-5	1,1,2,2-Tetrachloroethane	5.5	U
541-73-1	1,3-Dichlorobenzene	5.5	U
106-46-7	1,4-Dichlorobenzene	5.5	U
95-50-1	1,2-Dichlorobenzene	5.5	U
96-12-8	1,2-Dibromo-3-Chloropropane	5.5	U
120-82-1	1,2,4-Trichlorobenzene	5.5	U
87-61-6	1,2,3-Trichlorobenzene	5.5	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCSB1S-W-32879

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF09.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 11.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	Unknown	6.90	34	B X J
02	E966796 <sup>1</sup> Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.



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

EPA SAMPLE NO.  
MCSB1S-W-32879DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF08.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 302.5  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
75-71-8	Dichlorodifluoromethane	150	U
74-87-3	Chloromethane	150	U
75-01-4	Vinyl chloride	150	U
74-83-9	Bromomethane	150	U
75-00-3	Chloroethane	150	U
75-69-4	Trichlorofluoromethane	150	U
75-35-4	1,1-Dichloroethene	150	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	150	U
67-64-1	Acetone	310	J D B
75-15-0	Carbon disulfide	15	J D B
79-20-9	Methyl acetate	150	U
75-09-2	Methylene Chloride	31	J D B
156-60-5	trans-1,2-Dichloroethene	150	U
1634-04-4	Methyl tert-butyl ether	15	J D
75-34-3	1,1-Dichloroethane	150	U
156-59-2	cis-1,2-Dichloroethene	150	U
78-93-3	2-Butanone	1500	U
74-97-5	Bromochloromethane	150	U
67-66-3	Chloroform	1800	D
71-55-6	1,1,1-Trichloroethane	150	U
110-82-7	Cyclohexane	150	U
56-23-5	Carbon tetrachloride	4300	D B
71-43-2	Benzene	150	U
107-06-2	1,2-Dichloroethane	150	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.  
MCSB1S-W-32879DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF08.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 302.5  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	150	U
108-87-2	Methylcyclohexane	150	U
78-87-5	1,2-Dichloropropane	150	U
75-27-4	Bromodichloromethane	150	U
10061-01-5	cis-1,3-Dichloropropene	150	U
108-10-1	4-Methyl-2-pentanone	1500	U
108-88-3	Toluene	150	U
10061-02-6	trans-1,3-Dichloropropene	150	U
79-00-5	1,1,2-Trichloroethane	150	U
127-18-4	Tetrachloroethene	4.8	J D B
591-78-6	2-Hexanone	1500	U
124-48-1	Dibromochloromethane	150	U
106-93-4	1,2-Dibromoethane	150	U
108-90-7	Chlorobenzene	150	U
100-41-4	Ethylbenzene	150	U
95-47-6	o-Xylene	150	U
179601-23-1	m,p-Xylene	150	U
100-42-5	Styrene	150	U
75-25-2	Bromoform	150	U
98-82-8	Isopropylbenzene	150	U
79-34-5	1,1,2,2-Tetrachloroethane	150	U
541-73-1	1,3-Dichlorobenzene	150	U
106-46-7	1,4-Dichlorobenzene	150	U
95-50-1	1,2-Dichlorobenzene	150	U
96-12-8	1,2-Dibromo-3-Chloropropane	150	U
120-82-1	1,2,4-Trichlorobenzene	150	U
87-61-6	1,2,3-Trichlorobenzene	150	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
 MCSB1S-W-32879DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF08.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 302.5  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	970	B X D
02	E966796 <sup>1</sup>	Total Alkanes	N/A		J

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

MCSB27D-W-32893

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-5  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF05.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	3.7	J B
75-15-0	Carbon disulfide	0.11	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.054	J B
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.064	J
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.91	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	2.4	B
71-43-2	Benzene	0.066	J
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.  
MCSB27D-W-32893

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-5  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF05.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.21	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.023	J B
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.087	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCSB27D-W-32893

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-5  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF05.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	593-79-3	Dimethyl selenide	3.53	1.5	J N
02		Unknown	6.90	3.2	B X J
03	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

MCSB38M-W-32889

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF04.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	2.1	J B
75-15-0	Carbon disulfide	0.15	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.056	J
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.044	J B
71-43-2	Benzene	0.026	J
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCSB38M-W-32889

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF04.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.20	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.032	J
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.11	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U



1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCSB38M-W-32889

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF04.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.2	B X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.85	1.3	B J N
03		Unknown siloxane derivative	10.69	1.5	B J
04	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

MCSB41D-W-23882

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF12.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.7  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
75-71-8	Dichlorodifluoromethane	0.85	U
74-87-3	Chloromethane	0.85	U
75-01-4	Vinyl chloride	0.85	U
74-83-9	Bromomethane	0.85	U
75-00-3	Chloroethane	0.85	U
75-69-4	Trichlorofluoromethane	0.85	U
75-35-4	1,1-Dichloroethene	0.85	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.85	U
67-64-1	Acetone	6.4	J B
75-15-0	Carbon disulfide	0.10	J B
79-20-9	Methyl acetate	0.85	U
75-09-2	Methylene Chloride	0.49	J B
156-60-5	trans-1,2-Dichloroethene	0.85	U
1634-04-4	Methyl tert-butyl ether	0.85	U
75-34-3	1,1-Dichloroethane	0.85	U
156-59-2	cis-1,2-Dichloroethene	0.85	U
78-93-3	2-Butanone	8.5	U
74-97-5	Bromochloromethane	0.85	U
67-66-3	Chloroform	54	E
71-55-6	1,1,1-Trichloroethane	0.85	U
110-82-7	Cyclohexane	0.85	U
56-23-5	Carbon tetrachloride	11	B
71-43-2	Benzene	0.11	J
107-06-2	1,2-Dichloroethane	0.85	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.  
MCSB41D-W-23882

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF12.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.7  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.85	U
108-87-2	Methylcyclohexane	0.85	U
78-87-5	1,2-Dichloropropane	0.85	U
75-27-4	Bromodichloromethane	0.85	U
10061-01-5	cis-1,3-Dichloropropene	0.85	U
108-10-1	4-Methyl-2-pentanone	8.5	U
108-88-3	Toluene	0.26	J
10061-02-6	trans-1,3-Dichloropropene	0.85	U
79-00-5	1,1,2-Trichloroethane	0.85	U
127-18-4	Tetrachloroethene	0.053	J B
591-78-6	2-Hexanone	8.5	U
124-48-1	Dibromochloromethane	0.85	U
106-93-4	1,2-Dibromoethane	0.85	U
108-90-7	Chlorobenzene	0.85	U
100-41-4	Ethylbenzene	0.85	U
95-47-6	o-Xylene	0.85	U
179601-23-1	m,p-Xylene	0.14	J
100-42-5	Styrene	0.85	U
75-25-2	Bromoform	0.85	U
98-82-8	Isopropylbenzene	0.85	U
79-34-5	1,1,2,2-Tetrachloroethane	0.85	U
541-73-1	1,3-Dichlorobenzene	0.85	U
106-46-7	1,4-Dichlorobenzene	0.85	U
95-50-1	1,2-Dichlorobenzene	0.85	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.85	U
120-82-1	1,2,4-Trichlorobenzene	0.85	U
87-61-6	1,2,3-Trichlorobenzene	0.85	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCSB41D-W-23882

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF12.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.7  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	593-79-3	Dimethyl selenide	3.53	1.1	J N
02		Unknown	6.90	5.6	B X J
03	541-05-9	Cyclotrisiloxane, hexamethyl-	7.85	2.3	B J N
04		Unknown siloxane derivative	10.69	2.2	B J
05	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.  
MCSB41D-W-23882DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF07.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 3.3  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/kg)	ug/L	
75-71-8	Dichlorodifluoromethane		1.6	U
74-87-3	Chloromethane		1.6	U
75-01-4	Vinyl chloride		1.6	U
74-83-9	Bromomethane		1.6	U
75-00-3	Chloroethane		1.6	U
75-69-4	Trichlorofluoromethane		1.6	U
75-35-4	1,1-Dichloroethene		1.6	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		1.6	U
67-64-1	Acetone		7.0	J D B
75-15-0	Carbon disulfide		0.21	J D B
79-20-9	Methyl acetate		1.6	U
75-09-2	Methylene Chloride		0.47	J D B
156-60-5	trans-1,2-Dichloroethene		1.6	U
1634-04-4	Methyl tert-butyl ether		1.6	U
75-34-3	1,1-Dichloroethane		1.6	U
156-59-2	cis-1,2-Dichloroethene		1.6	U
78-93-3	2-Butanone		16	U
74-97-5	Bromochloromethane		1.6	U
67-66-3	Chloroform		52	D
71-55-6	1,1,1-Trichloroethane		1.6	U
110-82-7	Cyclohexane		1.6	U
56-23-5	Carbon tetrachloride		10	D B
71-43-2	Benzene		0.10	J D
107-06-2	1,2-Dichloroethane		1.6	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.  
MCSB41D-W-23882DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF07.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 3.3  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	1.6	U
108-87-2	Methylcyclohexane	1.6	U
78-87-5	1,2-Dichloropropane	1.6	U
75-27-4	Bromodichloromethane	1.6	U
10061-01-5	cis-1,3-Dichloropropene	1.6	U
108-10-1	4-Methyl-2-pentanone	16	U
108-88-3	Toluene	0.27	J D
10061-02-6	trans-1,3-Dichloropropene	1.6	U
79-00-5	1,1,2-Trichloroethane	1.6	U
127-18-4	Tetrachloroethene	1.6	U
591-78-6	2-Hexanone	16	U
124-48-1	Dibromochloromethane	1.6	U
106-93-4	1,2-Dibromoethane	1.6	U
108-90-7	Chlorobenzene	1.6	U
100-41-4	Ethylbenzene	0.055	J D
95-47-6	o-Xylene	1.6	U
179601-23-1	m,p-Xylene	0.14	J D
100-42-5	Styrene	1.6	U
75-25-2	Bromoform	1.6	U
98-82-8	Isopropylbenzene	1.6	U
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U
541-73-1	1,3-Dichlorobenzene	1.6	U
106-46-7	1,4-Dichlorobenzene	1.6	U
95-50-1	1,2-Dichlorobenzene	1.6	U
96-12-8	1,2-Dibromo-3-Chloropropane	1.6	U
120-82-1	1,2,4-Trichlorobenzene	1.6	U
87-61-6	1,2,3-Trichlorobenzene	1.6	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
 MCSB41D-W-23882DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF07.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 3.3  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	10	B X D J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.  
MCSB27D-W-32893

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-6  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF06.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	11	B
75-15-0	Carbon disulfide	0.077	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.47	J B
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	8.7	
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	7.3	B
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only



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

EPA SAMPLE NO.

MCSB27D-W-32893

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-6  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF06.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	6.0	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.20	J B
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.10	J
179601-23-1	m,p-Xylene	0.31	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
 MCSB27D-W-32893

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.:            SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-6  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF06.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 04/08/2011  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume:                      (uL) Soil Aliquot Volume:            (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.3	B X J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

6A - FORM VI VOA-1  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Instrument ID: J.i Calibration Date(s): 03/24/2011 03/24/2011  
 Heated Purge: (Y/N) N Calibration Time(s): 1408 1549  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

LAB FILE ID: \_\_\_\_\_ RRF0.5 = JCU03.D RRF1.0 = JCU04.D  
 RRF5.0 = JCU05.D RRF10 = JCU06.D RRF20 = JCU07.D

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
Dichlorodifluoromethane	0.544	0.601	0.553	0.532	0.488	0.544	7.4
Chloromethane	0.438	0.442	0.422	0.410	0.366	0.416	7.4
Vinyl chloride	0.429	0.440	0.423	0.405	0.362	0.412	7.5
Bromomethane	0.233	0.236	0.233	0.204	0.180	0.217	11.2
Chloroethane	0.222	0.244	0.222	0.213	0.190	0.218	8.9
Trichlorofluoromethane	0.644	0.635	0.621	0.602	0.549	0.610	6.2
1,1-Dichloroethene	0.286	0.304	0.308	0.289	0.255	0.288	7.3
1,1,2-Trichloro- 1,2,2-trifluoroethane	0.345	0.374	0.349	0.334	0.301	0.341	7.8
Acetone	0.018	0.015	0.015	0.016	0.014	0.016	10.8
Carbon disulfide	0.991	0.897	0.906	0.850	0.813	0.891	7.5
Methyl acetate	0.041	0.052	0.045	0.046	0.044	0.046	9.0
Methylene Chloride	0.277	0.265	0.272	0.261	0.246	0.264	4.5
trans-1,2-Dichloroethene	0.336	0.336	0.349	0.338	0.315	0.335	3.7
Methyl tert-butyl ether	0.361	0.385	0.390	0.394	0.382	0.382	3.3
1,1-Dichloroethane	0.577	0.568	0.566	0.558	0.520	0.558	3.9
cis-1,2-Dichloroethene	0.306	0.331	0.326	0.325	0.307	0.319	3.6
2-Butanone	0.020	0.025	0.026	0.026	0.026	0.024	11.2
Bromochloromethane	0.107	0.109	0.108	0.104	0.101	0.106	2.8
Chloroform	0.528	0.560	0.559	0.537	0.510	0.539	4.0
1,1,1-Trichloroethane	0.679	0.694	0.719	0.682	0.674	0.689	2.6
Cyclohexane	0.603	0.630	0.720	0.698	0.699	0.670	7.5
Carbon tetrachloride	0.610	0.622	0.658	0.634	0.630	0.631	2.8
Benzene	1.466	1.610	1.649	1.624	1.611	1.592	4.5
1,2-Dichloroethane	0.210	0.221	0.217	0.226	0.208	0.216	3.7
Trichloroethene	0.384	0.414	0.421	0.408	0.410	0.407	3.4
Methylcyclohexane	0.464	0.484	0.516	0.519	0.515	0.500	4.9

Report 1,4-Dioxane for Low-Medium VOA analysis only

6B - FORM VI VOA-2  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Instrument ID: J.i Calibration Date(s): 03/24/2011 03/24/2011  
 Heated Purge: (Y/N) N Calibration Time(s): 1408 1549  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
LAB FILE ID: _____	RRF0.5 = <u>JCU03.D</u>	RRF1.0 = <u>JCU04.D</u>	RRF5.0 = <u>JCU05.D</u>	RRF10 = <u>JCU06.D</u>	RRF20 = <u>JCU07.D</u>		
1,2-Dichloropropane	0.311	0.297	0.328	0.313	0.308	0.311	3.5
Bromodichloromethane	0.380	0.377	0.389	0.382	0.376	0.381	1.3
cis-1,3-Dichloropropene	0.396	0.377	0.465	0.457	0.460	0.431	9.6
4-Methyl-2-pentanone	0.060	0.070	0.079	0.079	0.079	0.073	11.4
Toluene	1.553	1.602	1.797	1.747	1.684	1.677	6.0
trans-1,3-Dichloropropene	0.271	0.277	0.331	0.328	0.324	0.306	9.6
1,1,2-Trichloroethane	0.138	0.168	0.170	0.159	0.157	0.158	8.0
Tetrachloroethene	0.348	0.346	0.376	0.362	0.352	0.357	3.5
2-Hexanone	0.034	0.041	0.054	0.053	0.054	0.047	19.1
Dibromochloromethane	0.203	0.209	0.221	0.223	0.222	0.216	4.2
1,2-Dibromoethane	0.122	0.143	0.143	0.147	0.143	0.140	7.3
Chlorobenzene	0.996	1.039	1.018	1.004	0.985	1.008	2.1
Ethylbenzene	1.586	1.771	1.977	1.974	1.971	1.856	9.4
o-Xylene	0.596	0.606	0.702	0.705	0.706	0.663	8.5
m,p-Xylene	0.579	0.651	0.782	0.774	0.777	0.713	13.0
Styrene	0.706	0.892	1.074	1.093	1.078	0.969	17.4
Bromoform	0.232	0.195	0.213	0.201	0.214	0.211	6.7
Isopropylbenzene	1.462	1.631	2.003	2.029	2.015	1.828	14.4
1,1,2,2-Tetrachloroethane	0.131	0.153	0.146	0.144	0.143	0.144	5.4
1,3-Dichlorobenzene	1.461	1.504	1.618	1.535	1.520	1.528	3.8
1,4-Dichlorobenzene	1.511	1.553	1.598	1.527	1.521	1.542	2.3
1,2-Dichlorobenzene	1.169	1.252	1.285	1.245	1.246	1.240	3.5
1,2-Dibromo-3-Chloropropane	0.044	0.042	0.037	0.043	0.044	0.042	6.2
1,2,4-Trichlorobenzene	0.604	0.690	0.758	0.740	0.769	0.712	9.5
1,2,3-Trichlorobenzene	0.457	0.508	0.543	0.537	0.545	0.518	7.2

6C - FORM VI VOA-3  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Instrument ID: J.i Calibration Date(s): 03/24/2011 03/24/2011  
 Heated Purge: (Y/N) N Calibration Time(s): 1408 1549  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

LAB FILE ID: _____	RRF0.5 = <u>JCU03.D</u>	RRF1.0 = <u>JCU04.D</u>					
RRF5.0 = <u>JCU05.D</u>	RRF10 = <u>JCU06.D</u>	RRF20 = <u>JCU07.D</u>					
COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
Vinyl Chloride-d3	0.390	0.401	0.373	0.356	0.320	0.368	8.7
Chloroethane-d5	0.310	0.310	0.285	0.263	0.228	0.279	12.5
1,1-Dichloroethene-d2	0.600	0.671	0.636	0.611	0.555	0.615	7.0
2-Butanone-d5	0.025	0.025	0.026	0.027	0.026	0.026	4.1
Chloroform-d	0.587	0.591	0.583	0.565	0.535	0.572	4.0
1,2-Dichloroethane-d4	0.183	0.182	0.183	0.182	0.172	0.180	2.7
Benzene-d6	1.411	1.574	1.642	1.613	1.586	1.565	5.8
1,2-Dichloropropane-d6	0.419	0.358	0.427	0.419	0.359	0.396	8.8
Toluene-d8	1.263	1.374	1.546	1.505	1.445	1.427	7.8
trans-1,3-Dichloropropene-d4	0.238	0.255	0.297	0.300	0.296	0.277	10.3
2-Hexanone-d5	0.018	0.023	0.029	0.030	0.030	0.026	20.3
1,1,2,2-Tetrachloroethane-d2	0.140	0.151	0.154	0.151	0.147	0.149	3.7
1,2-Dichlorobenzene-d4	0.772	0.792	0.822	0.775	0.779	0.788	2.6

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Instrument ID: J.i Calibration Date: 04/12/2011 Time: 0746  
 Lab File Id: JCUF02.D Init. Calib. Date(s): 03/24/2011 03/24/2011  
 EPA Sample No. (VSTD####): VSTD005JX Init. Calib. Time(s): 1408 1549  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.544	0.480	0.010	-11.8	40.0
Chloromethane	0.416	0.334	0.010	-19.7	40.0
Vinyl chloride	0.412	0.344	0.010	-16.3	30.0
Bromomethane	0.217	0.161	0.100	-25.8	30.0
Chloroethane	0.218	0.174	0.010	-20.0	40.0
Trichlorofluoromethane	0.610	0.575	0.010	-5.8	40.0
1,1-Dichloroethene	0.288	0.277	0.100	-4.0	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.341	0.325	0.010	-4.7	40.0
Acetone	0.016	0.016	0.010	-0.6	40.0
Carbon disulfide	0.891	0.865	0.010	-3.0	40.0
Methyl acetate	0.046	0.045	0.010	-0.8	40.0
Methylene Chloride	0.264	0.274	0.010	3.5	40.0
trans-1,2-Dichloroethene	0.335	0.341	0.010	1.7	40.0
Methyl tert-butyl ether	0.382	0.414	0.010	8.4	40.0
1,1-Dichloroethane	0.558	0.562	0.200	0.7	30.0
cis-1,2-Dichloroethene	0.319	0.339	0.010	6.2	40.0
2-Butanone	0.024	0.027	0.010	9.4	40.0
Bromochloromethane	0.106	0.115	0.050	8.8	30.0
Chloroform	0.539	0.556	0.200	3.2	30.0
1,1,1-Trichloroethane	0.689	0.721	0.100	4.5	30.0
Cyclohexane	0.670	0.708	0.010	5.6	40.0
Carbon tetrachloride	0.631	0.687	0.100	8.8	30.0
Benzene	1.592	1.662	0.400	4.4	30.0
1,2-Dichloroethane	0.216	0.227	0.100	4.8	30.0
Trichloroethene	0.407	0.439	0.300	7.8	30.0
Methylcyclohexane	0.500	0.526	0.010	5.3	40.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Instrument ID: J.i Calibration Date: 04/12/2011 Time: 0746  
 Lab File Id: JCUF02.D Init. Calib. Date(s): 03/24/2011 03/24/2011  
 EPA Sample No. (VSTD####): VSTD005JX Init. Calib. Time(s): 1408 1549  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.311	0.328	0.010	5.2	40.0
Bromodichloromethane	0.381	0.409	0.200	7.4	30.0
cis-1,3-Dichloropropene	0.431	0.478	0.200	11.0	30.0
4-Methyl-2-pentanone	0.073	0.084	0.010	13.9	40.0
Toluene	1.677	1.812	0.400	8.1	30.0
trans-1,3-Dichloropropene	0.306	0.339	0.100	10.8	30.0
1,1,2-Trichloroethane	0.158	0.173	0.100	9.1	30.0
Tetrachloroethene	0.357	0.393	0.100	10.2	30.0
2-Hexanone	0.047	0.056	0.010	17.8	40.0
Dibromochloromethane	0.216	0.249	0.100	15.2	30.0
1,2-Dibromoethane	0.140	0.159	0.010	13.6	40.0
Chlorobenzene	1.008	1.083	0.500	7.4	30.0
Ethylbenzene	1.856	1.999	0.100	7.7	30.0
o-Xylene	0.663	0.734	0.300	10.7	30.0
m,p-Xylene	0.713	0.802	0.300	12.5	30.0
Styrene	0.969	1.127	0.300	16.4	30.0
Bromoform	0.211	0.261	0.050	23.5	30.0
Isopropylbenzene	1.828	2.049	0.010	12.1	40.0
1,1,2,2-Tetrachloroethane	0.144	0.159	0.100	10.9	30.0
1,3-Dichlorobenzene	1.528	1.688	0.400	10.5	30.0
1,4-Dichlorobenzene	1.542	1.695	0.400	9.9	30.0
1,2-Dichlorobenzene	1.240	1.382	0.400	11.4	30.0
1,2-Dibromo-3-Chloropropane	0.042	0.044	0.010	4.9	40.0
1,2,4-Trichlorobenzene	0.712	0.786	0.200	10.4	30.0
1,2,3-Trichlorobenzene	0.518	0.544	0.200	5.1	30.0

7C - FORM VII VOA-3  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Instrument ID: J.i Calibration Date: 04/12/2011 Time: 0746  
 Lab File Id: JCUF02.D Init. Calib. Date(s): 03/24/2011 03/24/2011  
 EPA Sample No. (VSTD####): VSTD005JX Init. Calib. Time(s): 1408 1549  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.368	0.294	0.010	-20.1	30.0
Chloroethane-d5	0.279	0.222	0.010	-20.7	40.0
1,1-Dichloroethene-d2	0.615	0.549	0.010	-10.7	30.0
2-Butanone-d5	0.026	0.026	0.010	0.9	40.0
Chloroform-d	0.572	0.570	0.010	-0.4	30.0
1,2-Dichloroethane-d4	0.180	0.189	0.010	4.8	30.0
Benzene-d6	1.565	1.574	0.010	0.5	30.0
1,2-Dichloropropane-d6	0.396	0.425	0.010	7.1	40.0
Toluene-d8	1.427	1.533	0.010	7.5	30.0
trans-1,3-Dichloropropene-d4	0.277	0.303	0.010	9.3	30.0
2-Hexanone-d5	0.026	0.030	0.010	15.0	40.0
1,1,2,2-Tetrachloroethane-d2	0.149	0.157	0.010	5.8	30.0
1,2-Dichlorobenzene-d4	0.788	0.833	0.010	5.7	30.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only



7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Instrument ID: J.i Calibration Date: 04/12/2011 Time: 1416  
 Lab File Id: JCUF16.D Init. Calib. Date(s): 03/24/2011 03/24/2011  
 EPA Sample No. (VSTD####): VSTD005XJ Init. Calib. Time(s): 1408 1549  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.544	0.481	0.010	-11.6	50.0
Chloromethane	0.416	0.310	0.010	-25.4	50.0
Vinyl chloride	0.412	0.320	0.010	-22.2	50.0
Bromomethane	0.217	0.180	0.010	-17.2	50.0
Chloroethane	0.218	0.180	0.010	-17.3	50.0
Trichlorofluoromethane	0.610	0.584	0.010	-4.4	50.0
1,1-Dichloroethene	0.288	0.272	0.010	-5.6	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.341	0.327	0.010	-4.0	50.0
Acetone	0.016	0.014	0.010	-13.7	50.0
Carbon disulfide	0.891	0.763	0.010	-14.4	50.0
Methyl acetate	0.046	0.042	0.010	-8.5	50.0
Methylene Chloride	0.264	0.255	0.010	-3.4	50.0
trans-1,2-Dichloroethene	0.335	0.331	0.010	-1.2	50.0
Methyl tert-butyl ether	0.382	0.378	0.010	-1.0	50.0
1,1-Dichloroethane	0.558	0.526	0.010	-5.8	50.0
cis-1,2-Dichloroethene	0.319	0.315	0.010	-1.1	50.0
2-Butanone	0.024	0.023	0.010	-7.6	50.0
Bromochloromethane	0.106	0.111	0.010	5.0	50.0
Chloroform	0.539	0.541	0.010	0.4	50.0
1,1,1-Trichloroethane	0.689	0.710	0.010	2.9	50.0
Cyclohexane	0.670	0.637	0.010	-4.9	50.0
Carbon tetrachloride	0.631	0.681	0.010	7.9	50.0
Benzene	1.592	1.559	0.010	-2.1	50.0
1,2-Dichloroethane	0.216	0.230	0.010	6.5	50.0
Trichloroethene	0.407	0.419	0.010	2.9	50.0
Methylcyclohexane	0.500	0.487	0.010	-2.6	50.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Instrument ID: J.i Calibration Date: 04/12/2011 Time: 1416  
 Lab File Id: JCUF16.D Init. Calib. Date(s): 03/24/2011 03/24/2011  
 EPA Sample No. (VSTD####): VSTD005XJ Init. Calib. Time(s): 1408 1549  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.311	0.282	0.010	-9.5	50.0
Bromodichloromethane	0.381	0.388	0.010	2.0	50.0
cis-1,3-Dichloropropene	0.431	0.456	0.010	5.8	50.0
4-Methyl-2-pentanone	0.073	0.071	0.010	-3.7	50.0
Toluene	1.677	1.720	0.010	2.6	50.0
trans-1,3-Dichloropropene	0.306	0.328	0.010	7.0	50.0
1,1,2-Trichloroethane	0.158	0.170	0.010	7.4	50.0
Tetrachloroethene	0.357	0.392	0.010	10.0	50.0
2-Hexanone	0.047	0.046	0.010	-2.3	50.0
Dibromochloromethane	0.216	0.236	0.010	9.4	50.0
1,2-Dibromoethane	0.140	0.151	0.010	8.2	50.0
Chlorobenzene	1.008	1.037	0.010	2.9	50.0
Ethylbenzene	1.856	1.937	0.010	4.4	50.0
o-Xylene	0.663	0.708	0.010	6.8	50.0
m,p-Xylene	0.713	0.777	0.010	9.0	50.0
Styrene	0.969	1.075	0.010	11.0	50.0
Bromoform	0.211	0.226	0.010	7.1	50.0
Isopropylbenzene	1.828	1.986	0.010	8.6	50.0
1,1,2,2-Tetrachloroethane	0.144	0.143	0.010	-0.7	50.0
1,3-Dichlorobenzene	1.528	1.631	0.010	6.8	50.0
1,4-Dichlorobenzene	1.542	1.607	0.010	4.2	50.0
1,2-Dichlorobenzene	1.240	1.325	0.010	6.9	50.0
1,2-Dibromo-3-Chloropropane	0.042	0.040	0.010	-5.5	50.0
1,2,4-Trichlorobenzene	0.712	0.763	0.010	7.1	50.0
1,2,3-Trichlorobenzene	0.518	0.509	0.010	-1.8	50.0

7C - FORM VII VOA-3  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Instrument ID: J.i Calibration Date: 04/12/2011 Time: 1416  
 Lab File Id: JCUF16.D Init. Calib. Date(s): 03/24/2011 03/24/2011  
 EPA Sample No. (VSTD####): VSTD005XJ Init. Calib. Time(s): 1408 1549  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.368	0.282	0.010	-23.5	50.0
Chloroethane-d5	0.279	0.220	0.010	-21.2	50.0
1,1-Dichloroethene-d2	0.615	0.556	0.010	-9.5	50.0
2-Butanone-d5	0.026	0.022	0.010	-13.8	50.0
Chloroform-d	0.572	0.555	0.010	-3.0	50.0
1,2-Dichloroethane-d4	0.180	0.183	0.010	1.5	50.0
Benzene-d6	1.565	1.492	0.010	-4.7	50.0
1,2-Dichloropropane-d6	0.396	0.384	0.010	-3.0	50.0
Toluene-d8	1.427	1.464	0.010	2.6	50.0
trans-1,3-Dichloropropene-d4	0.277	0.285	0.010	2.9	50.0
2-Hexanone-d5	0.026	0.026	0.010	-1.2	50.0
1,1,2,2-Tetrachloroethane-d2	0.149	0.143	0.010	-3.4	50.0
1,2-Dichlorobenzene-d4	0.788	0.791	0.010	0.4	50.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

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

EPA SAMPLE NO.

VBLKJX

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-16411/3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF03.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.8	J
75-15-0	Carbon disulfide	0.16	J
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.034	J
156-60-5	trans-1,2-Dichloroethene	0.040	J
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.026	J
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VBLKJX

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-16411/3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF03.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.020	J
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.072	J
87-61-6	1,2,3-Trichlorobenzene	0.12	J

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKJX

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-16411/3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF03.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.3	X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.85	0.86	J N
03		Unknown siloxane derivative	10.69	0.92	J
04	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-7  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF15.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	0.91	J B
75-15-0	Carbon disulfide	0.044	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.041	J B
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-7  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF15.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.0049	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U



1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-4605-7  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF15.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.0	B X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.85	0.79	B J N
03		Unknown siloxane derivative	10.69	0.78	B J
04	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

VIBLKJX

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-16411/10  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF10.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.0	J B
75-15-0	Carbon disulfide	0.046	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.044	J B
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.15	J
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.30	J B
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VIBLKJX

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-16411/10  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF10.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
 VIBLKJX

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-16411/10  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF10.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.2	B X J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

VIBLKJZ

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-16411/13  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF13.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	2.6	J B
75-15-0	Carbon disulfide	0.047	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.052	J B
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.056	J
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.051	J B
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VIBLKJZ

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-16411/13  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF13.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VIBLKJZ

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-4605  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-16411/13  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCUF13.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 04/12/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.2	B X J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

## ANALYTICAL REPORT

Job Number: 200-5223-1

SDG Number: 200-5223

Job Description: Montgomery City (200-5223)

Contract Number: EP-W-09-044

For:

Argonne National Laboratory

9700 South Cass Avenue

Building 203

Office B-149

Argonne, IL 60439

Attention: Mr. Clyde Dennis



Approved for release.  
Kirk F Young  
Project Manager I  
5/24/2011 7:25 AM

---

Kirk F Young

Project Manager I

kirk.young@testamericainc.com

05/24/2011

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory



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## CASE NARRATIVE

**Client: Argonne National Laboratory**

**Project: Montgomery City (200-5223)**

**Report Number: 200-5223-1**

Enclosed is the data set for the referenced project work. With the exceptions noted as flags or footnotes, standard analytical protocols were followed in performing the analytical work and the applied control limits were met.

Calculations were performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### Receipt

The samples were received on 05/18/2011. 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, as received, were not acid preserved. On that basis, the laboratory did provide for the analytical work to be performed within seven days of sample collection.

### SOM01.2 Volatile Organics (Trace Level Water)

A storage blank was prepared for volatile organics analysis, and stored in association with the storage of the samples. That storage blank, identified as VHBLK01, was carried through the holding period with the samples, and analyzed.

Each sample was analyzed without a dilution. An additional, dilution analysis was performed on sample MCSB01M-W-33290 in order to provide quantification within the range of calibrated instrument response. Both sets of results for the analysis of sample MCSB01M-W-33290 are included in this submittal.

Each of the analyses associated with the sample set exhibited an acceptable internal standard performance. There was an acceptable recovery of each deuterated monitoring compound (DMC) in the analysis of the method blank and instrument blank associated with the analytical work, and in the analysis of the storage blank associated with the sample set. The analysis of the samples in this sample set did meet the technical acceptance criteria specific to DMC recoveries, although not all DMC recoveries were within the control range in each analysis. The technical acceptance criteria does provide for the recovery of up to three DMCs to fall outside of the control range in the analysis of field samples. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. Trace concentrations of acetone, carbon disulfide, and trans-1,2-dichloroethene were identified in the analysis of the method blank associated with the analytical work. The concentration of each compound in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant method blank analysis. A trace concentration of carbon tetrachloride was identified in the analysis of the storage blank associated with the sample set. The concentration of carbon tetrachloride in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant storage blank analysis. Trace concentrations of carbon

disulfide, methylene chloride, and carbon tetrachloride were identified in the analysis of the instrument blank associated with the sample set. The concentration of each compound in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant instrument blank analysis. Present in the method blank, storage blank, and instrument blank analyses was a non-target constituent that represents a compound that is related to the DMC formulation. The fact that the presence of this compound is not within the laboratory's control is at issue. The derived results for that compound have been qualified with an "X" qualifier to reflect the source of the contamination.

The responses for each of the target analytes met the relative standard deviation criterion in the initial calibration. The response for each target analyte met the percent difference criterion in the opening/continuing calibration check acquisition. The response for each target analyte met the 50.0 percent difference criterion in the closing calibration check acquisition.

The primary quantitation mass for methylcyclohexane that is specified in the Statement of Work is mass 83. The laboratory did identify a contribution to mass 83 from 1,2-dichloropropane-d<sub>6</sub>, one of the deuterated monitoring compounds (DMCs). The laboratory did change the primary quantitation mass assignment to mass 55 for the quantification of methylcyclohexane.

Manual integration was employed in deriving certain of the analytical results. The values that have been derived from manual integration are qualified on the quantitation reports. Extracted ion current profiles for each manual integration are included in the data package, and further documented at the end of this submittal.

## DATA REPORTING QUALIFIERS

Client: Argonne National Laboratory

Job Number: 200-5223-1

Sdg Number: 200-5223

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	E	Compound concentration exceeds the upper level of the calibration range of the instrument for that specific analysis.
	J	Indicates an Estimated Value for TICs
	J	Indicates an estimated value.
	D	Sample was analyzed at a higher dilution factor.
	X	See case narrative notes for explanation of the 'X' flag
	*	Surrogate exceeds the control limit
	B	The analyte was found in an associated blank, as well as in the sample.
	N	This flag indicates the presumptive evidence of a compound.

MATRIX: <i>Water</i>		ARGONNE NATIONAL LABORATORY				Shipping Container No.		
RECEIVING LAB: <i>Test America</i>		CHAIN OF CUSTODY RECORD*				Shipping Info:		
PROJECT/SITE: <i>Montgomery City, Mo</i>		ANALYSIS				ANL Field Contact (Name & Temporary Phone):		
SAMPLER(S) (Signature) <i>[Signature]</i>		Number of con-tainers				REMARKS		
DATE OF COLLECTION		SAMPLE ID NUMBER(S)						
<i>5/17/2011</i>	<i>MCSB54D-W-33295</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2x40ml for VOC to TA</i>		
<i>5/17/2011</i>	<i>MCSB01M-W-33290</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2x40ml for VOC to TA</i>		
<i>5/17/2011</i>	<i>MCQCTB-W-33303</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2x40ml for VOC to TA</i>		
<div style="display: flex; justify-content: space-between;"> <span>Relinquished by (Signature) <i>[Signature]</i></span> <span>Received by (Signature) <i>[Signature]</i></span> </div> <div style="display: flex; justify-content: space-between;"> <span>Date <i>5/17/2011</i></span> <span>Date</span> </div> <div style="display: flex; justify-content: space-between;"> <span>Time <i>15:10</i></span> <span>Time</span> </div>								
<div style="display: flex; justify-content: space-between;"> <span>Relinquished by (Signature) <i>[Signature]</i></span> <span>Received for Laboratory by <i>[Signature]</i></span> </div> <div style="display: flex; justify-content: space-between;"> <span>Date</span> <span>Date <i>05/18/11</i></span> </div> <div style="display: flex; justify-content: space-between;"> <span>Time</span> <span>Time <i>1030</i></span> </div>								
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 Research Division, 9700 S. Cass Avenue, Argonne, IL 60439								







# Shipping and Receiving Documents

FedEx USA AIRMAIL

840567181988

0200

10/10/01

0604-0552 0

B SEDIVA

402 405-9021

ARCADE LAB

401 PROFESSIONAL AVE #6

ALBANY

AVE 68504

877-55-107

KICK YARD

802 660-1990

TEX ARCADE

3000 WINDY HILL

DATE

VF 05405

8405 6718 1988



446

WCS1 03

Rev One 10/01 • Part #15162\*

## Login Sample Receipt Checklist

Client: Argonne National Laboratory

Job Number: 200-5223-1

SDG Number: 200-5223

**Login Number: 5223**

**List Source: TestAmerica Burlington**

**List Number: 2**

**Creator: Matot, Wade M**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.6 °C, IR gun ID 96, CF= 0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	N/A	No collection times on COC
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	Sample volumes received unpreserved.
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level if required.

## Sample Login Acknowledgement

**Job 200-5223-1**

<b>Client Job Description:</b>	Montgomery City (200-5223)	<b>Report To:</b>	Argonne National Laboratory
<b>Purchase Order #:</b>	8E-00302		Jorge Alvarado
<b>Work Order #:</b>	8E-00302		9700 South Cass Avenue
<b>Project Manager:</b>	Kirk F Young		Building 203
<b>Job Due Date:</b>	6/1/2011		Office B-149
<b>Job TAT:</b>	14 Days		Argonne, IL 60439
<b>Max Deliverable Level:</b>	IV	<b>Bill To:</b>	Argonne National Laboratory
			Accounts Payable
<b>Earliest Deliverable Due:</b>	6/1/2011		Chief Financial Offices
			9700 S. Cass Ave.
			Building 201
			Argonne, IL 60439

**Login 200-5223**

<b>Sample Receipt:</b>	5/18/2011 10:30:00 AM	<b>Number of Coolers:</b>	1
<b>Method of Delivery:</b>	FedEx Priority Overnight	<b>Cooler Temperature(s) (C°):</b>	1.6;

Lab Sample #	Client Sample ID	Date Sampled	Matrix	Rpt Basis	Dry / Wet **
Method	Method Description / Work Location				
200-5223-1	MCSB54D-W-33295	5/17/2011 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-5223-2	MCSB01M-W-33290	5/17/2011 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-5223-3	MCQCTB-W-33303	5/17/2011 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-5223-4	VHBLK01	5/18/2011 3:00:00 PM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet

\* Method on-hold

\*\* Wet/Dry indicates whether the reported results will be corrected for moisture content, and based on sample Wet weight or Dry

## METHODOLOGY SUMMARY

Laboratory: TestAmerica Laboratories

Project No:

Location: South Burlington, Vermont

SDG No: 200-5223

### VOA

Volatile Organics Trace - USEPA CLP SOM01.2

2A - FORM II VOA-1  
 WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON

Contract: 8E-00302

Lab Code: STLV

Case No.: MONTGO Mod. Ref No.:

SDG No.: 200-5223

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLKJD	113	106	79	130	108	114	98
02	MCQCTB-W-33303	107	99	74	114	100	106	94
03	MCSB54D-W-3329 5	111	102	77	253 *	106	114	95
04	MCSB01M-W-3329 0	98	91	67	184 *	122 *	102	111
05	MCSB01M-W-3329 0DL	103	101	74	111	94	112	98
06	VHBLK01	111	102	74	113	95	114	95

VDMC1 (VCL) = Vinyl Chloride-d3  
 VDMC2 (CLA) = Chloroethane-d5  
 VDMC3 (DCE) = 1,1-Dichloroethene-d2  
 VDMC4 (BUT) = 2-Butanone-d5  
 VDMC5 (CLF) = Chloroform-d  
 VDMC6 (DCA) = 1,2-Dichloroethane-d4  
 VDMC7 (BEN) = Benzene-d6

QC LIMITS

(65-131)  
 (71-131)  
 (55-104)  
 (49-155)  
 (78-121)  
 (78-129)  
 (77-124)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits

2B - FORM II VOA-2  
WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (TCA) #	VDMC13 (DCZ) #	OTHER	TOT OUT
01	VBLKJD	86	98	102	100	109	109		0
02	MCQCTB-W-33303	81	95	98	96	93	94		0
03	MCSB54D-W-3329 5	84	91	96	219 *	93	94		2
04	MCSB01M-W-3329 0	90	102	95	206 *	94	90		3
05	MCSB01M-W-3329 ODL	88	100	100	100	94	107		0
06	VHBLK01	83	93	96	98	93	97		0

VDMC8 (DPA) = 1,2-Dichloropropane-d6  
 VDMC9 (TOL) = Toluene-d8  
 VDMC10 (TDP) = trans-1,3-Dichloropropene-d4  
 VDMC11 (HEX) = 2-Hexanone-d5  
 VDMC12 (TCA) = 1,1,2,2-Tetrachloroethane-d2  
 VDMC13 (DCZ) = 1,2-Dichlorobenzene-d4

QC LIMITS  
 (79-124)  
 (77-121)  
 (73-121)  
 (28-135)  
 (73-125)  
 (80-131)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKJD

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Lab File ID: JCVA03.D Lab Sample ID: MB 200-18258/3  
 Instrument ID: J.i  
 Matrix: (SOIL/SED/WATER) Water Date Analyzed: 05/19/2011  
 Level: (TRACE or LOW/MED) TRACE Time Analyzed: 0741  
 GC Column: DB-624 ID: 0.20 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MCQCTB-W-333 03	200-5223-3	JCVA04.D	0820
02	MCSB54D-W-33 295	200-5223-1	JCVA05.D	0844
03	MCSB01M-W-33 290	200-5223-2	JCVA06.D	0944
04	VIBLKJE	VIBLK 200-18258/7	JCVA07.D	1008
05	MCSB01M-W-33 290DL	200-5223-2	JCVA09.D	1058
06	VHBLK01	200-5223-4	JCVA11.D	1148

COMMENTS:

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5A - FORM V VOA  
VOLATILE ORGANICS INSTRUMENT  
PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJC

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Lab File Id: JCV03.D BFB Injection Date: 05/10/2011  
 Instrument Id: J.i BFB Injection Time: 0947  
 GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.8
75	30.0 - 80.0% of mass 95	44.4
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.2 ( 0.2)1
174	50.0 - 120% of mass 95	83.8
175	5.0 - 9.0% of mass 174	6.9 ( 8.2)1
176	95.0 - 101% of mass 174	83.9 ( 100)1
177	5.0 - 9.0% of mass 176	5.9 ( 7.0)2

1 - Value is %mass 174

2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0.5JC	IC 200-17808/5	JCV05.D	05/10/2011	1032
02	VSTD001JC	IC 200-17808/6	JCV06.D	05/10/2011	1058
03	VSTD005JC	ICIS 200-17808/7	JCV07.D	05/10/2011	1123
04	VSTD010JC	IC 200-17808/8	JCV08.D	05/10/2011	1147
05	VSTD020JC	IC 200-17808/9	JCV09.D	05/10/2011	1212

5A - FORM V VOA  
 VOLATILE ORGANICS INSTRUMENT  
 PERFORMANCE CHECK  
 BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBJD

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Lab File Id: JCVA01.D BFB Injection Date: 05/19/2011  
 Instrument Id: J.i BFB Injection Time: 0656  
 GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.1
75	30.0 - 80.0% of mass 95	47.9
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.3 ( 0.3)1
174	50.0 - 120% of mass 95	96.5
175	5.0 - 9.0% of mass 174	7.1 ( 7.4)1
176	95.0 - 101% of mass 174	94.9 ( 98.3)1
177	5.0 - 9.0% of mass 176	6.4 ( 6.8)2

1 - Value is %mass 174

2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005JD	CCVIS 200-18258/2	JCVA02.D	05/19/2011	0717
02	VBLKJD	MB 200-18258/3	JCVA03.D	05/19/2011	0741
03	MCQCTB-W-3 3303	200-5223-3	JCVA04.D	05/19/2011	0820
04	MCSB54D-W- 33295	200-5223-1	JCVA05.D	05/19/2011	0844
05	MCSB01M-W- 33290	200-5223-2	JCVA06.D	05/19/2011	0944
06	VIBLKJE	VIBLK 200-18258/7	JCVA07.D	05/19/2011	1008
07	MCSB01M-W- 33290DL	200-5223-2	JCVA09.D	05/19/2011	1058
08	VHBLK01	200-5223-4	JCVA11.D	05/19/2011	1148
09	VSTD005DJ	CCVC 200-18258/12	JCVA12.D	05/19/2011	1226

8A - FORM VIII VOA  
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 GC Column: DB-624 ID: 0.20 (mm) Init. Calib. Date(s): 05/10/2011 05/10/2011  
 EPA Sample No. (VSTD#####): VSTD005JD Date Analyzed: 05/19/2011  
 Lab File ID (Standard): JCVA02.D Time Analyzed: 0717  
 Instrument ID: J.i Heated Purge: (Y/N) N

	IS1 (CBZ)		IS2 (DFB)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	584695	8.93	671882	5.58	280422	11.76
UPPER LIMIT	818573	9.26	940635	5.91	392591	12.09
LOWER LIMIT	350817	8.60	403129	5.25	168253	11.43
EPA SAMPLE NO.						
01 VBLKJD	516207	8.93	608121	5.58	241839	11.76
02 MCQCTB-W-33303	485804	8.93	593764	5.58	240510	11.76
03 MCSB54D-W-3329 5	482900	8.93	551684	5.58	228193	11.76
04 MCSB01M-W-3329 0	540652	8.93	754941	5.58	271066	11.76
05 VIBLKJE	502902	8.93	634163	5.58	231250	11.76
06 MCSB01M-W-3329 ODL	467591	8.93	583788	5.58	221703	11.76
07 VHBLK01	436001	8.93	517867	5.58	213456	11.76

IS1 (CBZ) = Chlorobenzene-d5  
 IS2 (DFB) = 1,4-Difluorobenzene  
 IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 140% (Trace Volatiles) of internal standard area  
 AREA LOWER LIMIT = 60% (Trace Volatiles) of internal standard area  
 RT UPPER LIMIT = + 0.33 (Trace Volatiles) minutes of internal standard RT  
 RT LOWER LIMIT = - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside contract required QC limits with an asterisk.

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

EPA SAMPLE NO.

MCQCTB-W-33303

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5223-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA04.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 05/18/2011  
 % Moisture: not dec. Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	4.3	J B
75-15-0	Carbon disulfide	0.20	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.027	J
71-43-2	Benzene	0.035	J
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCQCTB-W-33303

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5223-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA04.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 05/18/2011  
 % Moisture: not dec. Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.25	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCQCTB-W-33303

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5223-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA04.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 05/18/2011  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.3	B X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.85	1.7	B J N
03		Unknown siloxane derivative	10.69	1.9	B J
04		Unknown	12.88	0.58	J
05	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

MCSB01M-W-33290

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5223-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA06.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 05/18/2011  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 44.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	22	U
74-87-3	Chloromethane	22	U
75-01-4	Vinyl chloride	22	U
74-83-9	Bromomethane	22	U
75-00-3	Chloroethane	22	U
75-69-4	Trichlorofluoromethane	22	U
75-35-4	1,1-Dichloroethene	22	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	22	U
67-64-1	Acetone	380	B
75-15-0	Carbon disulfide	7.4	J B
79-20-9	Methyl acetate	22	U
75-09-2	Methylene Chloride	24	
156-60-5	trans-1,2-Dichloroethene	1.4	J B
1634-04-4	Methyl tert-butyl ether	22	U
75-34-3	1,1-Dichloroethane	22	U
156-59-2	cis-1,2-Dichloroethene	22	U
78-93-3	2-Butanone	3200	
74-97-5	Bromochloromethane	22	U
67-66-3	Chloroform	1700	E
71-55-6	1,1,1-Trichloroethane	22	U
110-82-7	Cyclohexane	22	U
56-23-5	Carbon tetrachloride	12000	E
71-43-2	Benzene	22	U
107-06-2	1,2-Dichloroethane	22	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCSB01M-W-33290

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5223-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA06.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 05/18/2011  
 % Moisture: not dec. Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 44.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	1.7	J
108-87-2	Methylcyclohexane	22	U
78-87-5	1,2-Dichloropropane	22	U
75-27-4	Bromodichloromethane	22	U
10061-01-5	cis-1,3-Dichloropropene	22	U
108-10-1	4-Methyl-2-pentanone	220	U
108-88-3	Toluene	.22	U
10061-02-6	trans-1,3-Dichloropropene	22	U
79-00-5	1,1,2-Trichloroethane	22	U
127-18-4	Tetrachloroethene	7.2	J
591-78-6	2-Hexanone	220	U
124-48-1	Dibromochloromethane	22	U
106-93-4	1,2-Dibromoethane	22	U
108-90-7	Chlorobenzene	22	U
100-41-4	Ethylbenzene	22	U
95-47-6	o-Xylene	22	U
179601-23-1	m,p-Xylene	22	U
100-42-5	Styrene	22	U
75-25-2	Bromoform	22	U
98-82-8	Isopropylbenzene	22	U
79-34-5	1,1,2,2-Tetrachloroethane	22	U
541-73-1	1,3-Dichlorobenzene	22	U
106-46-7	1,4-Dichlorobenzene	22	U
95-50-1	1,2-Dichlorobenzene	22	U
96-12-8	1,2-Dibromo-3-Chloropropane	22	U
120-82-1	1,2,4-Trichlorobenzene	22	U
87-61-6	1,2,3-Trichlorobenzene	22	U



1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCSB01M-W-33290

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5223-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA06.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 05/18/2011  
 % Moisture: not dec. Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 44.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	130	B X J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.  
MCSB01M-W-33290DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5223-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA09.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 05/18/2011  
 % Moisture: not dec. Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1000.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	500	U
74-87-3	Chloromethane	500	U
75-01-4	Vinyl chloride	500	U
74-83-9	Bromomethane	500	U
75-00-3	Chloroethane	500	U
75-69-4	Trichlorofluoromethane	500	U
75-35-4	1,1-Dichloroethene	500	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	500	U
67-64-1	Acetone	5000	U
75-15-0	Carbon disulfide	500	U
79-20-9	Methyl acetate	500	U
75-09-2	Methylene Chloride	73	J D
156-60-5	trans-1,2-Dichloroethene	500	U
1634-04-4	Methyl tert-butyl ether	53	J D
75-34-3	1,1-Dichloroethane	500	U
156-59-2	cis-1,2-Dichloroethene	500	U
78-93-3	2-Butanone	3500	J D
74-97-5	Bromochloromethane	500	U
67-66-3	Chloroform	1900	D
71-55-6	1,1,1-Trichloroethane	500	U
110-82-7	Cyclohexane	500	U
56-23-5	Carbon tetrachloride	11000	D
71-43-2	Benzene	500	U
107-06-2	1,2-Dichloroethane	500	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCSB01M-W-33290DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5223-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA09.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 05/18/2011  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1000.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	500	U
108-87-2	Methylcyclohexane	500	U
78-87-5	1,2-Dichloropropane	500	U
75-27-4	Bromodichloromethane	500	U
10061-01-5	cis-1,3-Dichloropropene	500	U
108-10-1	4-Methyl-2-pentanone	5000	U
108-88-3	Toluene	500	U
10061-02-6	trans-1,3-Dichloropropene	500	U
79-00-5	1,1,2-Trichloroethane	500	U
127-18-4	Tetrachloroethene	500	U
591-78-6	2-Hexanone	5000	U
124-48-1	Dibromochloromethane	500	U
106-93-4	1,2-Dibromoethane	500	U
108-90-7	Chlorobenzene	500	U
100-41-4	Ethylbenzene	500	U
95-47-6	o-Xylene	500	U
179601-23-1	m,p-Xylene	500	U
100-42-5	Styrene	500	U
75-25-2	Bromoform	500	U
98-82-8	Isopropylbenzene	500	U
79-34-5	1,1,2,2-Tetrachloroethane	500	U
541-73-1	1,3-Dichlorobenzene	500	U
106-46-7	1,4-Dichlorobenzene	500	U
95-50-1	1,2-Dichlorobenzene	500	U
96-12-8	1,2-Dibromo-3-Chloropropane	500	U
120-82-1	1,2,4-Trichlorobenzene	500	U
87-61-6	1,2,3-Trichlorobenzene	500	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.  
 MCSB01M-W-33290DL

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5223-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA09.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 05/18/2011  
 % Moisture: not dec. Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1000.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3200	B X D J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.85	980	B D J N
03		Unknown siloxane derivative	10.69	800	B D J
04	E966796 1	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

MCSB54D-W-33295

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5223-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA05.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 05/18/2011  
 % Moisture: not dec. Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/kg)	ug/L	
75-71-8	Dichlorodifluoromethane		0.50	U
74-87-3	Chloromethane		0.50	U
75-01-4	Vinyl chloride		0.50	U
74-83-9	Bromomethane		0.50	U
75-00-3	Chloroethane		0.50	U
75-69-4	Trichlorofluoromethane		0.50	U
75-35-4	1,1-Dichloroethene		0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane		0.50	U
67-64-1	Acetone		2.0	J B
75-15-0	Carbon disulfide		0.16	J B
79-20-9	Methyl acetate		0.50	U
75-09-2	Methylene Chloride		0.50	U
156-60-5	trans-1,2-Dichloroethene		0.50	U
1634-04-4	Methyl tert-butyl ether		0.50	U
75-34-3	1,1-Dichloroethane		0.50	U
156-59-2	cis-1,2-Dichloroethene		0.50	U
78-93-3	2-Butanone		5.0	U
74-97-5	Bromochloromethane		0.50	U
67-66-3	Chloroform		0.50	U
71-55-6	1,1,1-Trichloroethane		0.50	U
110-82-7	Cyclohexane		0.50	U
56-23-5	Carbon tetrachloride		0.046	J
71-43-2	Benzene		0.035	J
107-06-2	1,2-Dichloroethane		0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCSB54D-W-33295

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5223-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA05.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 05/18/2011  
 % Moisture: not dec. Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.083	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.053	J
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.13	J
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCSB54D-W-33295

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5223-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA05.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 05/18/2011  
 % Moisture: not dec. Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.4	B X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.85	0.56	B J N
03	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

6A - FORM VI VOA-1  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Instrument ID: J.i Calibration Date(s): 05/10/2011 05/10/2011  
 Heated Purge: (Y/N) N Calibration Time(s): 1032 1212  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
Dichlorodifluoromethane	0.566	0.585	0.554	0.525	0.518	0.549	5.1
Chloromethane	0.352	0.330	0.327	0.306	0.303	0.324	6.2
Vinyl chloride	0.348	0.339	0.337	0.318	0.313	0.331	4.4
Bromomethane	0.195	0.190	0.179	0.177	0.167	0.182	6.0
Chloroethane	0.177	0.197	0.183	0.176	0.167	0.180	6.2
Trichlorofluoromethane	0.610	0.619	0.594	0.579	0.563	0.593	3.9
1,1-Dichloroethene	0.281	0.277	0.265	0.260	0.253	0.267	4.3
1,1,2-Trichloro- 1,2,2-trifluoroethane	0.348	0.332	0.309	0.301	0.300	0.318	6.7
Acetone	0.020	0.017	0.016	0.016	0.016	0.017	11.8
Carbon disulfide	0.942	0.857	0.793	0.702	0.706	0.800	12.8
Methyl acetate	0.050	0.037	0.042	0.045	0.039	0.043	12.0
Methylene Chloride	0.279	0.267	0.260	0.244	0.242	0.258	6.0
trans-1,2-Dichloroethene	0.341	0.339	0.319	0.310	0.305	0.323	5.1
Methyl tert-butyl ether	0.406	0.393	0.414	0.407	0.405	0.405	1.9
1,1-Dichloroethane	0.533	0.502	0.494	0.485	0.480	0.499	4.2
cis-1,2-Dichloroethene	0.332	0.327	0.316	0.310	0.308	0.319	3.4
2-Butanone	0.022	0.026	0.026	0.026	0.027	0.025	6.8
Bromochloromethane	0.122	0.119	0.118	0.109	0.111	0.116	4.8
Chloroform	0.566	0.544	0.540	0.518	0.517	0.537	3.9
1,1,1-Trichloroethane	0.681	0.694	0.669	0.665	0.670	0.676	1.7
Cyclohexane	0.521	0.578	0.569	0.574	0.588	0.566	4.6
Carbon tetrachloride	0.655	0.715	0.653	0.640	0.649	0.663	4.5
Benzene	1.441	1.533	1.434	1.455	1.478	1.468	2.7
1,2-Dichloroethane	0.250	0.226	0.235	0.239	0.233	0.236	3.8
Trichloroethene	0.414	0.410	0.389	0.399	0.396	0.402	2.6
Methylcyclohexane	0.462	0.443	0.442	0.446	0.456	0.450	2.0

Report 1,4-Dioxane for Low-Medium VOA analysis only



6B - FORM VI VOA-2  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Instrument ID: J.i Calibration Date(s): 05/10/2011 05/10/2011  
 Heated Purge: (Y/N) N Calibration Time(s): 1032 1212  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
LAB FILE ID: _____	RRF0.5 = <u>JCV05.D</u>	RRF1.0 = <u>JCV06.D</u>					
RRF5.0 = <u>JCV07.D</u>	RRF10 = <u>JCV08.D</u>	RRF20 = <u>JCV09.D</u>					
1,2-Dichloropropane	0.275	0.262	0.275	0.286	0.282	0.276	3.3
Bromodichloromethane	0.403	0.427	0.389	0.390	0.390	0.400	4.1
cis-1,3-Dichloropropene	0.409	0.447	0.445	0.451	0.464	0.443	4.7
4-Methyl-2-pentanone	0.069	0.072	0.075	0.076	0.078	0.074	4.8
Toluene	1.562	1.652	1.632	1.646	1.665	1.631	2.5
trans-1,3-Dichloropropene	0.311	0.316	0.335	0.346	0.355	0.333	5.6
1,1,2-Trichloroethane	0.176	0.212	0.165	0.172	0.168	0.179	10.6
Tetrachloroethene	0.343	0.400	0.372	0.364	0.368	0.369	5.5
2-Hexanone	0.039	0.046	0.050	0.052	0.053	0.048	11.8
Dibromochloromethane	0.229	0.253	0.250	0.245	0.250	0.245	3.9
1,2-Dibromoethane	0.159	0.170	0.157	0.158	0.161	0.161	3.2
Chlorobenzene	0.977	1.043	1.005	1.015	1.019	1.012	2.4
Ethylbenzene	1.709	1.787	1.808	1.870	1.911	1.817	4.3
o-Xylene	0.626	0.676	0.684	0.693	0.709	0.678	4.6
m,p-Xylene	0.602	0.726	0.739	0.748	0.759	0.715	9.0
Styrene	0.806	0.949	1.063	1.087	1.097	1.001	12.4
Bromoform	0.225	0.258	0.243	0.242	0.244	0.242	4.8
Isopropylbenzene	1.595	1.737	1.886	1.943	1.987	1.830	8.8
1,1,2,2-Tetrachloroethane	0.144	0.149	0.143	0.147	0.150	0.147	2.1
1,3-Dichlorobenzene	1.532	1.551	1.542	1.547	1.581	1.551	1.2
1,4-Dichlorobenzene	1.655	1.627	1.575	1.560	1.568	1.597	2.6
1,2-Dichlorobenzene	1.232	1.193	1.278	1.281	1.291	1.255	3.3
1,2-Dibromo-3-Chloropropane	0.066	0.038	0.044	0.043	0.044	0.047	22.8
1,2,4-Trichlorobenzene	0.699	0.760	0.765	0.791	0.809	0.765	5.5
1,2,3-Trichlorobenzene	0.522	0.527	0.573	0.556	0.579	0.552	4.7

6C - FORM VI VOA-3  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab. Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Instrument ID: J.i Calibration Date(s): 05/10/2011 05/10/2011  
 Heated Purge: (Y/N) N Calibration Time(s): 1032 1212  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
Vinyl Chloride-d3	0.334	0.306	0.289	0.277	0.272	0.296	8.5
Chloroethane-d5	0.217	0.234	0.226	0.213	0.203	0.219	5.3
1,1-Dichloroethene-d2	0.585	0.580	0.551	0.534	0.532	0.556	4.5
2-Butanone-d5	0.020	0.024	0.025	0.025	0.025	0.023	9.4
Chloroform-d	0.578	0.559	0.569	0.539	0.537	0.556	3.3
1,2-Dichloroethane-d4	0.212	0.187	0.190	0.186	0.191	0.193	5.6
Benzene-d6	1.484	1.509	1.444	1.413	1.437	1.458	2.7
1,2-Dichloropropane-d6	0.383	0.354	0.373	0.375	0.369	0.371	2.8
Toluene-d8	1.341	1.402	1.420	1.393	1.430	1.397	2.5
trans-1,3-Dichloropropene-d4	0.307	0.296	0.298	0.307	0.312	0.304	2.2
2-Hexanone-d5	0.025	0.025	0.028	0.029	0.030	0.027	7.2
1,1,2,2-Tetrachloroethane-d2	0.145	0.158	0.152	0.156	0.151	0.152	3.3
1,2-Dichlorobenzene-d4	0.895	0.875	0.806	0.771	0.788	0.827	6.7

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only.

7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Instrument ID: J.i Calibration Date: 05/19/2011 Time: 0717  
 Lab File Id: JCVA02.D Init. Calib. Date(s): 05/10/2011 05/10/2011  
 EPA Sample No. (VSTD####): VSTD005JD Init. Calib. Time(s): 1032 1212  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.549	0.623	0.010	13.3	40.0
Chloromethane	0.324	0.374	0.010	15.7	40.0
Vinyl chloride	0.331	0.374	0.010	13.0	30.0
Bromomethane	0.182	0.208	0.100	14.5	30.0
Chloroethane	0.180	0.187	0.010	3.6	40.0
Trichlorofluoromethane	0.593	0.643	0.010	8.3	40.0
1,1-Dichloroethene	0.267	0.270	0.100	1.1	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.318	0.331	0.010	4.2	40.0
Acetone	0.017	0.017	0.010	-0.2	40.0
Carbon disulfide	0.800	0.852	0.010	6.5	40.0
Methyl acetate	0.043	0.050	0.010	16.8	40.0
Methylene Chloride	0.258	0.296	0.010	14.7	40.0
trans-1,2-Dichloroethene	0.323	0.376	0.010	16.6	40.0
Methyl tert-butyl ether	0.405	0.453	0.010	11.8	40.0
1,1-Dichloroethane	0.499	0.574	0.200	15.1	30.0
cis-1,2-Dichloroethene	0.319	0.361	0.010	13.2	40.0
2-Butanone	0.025	0.027	0.010	5.8	40.0
Bromochloromethane	0.116	0.128	0.050	10.7	30.0
Chloroform	0.537	0.570	0.200	6.1	30.0
1,1,1-Trichloroethane	0.676	0.703	0.100	4.1	30.0
Cyclohexane	0.566	0.583	0.010	3.1	40.0
Carbon tetrachloride	0.663	0.689	0.100	4.0	30.0
Benzene	1.468	1.439	0.400	-2.0	30.0
1,2-Dichloroethane	0.236	0.270	0.100	14.4	30.0
Trichloroethene	0.402	0.406	0.300	1.2	30.0
Methylcyclohexane	0.450	0.457	0.010	1.5	40.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Instrument ID: J.i Calibration Date: 05/19/2011 Time: 0717  
 Lab File Id: JCVA02.D Init. Calib. Date(s): 05/10/2011 05/10/2011  
 EPA Sample No. (VSTD####): VSTD005JD Init. Calib. Time(s): 1032 1212  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.276	0.279	0.010	1.0	40.0
Bromodichloromethane	0.400	0.389	0.200	-2.8	30.0
cis-1,3-Dichloropropene	0.443	0.454	0.200	2.3	30.0
4-Methyl-2-pentanone	0.074	0.078	0.010	5.6	40.0
Toluene	1.631	1.632	0.400	0.0	30.0
trans-1,3-Dichloropropene	0.333	0.355	0.100	6.7	30.0
1,1,2-Trichloroethane	0.179	0.176	0.100	-1.6	30.0
Tetrachloroethene	0.369	0.377	0.100	2.1	30.0
2-Hexanone	0.048	0.048	0.010	-1.2	40.0
Dibromochloromethane	0.245	0.247	0.100	0.6	30.0
1,2-Dibromoethane	0.161	0.158	0.010	-1.4	40.0
Chlorobenzene	1.012	1.028	0.500	1.6	30.0
Ethylbenzene	1.817	1.930	0.100	6.2	30.0
o-Xylene	0.678	0.731	0.300	7.9	30.0
m,p-Xylene	0.715	0.771	0.300	7.8	30.0
Styrene	1.001	1.112	0.300	11.1	30.0
Bromoform	0.242	0.251	0.050	3.4	30.0
Isopropylbenzene	1.830	1.984	0.010	8.4	40.0
1,1,2,2-Tetrachloroethane	0.147	0.145	0.100	-1.2	30.0
1,3-Dichlorobenzene	1.551	1.576	0.400	1.7	30.0
1,4-Dichlorobenzene	1.597	1.603	0.400	0.4	30.0
1,2-Dichlorobenzene	1.255	1.381	0.400	10.0	30.0
1,2-Dibromo-3-Chloropropane	0.047	0.052	0.010	10.9	40.0
1,2,4-Trichlorobenzene	0.765	0.814	0.200	6.4	30.0
1,2,3-Trichlorobenzene	0.552	0.575	0.200	4.2	30.0

7C - FORM VII VOA-3  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Instrument ID: J.i Calibration Date: 05/19/2011 Time: 0717  
 Lab File Id: JCVA02.D Init. Calib. Date(s): 05/10/2011 05/10/2011  
 EPA Sample No. (VSTD####): VSTD005JD Init. Calib. Time(s): 1032 1212  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.296	0.329	0.010	11.4	30.0
Chloroethane-d5	0.219	0.236	0.010	7.9	40.0
1,1-Dichloroethene-d2	0.556	0.574	0.010	3.2	30.0
2-Butanone-d5	0.023	0.027	0.010	13.1	40.0
Chloroform-d	0.556	0.599	0.010	7.6	30.0
1,2-Dichloroethane-d4	0.193	0.208	0.010	7.4	30.0
Benzene-d6	1.458	1.466	0.010	0.6	30.0
1,2-Dichloropropane-d6	0.371	0.372	0.010	0.3	40.0
Toluene-d8	1.397	1.458	0.010	4.4	30.0
trans-1,3-Dichloropropene-d4	0.304	0.306	0.010	0.7	30.0
2-Hexanone-d5	0.027	0.029	0.010	6.7	40.0
1,1,2,2-Tetrachloroethane-d2	0.152	0.148	0.010	-2.8	30.0
1,2-Dichlorobenzene-d4	0.827	0.868	0.010	5.0	30.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Instrument ID: J.i Calibration Date: 05/19/2011 Time: 1226  
 Lab File Id: JCVA12.D Init. Calib. Date(s): 05/10/2011 05/10/2011  
 EPA Sample No. (VSTD####): VSTD005DJ Init. Calib. Time(s): 1032 1212  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.549	0.636	0.010	15.8	50.0
Chloromethane	0.324	0.351	0.010	8.4	50.0
Vinyl chloride	0.331	0.379	0.010	14.5	50.0
Bromomethane	0.182	0.194	0.010	7.0	50.0
Chloroethane	0.180	0.184	0.010	2.3	50.0
Trichlorofluoromethane	0.593	0.659	0.010	11.1	50.0
1,1-Dichloroethene	0.267	0.269	0.010	0.7	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.318	0.331	0.010	4.2	50.0
Acetone	0.017	0.016	0.010	-7.4	50.0
Carbon disulfide	0.800	0.800	0.010	0.0	50.0
Methyl acetate	0.043	0.052	0.010	21.7	50.0
Methylene Chloride	0.258	0.304	0.010	17.6	50.0
trans-1,2-Dichloroethene	0.323	0.381	0.010	17.9	50.0
Methyl tert-butyl ether	0.405	0.456	0.010	12.5	50.0
1,1-Dichloroethane	0.499	0.590	0.010	18.3	50.0
cis-1,2-Dichloroethene	0.319	0.328	0.010	2.9	50.0
2-Butanone	0.025	0.023	0.010	-7.8	50.0
Bromochloromethane	0.116	0.117	0.010	1.2	50.0
Chloroform	0.537	0.572	0.010	6.6	50.0
1,1,1-Trichloroethane	0.676	0.750	0.010	11.0	50.0
Cyclohexane	0.566	0.573	0.010	1.2	50.0
Carbon tetrachloride	0.663	0.725	0.010	9.4	50.0
Benzene	1.468	1.508	0.010	2.7	50.0
1,2-Dichloroethane	0.236	0.256	0.010	8.3	50.0
Trichloroethene	0.402	0.418	0.010	4.0	50.0
Methylcyclohexane	0.450	0.444	0.010	-1.2	50.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Instrument ID: J.i Calibration Date: 05/19/2011 Time: 1226  
 Lab File Id: JCVA12.D Init. Calib. Date(s): 05/10/2011 05/10/2011  
 EPA Sample No. (VSTD####): VSTD005DJ Init. Calib. Time(s): 1032 1212  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.276	0.285	0.010	3.4	50.0
Bromodichloromethane	0.400	0.385	0.010	-3.8	50.0
cis-1,3-Dichloropropene	0.443	0.465	0.010	4.9	50.0
4-Methyl-2-pentanone	0.074	0.071	0.010	-3.3	50.0
Toluene	1.631	1.539	0.010	-5.6	50.0
trans-1,3-Dichloropropene	0.333	0.336	0.010	0.9	50.0
1,1,2-Trichloroethane	0.179	0.170	0.010	-5.1	50.0
Tetrachloroethene	0.369	0.380	0.010	2.8	50.0
2-Hexanone	0.048	0.049	0.010	1.3	50.0
Dibromochloromethane	0.245	0.256	0.010	4.2	50.0
1,2-Dibromoethane	0.161	0.150	0.010	-7.0	50.0
Chlorobenzene	1.012	1.044	0.010	3.2	50.0
Ethylbenzene	1.817	1.905	0.010	4.8	50.0
o-Xylene	0.678	0.679	0.010	0.1	50.0
m,p-Xylene	0.715	0.775	0.010	8.4	50.0
Styrene	1.001	1.064	0.010	6.3	50.0
Bromoform	0.242	0.241	0.010	-0.8	50.0
Isopropylbenzene	1.830	1.971	0.010	7.7	50.0
1,1,2,2-Tetrachloroethane	0.147	0.130	0.010	-11.6	50.0
1,3-Dichlorobenzene	1.551	1.570	0.010	1.2	50.0
1,4-Dichlorobenzene	1.597	1.663	0.010	4.1	50.0
1,2-Dichlorobenzene	1.255	1.298	0.010	3.4	50.0
1,2-Dibromo-3-Chloropropane	0.047	0.044	0.010	-7.3	50.0
1,2,4-Trichlorobenzene	0.765	0.799	0.010	4.5	50.0
1,2,3-Trichlorobenzene	0.552	0.565	0.010	2.4	50.0

7C - FORM VII VOA-3  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Instrument ID: J.i Calibration Date: 05/19/2011 Time: 1226  
 Lab File Id: JCVA12.D Init. Calib. Date(s): 05/10/2011 05/10/2011  
 EPA Sample No. (VSTD####): VSTD005DJ Init. Calib. Time(s): 1032 1212  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.296	0.341	0.010	15.2	50.0
Chloroethane-d5	0.219	0.227	0.010	3.7	50.0
1,1-Dichloroethene-d2	0.556	0.573	0.010	2.9	50.0
2-Butanone-d5	0.023	0.024	0.010	3.3	50.0
Chloroform-d	0.556	0.599	0.010	7.6	50.0
1,2-Dichloroethane-d4	0.193	0.212	0.010	9.4	50.0
Benzene-d6	1.458	1.487	0.010	2.0	50.0
1,2-Dichloropropane-d6	0.371	0.303	0.010	-18.3	50.0
Toluene-d8	1.397	1.447	0.010	3.5	50.0
trans-1,3-Dichloropropene-d4	0.304	0.321	0.010	5.4	50.0
2-Hexanone-d5	0.027	0.025	0.010	-7.8	50.0
1,1,2,2-Tetrachloroethane-d2	0.152	0.141	0.010	-7.6	50.0
1,2-Dichlorobenzene-d4	0.827	0.805	0.010	-2.6	50.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only



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

EPA SAMPLE NO.

VBLKJD

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-18258/3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA03.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.7	J
75-15-0	Carbon disulfide	0.22	J
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.075	J
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VBLKJD

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-18258/3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA03.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKJD

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-18258/3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA03.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	1066-40-6	Silanol, trimethyl-	4.14	3.0	J N
02		Unknown	6.90	3.5	X J
03	541-05-9	Cyclotrisiloxane, hexamethyl-	7.85	1.0	J N
04		Unknown siloxane derivative	10.69	0.93	J
05	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5223-4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA11.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
<del>75-35-4</del>	<del>1,1-Dichloroethene</del>	<del>0.50</del>	<del>U</del>
<del>76-13-1</del>	<del>1,1,2-Trichloro-1,2,2-trifluoroethane</del>	<del>0.50</del>	<del>U</del>
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.041	J
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5223-4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA11.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5223-4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA11.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.5	B X J
02	541-05-9	Cyclotrisiloxane, hexamethyl-	7.85	1.8	B J N
03		Unknown siloxane derivative	10.69	2.0	B J
04		Unknown	12.88	0.56	J
05	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

VIBLKJE

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-18258/7  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA07.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.095	J
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.056	J
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.19	J
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VIBLKJE

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-18258/7  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA07.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U



1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VIBLKJE

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5223  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: VIBLK 200-18258/7  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: JCVA07.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 05/19/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.90	3.1	B X J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

## ANALYTICAL REPORT

Job Number: 200-5483-1

SDG Number: 200-5483

Job Description: Montgomery City (200-5483)

Contract Number: EP-W-09-044

For:

Argonne National Laboratory

9700 South Cass Avenue

Building 203

Office B-149

Argonne, IL 60439

Attention: Mr. Clyde Dennis



Approved for release.  
Kirk F Young  
Project Manager I  
6/22/2011 8:07 AM

---

Kirk F Young  
Project Manager I  
kirk.young@testamericainc.com  
06/22/2011

The test results in this report relate only to sample(s) as received by the laboratory. These test results were derived under a quality system that adheres to the requirements of NELAC. Pursuant to NELAC, this report may not be produced in full without written approval from the laboratory

TestAmerica Laboratories, Inc.

TestAmerica Burlington 30 Community Drive, Suite 11, South Burlington, VT 05403

Tel (802) 660-1990 Fax (802) 660-1919 [www.testamericainc.com](http://www.testamericainc.com)



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## CASE NARRATIVE

**Client: Argonne National Laboratory**

**Project: Montgomery City (200-5483)**

**Report Number: 200-5483-1**

Enclosed is the data set for the referenced project work. With the exceptions noted as flags or footnotes, standard analytical protocols were followed in performing the analytical work and the applied control limits were met.

Calculations were performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### Receipt

The samples were received on 06/10/2011. 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, as received, were not acid preserved. On that basis, the laboratory did provide for the analytical work to be performed within seven days of sample collection.

### SOM01.2 Volatile Organics (Trace Level Water)

A storage blank was prepared for volatile organics analysis, and stored in association with the storage of the samples. That storage blank, identified as VHBLK01, was carried through the holding period with the samples, and analyzed.

Sample MCSB54M-W-33305 was analyzed at a 2.0-fold dilution, and this represented the most concentrated analysis of that sample. 2- Butanone and tetrahydrofuran were identified as constituents of sample MCSB54M-W-33305, and those were present at a relatively high concentration.

Each of the analyses associated with the sample set exhibited an acceptable internal standard performance. There was an acceptable recovery of each deuterated monitoring compound (DMC) in the analysis of each method blank associated with the analytical work, and in the analysis of the storage blank associated with the sample set. The analysis of the samples in this sample set did meet the technical acceptance criteria specific to DMC recoveries, although not all DMC recoveries were within the control range in each analysis. The technical acceptance criteria does provide for the recovery of up to three DMCs to fall outside of the control range in the analysis of field samples. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. Trace concentrations of acetone, carbon disulfide, methylene chloride, methyl tert-butyl ether, carbon tetrachloride, toluene, ethylbenzene, m,p-xylene, 1,3-dichlorobenzene, 1,2,4-trichlorobenzene, and 1,2,3-trichlorobenzene were identified in the analysis of the method blank associated with the analytical work. The concentration of each compound in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant method blank analysis. Trace concentrations of acetone, carbon disulfide, carbon tetrachloride, toluene, and m,p-xylene were identified in the analysis of the storage blank associated with the sample set. The concentration of each

compound in that analysis was below the established reporting limit, and the analysis did meet the technical acceptance criteria for a compliant storage blank analysis. Present in the method blank and storage blank analyses was a non-target constituent that represents a compound that is related to the DMC formulation. The fact that the presence of this compound is not within the laboratory's control is at issue. The derived results for that compound have been qualified with an "X" qualifier to reflect the source of the contamination.

The responses for each of the target analytes met the relative standard deviation criterion in the initial calibration. The response for each target analyte met the percent difference criterion in the opening/continuing calibration check acquisition. The response for each target analyte met the 50.0 percent difference criterion in the closing calibration check acquisition.

The primary quantitation mass for methylcyclohexane that is specified in the Statement of Work is mass 83. The laboratory did identify a contribution to mass 83 from 1,2-dichloropropane-d<sub>6</sub>, one of the deuterated monitoring compounds (DMCs). The laboratory did change the primary quantitation mass assignment to mass 55 for the quantification of methylcyclohexane.

Manual integration was employed in deriving certain of the analytical results. The values that have been derived from manual integration are qualified on the quantitation reports. Extracted ion current profiles for each manual integration are included in the data package, and further documented at the end of this submittal.

## DATA REPORTING QUALIFIERS

Client: Argonne National Laboratory

Job Number: 200-5483-1

Sdg Number: 200-5483

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	J	Indicates an Estimated Value for TICs
	J	Indicates an estimated value.
	X	See case narrative notes for explanation of the 'X' flag
	*	Surrogate exceeds the control limit
	B	The analyte was found in an associated blank, as well as in the sample.
	N	This flag indicates the presumptive evidence of a compound.









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City **Lincoln** Dept./Floor/Suite/Rm

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3 To Recipient's Name **KISS MOUSE** Phone **812-660-1910**

Company **TEX MEDIA**

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3  FedEx 10Day Freight\*  FedEx 2Day Freight  FedEx 3Day Freight

4b Express Freight Service

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6 Special Handling

1  HOLIDAY Delivery  HOLIDAY Saturday

2  SATURDAY Delivery  HOLIDAY Weekday

3  Signature Required  Signature Confirmation

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06/27/11

## Login Sample Receipt Checklist

Client: Argonne National Laboratory

Job Number: 200-5483-1

SDG Number: 200-5483

Login Number: 5483

List Source: TestAmerica Burlington

List Number: 2

Creator: Marion, Greg T

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	No numbers
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1°C IR gun ID 96, CF=0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	Minor Discrepancies
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	Sample volumes were received unpreserved.
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

## Sample Login Acknowledgement

**Job 200-5483-1**

<b>Client Job Description:</b>	Montgomery City (200-5483)	<b>Report To:</b>	Argonne National Laboratory
<b>Purchase Order #:</b>	8E-00302		Jorge Alvarado
<b>Work Order #:</b>	8E-00302		9700 South Cass Avenue
<b>Project Manager:</b>	Kirk F Young		Building 203
<b>Job Due Date:</b>	6/24/2011		Office B-149
<b>Job TAT:</b>	14 Days		Argonne, IL 60439
<b>Max Deliverable Level:</b>	IV	<b>Bill To:</b>	Argonne National Laboratory
			Accounts Payable
<b>Earliest Deliverable Due:</b>	6/24/2011		Chief Financial Offices
			9700 S. Cass Ave.
			Building 201
			Argonne, IL 60439

**Login 200-5483**

<b>Sample Receipt:</b>	6/10/2011 10:20:00 AM	<b>Number of Coolers:</b>	1
<b>Method of Delivery:</b>	FedEx Priority Overnight	<b>Cooler Temperature(s) (C°):</b>	1.1;

Lab Sample #	Client Sample ID	Date Sampled	Matrix	Rpt Basis	Dry / Wet **
Method	Method Description / Work Location				
200-5483-1	MCSB54M-W-33305	6/9/2011 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-5483-2	MCQCTB-W-33311	6/9/2011 12:00:00 AM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet
200-5483-3	VHBLK01	6/10/2011 12:15:00 PM	Water		
SOM01.2_Vol_Tr	SOM01.2 Trace Volatile Organics / In-Lab			Total	Wet

\* Method on-hold

\*\* Wet/Dry indicates whether the reported results will be corrected for moisture content, and based on sample Wet weight or Dry

06/22/2011 11 of 1

## METHODOLOGY SUMMARY

Laboratory: TestAmerica Laboratories

Project No:

Location: South Burlington, Vermont

SDG No: 200-5483

### VOA

Volatile Organics Trace - USEPA CLP SOM01.2

2A - FORM II VOA-1  
 WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLKDH	78	81	65	93	92	99	104
02	MCSB54M-W-3330 5	80	84	67	162 *	93	101	107
03	MCQCTB-W-33311	86	87	71	140	96	104	108
04	VHBLK01	85	88	70	90	93	98	107

		QC LIMITS
VDMC1	(VCL) = Vinyl Chloride-d3	(65-131)
VDMC2	(CLA) = Chloroethane-d5	(71-131)
VDMC3	(DCE) = 1,1-Dichloroethene-d2	(55-104)
VDMC4	(BUT) = 2-Butanone-d5	(49-155)
VDMC5	(CLF) = Chloroform-d	(78-121)
VDMC6	(DCA) = 1,2-Dichloroethane-d4	(78-129)
VDMC7	(BEN) = Benzene-d6	(77-124)

# Column to be used to flag recovery values  
 \* Values outside of contract required QC limits



2B - FORM II VOA-2  
 WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (TCA) #	VDMC13 (DCZ) #	OTHER	TOT OUT
01	VBLKDH	104	101	110	107	95	104		0
02	MCSB54M-W-3330 5	107	102	106	210 *	91	104		2
03	MCQCTB-W-33311	110	106	114	155 *	101	106		1
04	VHBLK01	108	105	108	107	93	105		0

		QC LIMITS
VDMC8	(DPA) = 1,2-Dichloropropane-d6	(79-124)
VDMC9	(TOL) = Toluene-d8	(77-121)
VDMC10	(TDP) = trans-1,3-Dichloropropene-d4	(73-121)
VDMC11	(HEX) = 2-Hexanone-d5	(28-135)
VDMC12	(TCA) = 1,1,2,2-Tetrachloroethane-d2	(73-125)
VDMC13	(DCZ) = 1,2-Dichlorobenzene-d4	(80-131)

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

4A - FORM IV VOA  
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLKDH

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
Lab File ID: DHOB04.D Lab Sample ID: MB 200-19483/4  
Instrument ID: D.i  
Matrix: (SOIL/SED/WATER) Water Date Analyzed: 06/11/2011  
Level: (TRACE or LOW/MED) TRACE Time Analyzed: 1517  
GC Column: DB-624 ID: 0.20 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	MCSB54M-W-33 305	200-5483-1	DHOB05.D	1555
02	MCQCTB-W-333 11	200-5483-2	DHOB06.D	1619
03	VHBLK01	200-5483-3	DHOB07.D	1644

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

5A - FORM V VOA  
VOLATILE ORGANICS INSTRUMENT  
PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBDE

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
Lab File Id: DHO01.D BFB Injection Date: 03/25/2011  
Instrument Id: D.i BFB Injection Time: 1150  
GC Column: DB-624 ID: 0.53 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.3
75	30.0 - 80.0% of mass 95	42.2
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.3 ( 0.5)1
174	50.0 - 120% of mass 95	74.2
175	5.0 - 9.0% of mass 174	4.9 ( 6.6)1
176	95.0 - 101% of mass 174	72.2 ( 97.4)1
177	5.0 - 9.0% of mass 176	4.7 ( 6.5)2

1 - Value is %mass 174

2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0.5DE	IC 200-15665/3	DHO03.D	03/25/2011	1225
02	VSTD001DE	IC 200-15665/4	DHO04.D	03/25/2011	1250
03	VSTD005DE	ICIS 200-15665/5	DHO05.D	03/25/2011	1314
04	VSTD010DE	IC 200-15665/6	DHO06.D	03/25/2011	1339
05	VSTD020DE	IC 200-15665/7	DHO07.D	03/25/2011	1403

5A - FORM V VOA  
VOLATILE ORGANICS INSTRUMENT  
PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFBDH

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
Lab File Id: DHOB01.D BFB Injection Date: 06/11/2011  
Instrument Id: D.i BFB Injection Time: 1409  
GC Column: DB-624 ID: 0.20 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.9
75	30.0 - 80.0% of mass 95	40.6
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.4 ( 0.5)1
174	50.0 - 120% of mass 95	74.3
175	5.0 - 9.0% of mass 174	5.0 ( 6.8)1
176	95.0 - 101% of mass 174	71.1 ( 95.6)1
177	5.0 - 9.0% of mass 176	4.7 ( 6.6)2

1 - Value is %mass 174

2 - Value is %mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD005DH	CCVIS 200-19483/3	DHOB03.D	06/11/2011	1452
02	VBLKDH	MB 200-19483/4	DHOB04.D	06/11/2011	1517
03	MCSB54M-W-33305	200-5483-1	DHOB05.D	06/11/2011	1555
04	MCQCTB-W-33311	200-5483-2	DHOB06.D	06/11/2011	1619
05	VHBLK01	200-5483-3	DHOB07.D	06/11/2011	1644
06	VSTD005HD	CCVC 200-19483/8	DHOB08.D	06/11/2011	1709

8A - FORM VIII VOA  
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 GC Column: DB-624 ID: 0.20 (mm) Init. Calib. Date(s): 03/25/2011 03/25/2011  
 EPA Sample No. (VSTD#####): VSTD005DH Date Analyzed: 06/11/2011  
 Lab File ID (Standard): DHOB03.D Time Analyzed: 1452  
 Instrument ID: D.i Heated Purge: (Y/N) N

	IS1 (CBZ)		IS2 (DFB)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	413635	8.83	493496	5.47	201523 11.66
	UPPER LIMIT	579089	9.16	690894	5.80	282132 11.99
	LOWER LIMIT	248181	8.50	296098	5.14	120914 11.33
	EPA SAMPLE NO.					
01	VBLKDH	420510	8.83	500886	5.47	188541 11.66
02	MCSB54M-W-3330 5	342090	8.83	408841	5.47	150978 11.66
03	MCQCTB-W-33311	361258	8.83	433500	5.47	168285 11.66
04	VHBLK01	357195	8.83	430881	5.47	160884 11.66

IS1 (CBZ) = Chlorobenzene-d5  
 IS2 (DFB) = 1,4-Difluorobenzene  
 IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 140% (Trace Volatiles) of internal standard area  
 AREA LOWER LIMIT = 60% (Trace Volatiles) of internal standard area  
 RT UPPER LIMIT = + 0.33 (Trace Volatiles) minutes of internal standard RT  
 RT LOWER LIMIT = - 0.33 (Trace Volatiles) minutes of internal standard RT

# Column used to flag values outside contract required QC limits with an asterisk.

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

EPA SAMPLE NO.

MCQCTB-W-33311

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5483-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: DHOB06.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 06/10/2011  
 % Moisture: not dec. Date Analyzed: 06/11/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.3	B
75-15-0	Carbon disulfide	0.035	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	1.1	J
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.016	J B
71-43-2	Benzene	0.12	J
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCQCTB-W-33311

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5483-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: DHOB06.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 06/10/2011  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 06/11/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.52	B
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.025	J
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.051	J B
95-47-6	o-Xylene	0.10	J
179601-23-1	m,p-Xylene	0.19	J B
100-42-5	Styrene	0.011	J
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCQCTB-W-33311

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5483-2  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: DHOB06.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 06/10/2011  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 06/11/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.79	3.3	B X J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.



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

EPA SAMPLE NO.

MCSB54M-W-33305

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5483-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: DHOB05.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 06/10/2011  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 06/11/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 2.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

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
75-35-4	1,1-Dichloroethene	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U
67-64-1	Acetone	28	B
75-15-0	Carbon disulfide	0.12	J B
79-20-9	Methyl acetate	1.0	U
75-09-2	Methylene Chloride	0.069	J B
156-60-5	trans-1,2-Dichloroethene	1.0	U
1634-04-4	Methyl tert-butyl ether	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	370	
74-97-5	Bromochloromethane	1.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	0.073	J
110-82-7	Cyclohexane	1.0	U
56-23-5	Carbon tetrachloride	0.025	J B
71-43-2	Benzene	0.042	J
107-06-2	1,2-Dichloroethane	1.0	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

MCSB54M-W-33305

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5483-1  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: DHOB05.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 06/10/2011  
 % Moisture: not dec. Date Analyzed: 06/11/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 2.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
79-01-6	Trichloroethene	0.048	J
108-87-2	Methylcyclohexane	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	10	U
108-88-3	Toluene	0.64	J B
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	0.088	J
591-78-6	2-Hexanone	10	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	0.021	J B
95-47-6	o-Xylene	0.032	J
179601-23-1	m,p-Xylene	0.040	J B
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
98-82-8	Isopropylbenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-Chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

1J - FORM I VOA-TIC  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MCSB54M-W-33305

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5483-1  
Sample wt/vol: 25.0 (g/mL) mL Lab File ID: DHOB05.D  
Level: (TRACE or LOW/MED) TRACE Date Received: 06/10/2011  
% Moisture: not dec. Date Analyzed: 06/11/2011  
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 2.0  
Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	109-99-9	Furan, tetrahydro-	4.39	160	J N
02		Unknown	6.79	6.2	B X J
03	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

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

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5483-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: DHOB07.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 06/10/2011  
 % Moisture: not dec. Date Analyzed: 06/11/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	0.88	J B
75-15-0	Carbon disulfide	0.033	J B
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.015	J B
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

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

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5483-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: DHOB07.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: 06/10/2011  
 % Moisture: not dec. Date Analyzed: 06/11/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.0058	J B
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.0053	J B
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VHBLK01

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: 200-5483-3  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: DHOB07.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: 06/10/2011  
 % Moisture: not dec. Date Analyzed: 06/11/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.79	3.1	B X J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

6A - FORM VI VOA-1  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Instrument ID: D.i Calibration Date(s): 03/25/2011 03/25/2011  
 Heated Purge: (Y/N) N Calibration Time(s): 1225 1403  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

LAB FILE ID: \_\_\_\_\_ RRF0.5 = DHO03.D RRF1.0 = DHO04.D  
 RRF5.0 = DHO05.D RRF10 = DHO06.D RRF20 = DHO07.D

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
Dichlorodifluoromethane	0.483	0.494	0.490	0.504	0.517	0.497	2.6
Chloromethane	0.656	0.603	0.600	0.603	0.593	0.611	4.2
Vinyl chloride	0.478	0.476	0.483	0.484	0.479	0.480	0.7
Bromomethane	0.224	0.209	0.210	0.235	0.234	0.223	5.7
Chloroethane	0.255	0.246	0.245	0.246	0.243	0.247	1.8
Trichlorofluoromethane	0.493	0.507	0.517	0.512	0.535	0.513	3.0
1,1-Dichloroethene	0.263	0.269	0.277	0.276	0.270	0.271	2.2
1,1,2-Trichloro- 1,2,2-trifluoroethane	0.310	0.309	0.316	0.307	0.301	0.309	1.8
Acetone	0.026	0.024	0.023	0.020	0.022	0.023	10.3
Carbon disulfide	0.570	0.575	0.642	0.673	0.684	0.629	8.5
Methyl acetate	0.086	0.081	0.070	0.062	0.066	0.073	13.7
Methylene Chloride	0.237	0.236	0.242	0.233	0.239	0.238	1.4
trans-1,2-Dichloroethene	0.274	0.279	0.296	0.294	0.302	0.289	4.2
Methyl tert-butyl ether	0.318	0.302	0.328	0.322	0.359	0.326	6.4
1,1-Dichloroethane	0.558	0.562	0.574	0.574	0.592	0.572	2.3
cis-1,2-Dichloroethene	0.274	0.290	0.308	0.308	0.316	0.299	5.6
2-Butanone	0.036	0.038	0.040	0.037	0.042	0.039	5.9
Bromochloromethane	0.100	0.096	0.103	0.100	0.108	0.101	4.5
Chloroform	0.432	0.460	0.471	0.467	0.485	0.463	4.2
1,1,1-Trichloroethane	0.419	0.423	0.452	0.452	0.451	0.439	3.9
Cyclohexane	0.700	0.753	0.821	0.818	0.799	0.778	6.6
Carbon tetrachloride	0.383	0.396	0.409	0.416	0.417	0.404	3.6
Benzene	1.409	1.468	1.441	1.415	1.390	1.425	2.1
1,2-Dichloroethane	0.246	0.229	0.269	0.257	0.283	0.257	8.0
Trichloroethene	0.351	0.343	0.336	0.337	0.335	0.341	2.0
Methylcyclohexane	0.606	0.646	0.688	0.682	0.672	0.659	5.1

Report 1,4-Dioxane for Low-Medium VOA analysis only

6B - FORM VI VOA-2  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Instrument ID: D.i Calibration Date(s): 03/25/2011 03/25/2011  
 Heated Purge: (Y/N) N Calibration Time(s): 1225 1403  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
1,2-Dichloropropane	0.355	0.355	0.356	0.347	0.353	0.353	1.1
Bromodichloromethane	0.255	0.270	0.291	0.291	0.302	0.282	6.7
cis-1,3-Dichloropropene	0.295	0.335	0.410	0.403	0.418	0.372	14.7
4-Methyl-2-pentanone	0.087	0.098	0.117	0.109	0.119	0.106	12.8
Toluene	1.487	1.567	1.626	1.625	1.617	1.584	3.8
trans-1,3-Dichloropropene	0.190	0.229	0.286	0.286	0.314	0.261	19.2
1,1,2-Trichloroethane	0.149	0.159	0.162	0.157	0.168	0.159	4.3
Tetrachloroethene	0.291	0.300	0.298	0.299	0.297	0.297	1.2
2-Hexanone	0.061	0.066	0.079	0.074	0.083	0.073	12.3
Dibromochloromethane	0.128	0.141	0.174	0.176	0.197	0.163	17.3
1,2-Dibromoethane	0.130	0.132	0.145	0.138	0.153	0.140	6.9
Chlorobenzene	0.972	1.004	1.035	1.012	1.032	1.011	2.5
Ethylbenzene	1.599	1.713	1.863	1.883	1.898	1.791	7.3
o-Xylene	0.574	0.626	0.731	0.740	0.744	0.683	11.4
m,p-Xylene	0.656	0.686	0.761	0.781	0.781	0.733	8.0
Styrene	0.796	0.872	1.080	1.097	1.135	0.996	15.2
Bromoform	0.088	0.087	0.117	0.122	0.139	0.111	20.3
Isopropylbenzene	1.472	1.660	1.945	2.006	2.036	1.824	13.5
1,1,2,2-Tetrachloroethane	0.149	0.149	0.168	0.161	0.175	0.160	7.1
1,3-Dichlorobenzene	1.519	1.533	1.609	1.649	1.654	1.593	4.0
1,4-Dichlorobenzene	1.689	1.675	1.606	1.631	1.624	1.645	2.1
1,2-Dichlorobenzene	1.365	1.344	1.382	1.387	1.389	1.373	1.4
1,2-Dibromo-3-Chloropropane	0.024	0.026	0.034	0.036	0.041	0.032	21.8
1,2,4-Trichlorobenzene	0.604	0.658	0.751	0.786	0.824	0.725	12.6
1,2,3-Trichlorobenzene	0.512	0.522	0.581	0.601	0.635	0.570	9.2



6C - FORM VI VOA-3  
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Instrument ID: D.i Calibration Date(s): 03/25/2011 03/25/2011  
 Heated Purge: (Y/N) N Calibration Time(s): 1225 1403  
 Purge Volume: 25.0 (mL)  
 GC Column: DB-624 ID: 0.53 (mm) Length: 75 (m)

LAB FILE ID: _____	RRF0.5 = <u>DHO03.D</u>	RRF1.0 = <u>DHO04.D</u>					
RRF5.0 = <u>DHO05.D</u>	RRF10 = <u>DHO06.D</u>	RRF20 = <u>DHO07.D</u>					
COMPOUND	RRF0.5	RRF1.0	RRF5.0	RRF10	RRF20	RRF	%RSD
Vinyl Chloride-d3	0.378	0.390	0.395	0.399	0.394	0.391	2.0
Chloroethane-d5	0.265	0.253	0.255	0.262	0.255	0.258	2.0
1,1-Dichloroethene-d2	0.653	0.627	0.664	0.666	0.663	0.655	2.5
2-Butanone-d5	0.036	0.039	0.040	0.037	0.042	0.039	6.1
Chloroform-d	0.470	0.476	0.487	0.486	0.510	0.486	3.1
1,2-Dichloroethane-d4	0.181	0.187	0.188	0.183	0.197	0.187	3.2
Benzene-d6	1.389	1.458	1.419	1.378	1.364	1.401	2.7
1,2-Dichloropropane-d6	0.349	0.356	0.357	0.347	0.356	0.353	1.3
Toluene-d8	1.265	1.325	1.393	1.379	1.381	1.349	4.0
trans-1,3-Dichloropropene-d4	0.175	0.190	0.235	0.243	0.271	0.223	17.7
2-Hexanone-d5	0.024	0.028	0.037	0.036	0.041	0.033	21.3
1,1,2,2-Tetrachloroethane-d2	0.154	0.149	0.172	0.164	0.182	0.164	8.2
1,2-Dichlorobenzene-d4	0.801	0.796	0.823	0.817	0.827	0.813	1.7

Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Instrument ID: D.i Calibration Date: 06/11/2011 Time: 1452  
 Lab File Id: DHOB03.D Init. Calib. Date(s): 03/25/2011 03/25/2011  
 EPA Sample No. (VSTD####): VSTD005DH Init. Calib. Time(s): 1225 1403  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.497	0.459	0.010	-7.8	40.0
Chloromethane	0.611	0.508	0.010	-16.8	40.0
Vinyl chloride	0.480	0.413	0.010	-13.9	30.0
Bromomethane	0.223	0.189	0.100	-14.9	30.0
Chloroethane	0.247	0.215	0.010	-12.8	40.0
Trichlorofluoromethane	0.513	0.477	0.010	-6.9	40.0
1,1-Dichloroethene	0.271	0.261	0.100	-3.7	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.309	0.294	0.010	-4.9	40.0
Acetone	0.023	0.020	0.010	-12.3	40.0
Carbon disulfide	0.629	0.623	0.010	-0.9	40.0
Methyl acetate	0.073	0.058	0.010	-20.8	40.0
Methylene Chloride	0.238	0.213	0.010	-10.5	40.0
trans-1,2-Dichloroethene	0.289	0.319	0.010	10.5	40.0
Methyl tert-butyl ether	0.326	0.339	0.010	4.0	40.0
1,1-Dichloroethane	0.572	0.589	0.200	3.0	30.0
cis-1,2-Dichloroethene	0.299	0.316	0.010	5.7	40.0
2-Butanone	0.039	0.038	0.010	-2.4	40.0
Bromochloromethane	0.101	0.105	0.050	3.7	30.0
Chloroform	0.463	0.472	0.200	1.9	30.0
1,1,1-Trichloroethane	0.439	0.501	0.100	14.0	30.0
Cyclohexane	0.778	0.854	0.010	9.7	40.0
Carbon tetrachloride	0.404	0.462	0.100	14.4	30.0
Benzene	1.425	1.537	0.400	7.9	30.0
1,2-Dichloroethane	0.257	0.247	0.100	-3.8	30.0
Trichloroethene	0.341	0.379	0.300	11.4	30.0
Methylcyclohexane	0.659	0.695	0.010	5.6	40.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Instrument ID: D.i Calibration Date: 06/11/2011 Time: 1452  
 Lab File Id: DHOB03.D Init. Calib. Date(s): 03/25/2011 03/25/2011  
 EPA Sample No. (VSTD####): VSTD005DH Init. Calib. Time(s): 1225 1403  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.353	0.360	0.010	1.9	40.0
Bromodichloromethane	0.282	0.302	0.200	7.3	30.0
cis-1,3-Dichloropropene	0.372	0.421	0.200	13.3	30.0
4-Methyl-2-pentanone	0.106	0.110	0.010	3.4	40.0
Toluene	1.584	1.690	0.400	6.7	30.0
trans-1,3-Dichloropropene	0.261	0.297	0.100	13.8	30.0
1,1,2-Trichloroethane	0.159	0.164	0.100	2.9	30.0
Tetrachloroethene	0.297	0.322	0.100	8.5	30.0
2-Hexanone	0.073	0.074	0.010	1.5	40.0
Dibromochloromethane	0.163	0.182	0.100	11.7	30.0
1,2-Dibromoethane	0.140	0.148	0.010	6.1	40.0
Chlorobenzene	1.011	1.053	0.500	4.1	30.0
Ethylbenzene	1.791	1.879	0.100	4.9	30.0
o-Xylene	0.683	0.724	0.300	6.0	30.0
m,p-Xylene	0.733	0.768	0.300	4.8	30.0
Styrene	0.996	0.997	0.300	0.1	30.0
Bromoform	0.111	0.130	0.050	17.7	30.0
Isopropylbenzene	1.824	1.959	0.010	7.4	40.0
1,1,2,2-Tetrachloroethane	0.160	0.158	0.100	-1.7	30.0
1,3-Dichlorobenzene	1.593	1.656	0.400	4.0	30.0
1,4-Dichlorobenzene	1.645	1.609	0.400	-2.2	30.0
1,2-Dichlorobenzene	1.373	1.381	0.400	0.5	30.0
1,2-Dibromo-3-Chloropropane	0.032	0.038	0.010	17.4	40.0
1,2,4-Trichlorobenzene	0.725	0.792	0.200	9.3	30.0
1,2,3-Trichlorobenzene	0.570	0.603	0.200	5.7	30.0

7C - FORM VII VOA-3  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Instrument ID: D.i Calibration Date: 06/11/2011 Time: 1452  
 Lab File Id: DHOB03.D Init. Calib. Date(s): 03/25/2011 03/25/2011  
 EPA Sample No. (VSTD####): VSTD005DH Init. Calib. Time(s): 1225 1403  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.391	0.314	0.010	-19.8	30.0
Chloroethane-d5	0.258	0.214	0.010	-17.2	40.0
1,1-Dichloroethene-d2	0.655	0.579	0.010	-11.5	30.0
2-Butanone-d5	0.039	0.037	0.010	-5.9	40.0
Chloroform-d	0.486	0.481	0.010	-1.0	30.0
1,2-Dichloroethane-d4	0.187	0.181	0.010	-3.5	30.0
Benzene-d6	1.401	1.507	0.010	7.5	30.0
1,2-Dichloropropane-d6	0.353	0.374	0.010	5.9	40.0
Toluene-d8	1.349	1.434	0.010	6.3	30.0
trans-1,3-Dichloropropene-d4	0.223	0.253	0.010	13.6	30.0
2-Hexanone-d5	0.033	0.037	0.010	10.8	40.0
1,1,2,2-Tetrachloroethane-d2	0.164	0.155	0.010	-5.4	30.0
1,2-Dichlorobenzene-d4	0.813	0.812	0.010	0.0	30.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

7A - FORM VII VOA-1  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Instrument ID: D.i Calibration Date: 06/11/2011 Time: 1709  
 Lab File Id: DHOB08.D Init. Calib. Date(s): 03/25/2011 03/25/2011  
 EPA Sample No. (VSTD####): VSTD005HD Init. Calib. Time(s): 1225 1403  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.497	0.484	0.010	-2.7	50.0
Chloromethane	0.611	0.553	0.010	-9.4	50.0
Vinyl chloride	0.480	0.445	0.010	-7.4	50.0
Bromomethane	0.223	0.212	0.010	-4.8	50.0
Chloroethane	0.247	0.231	0.010	-6.5	50.0
Trichlorofluoromethane	0.513	0.512	0.010	-0.2	50.0
1,1-Dichloroethene	0.271	0.272	0.010	0.3	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.309	0.318	0.010	3.2	50.0
Acetone	0.023	0.021	0.010	-7.1	50.0
Carbon disulfide	0.629	0.641	0.010	2.0	50.0
Methyl acetate	0.073	0.060	0.010	-17.3	50.0
Methylene Chloride	0.238	0.223	0.010	-6.1	50.0
trans-1,2-Dichloroethene	0.289	0.321	0.010	10.9	50.0
Methyl tert-butyl ether	0.326	0.341	0.010	4.6	50.0
1,1-Dichloroethane	0.572	0.597	0.010	4.4	50.0
cis-1,2-Dichloroethene	0.299	0.317	0.010	6.1	50.0
2-Butanone	0.039	0.040	0.010	3.0	50.0
Bromochloromethane	0.101	0.107	0.010	5.2	50.0
Chloroform	0.463	0.474	0.010	2.4	50.0
1,1,1-Trichloroethane	0.439	0.485	0.010	10.4	50.0
Cyclohexane	0.778	0.870	0.010	11.8	50.0
Carbon tetrachloride	0.404	0.460	0.010	13.9	50.0
Benzene	1.425	1.538	0.010	7.9	50.0
1,2-Dichloroethane	0.257	0.258	0.010	0.3	50.0
Trichloroethene	0.341	0.377	0.010	10.7	50.0
Methylcyclohexane	0.659	0.717	0.010	8.8	50.0

Report 1,4-Dioxane for Low/Medium VOA analysis only

7B - FORM VII VOA-2  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Instrument ID: D.i Calibration Date: 06/11/2011 Time: 1709  
 Lab File Id: DHOB08.D Init. Calib. Date(s): 03/25/2011 03/25/2011  
 EPA Sample No. (VSTD####): VSTD005HD Init. Calib. Time(s): 1225 1403  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.353	0.362	0.010	2.3	50.0
Bromodichloromethane	0.282	0.300	0.010	6.5	50.0
cis-1,3-Dichloropropene	0.372	0.425	0.010	14.1	50.0
4-Methyl-2-pentanone	0.106	0.114	0.010	8.0	50.0
Toluene	1.584	1.688	0.010	6.5	50.0
trans-1,3-Dichloropropene	0.261	0.295	0.010	13.2	50.0
1,1,2-Trichloroethane	0.159	0.170	0.010	6.8	50.0
Tetrachloroethene	0.297	0.327	0.010	10.1	50.0
2-Hexanone	0.073	0.078	0.010	7.0	50.0
Dibromochloromethane	0.163	0.180	0.010	10.1	50.0
1,2-Dibromoethane	0.140	0.147	0.010	5.2	50.0
Chlorobenzene	1.011	1.054	0.010	4.2	50.0
Ethylbenzene	1.791	1.887	0.010	5.4	50.0
o-Xylene	0.683	0.733	0.010	7.3	50.0
m,p-Xylene	0.733	0.779	0.010	6.3	50.0
Styrene	0.996	1.033	0.010	3.7	50.0
Bromoform	0.111	0.125	0.010	13.3	50.0
Isopropylbenzene	1.824	1.995	0.010	9.4	50.0
1,1,2,2-Tetrachloroethane	0.160	0.162	0.010	0.7	50.0
1,3-Dichlorobenzene	1.593	1.645	0.010	3.3	50.0
1,4-Dichlorobenzene	1.645	1.647	0.010	0.1	50.0
1,2-Dichlorobenzene	1.373	1.398	0.010	1.8	50.0
1,2-Dibromo-3-Chloropropane	0.032	0.036	0.010	13.2	50.0
1,2,4-Trichlorobenzene	0.725	0.754	0.010	4.0	50.0
1,2,3-Trichlorobenzene	0.570	0.592	0.010	3.9	50.0

7C - FORM VII VOA-3  
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Instrument ID: D.i Calibration Date: 06/11/2011 Time: 1709  
 Lab File Id: DHOB08.D Init. Calib. Date(s): 03/25/2011 03/25/2011  
 EPA Sample No. (VSTD####): VSTD005HD Init. Calib. Time(s): 1225 1403  
 Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.20 (mm) Length: 25 (m)  
 Purge Volume: 25.0 (mL)

COMPOUND	RRF	RRF5.0	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.391	0.337	0.010	-14.0	50.0
Chloroethane-d5	0.258	0.231	0.010	-10.5	50.0
1,1-Dichloroethene-d2	0.655	0.619	0.010	-5.4	50.0
2-Butanone-d5	0.039	0.037	0.010	-4.6	50.0
Chloroform-d	0.486	0.490	0.010	0.9	50.0
1,2-Dichloroethane-d4	0.187	0.184	0.010	-2.0	50.0
Benzene-d6	1.401	1.493	0.010	6.5	50.0
1,2-Dichloropropane-d6	0.353	0.373	0.010	5.6	50.0
Toluene-d8	1.349	1.433	0.010	6.2	50.0
trans-1,3-Dichloropropene-d4	0.223	0.247	0.010	11.1	50.0
2-Hexanone-d5	0.033	0.037	0.010	13.4	50.0
1,1,2,2-Tetrachloroethane-d2	0.164	0.160	0.010	-2.4	50.0
1,2-Dichlorobenzene-d4	0.813	0.815	0.010	0.3	50.0

Report 1,4-Dioxane-d8 for Low/Medium VOA analysis only

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

EPA SAMPLE NO.

VBLKDH

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-19483/4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: DHOB04.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 06/11/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/kg)	ug/L
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.021	J
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	1.3	J
75-15-0	Carbon disulfide	0.069	J
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene Chloride	0.014	J
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-butyl ether	0.025	J
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.011	J
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only



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

EPA SAMPLE NO.

VBLKDH

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-19483/4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: DHOB04.D  
 Level: (TRACE/LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. Date Analyzed: 06/11/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:		Q
		(ug/L or ug/kg)	ug/L	
79-01-6	Trichloroethene		0.50	U
108-87-2	Methylcyclohexane		0.50	U
78-87-5	1,2-Dichloropropane		0.50	U
75-27-4	Bromodichloromethane		0.50	U
10061-01-5	cis-1,3-Dichloropropene		0.50	U
108-10-1	4-Methyl-2-pentanone		5.0	U
108-88-3	Toluene		0.011	J
10061-02-6	trans-1,3-Dichloropropene		0.50	U
79-00-5	1,1,2-Trichloroethane		0.50	U
127-18-4	Tetrachloroethene		0.50	U
591-78-6	2-Hexanone		5.0	U
124-48-1	Dibromochloromethane		0.50	U
106-93-4	1,2-Dibromoethane		0.50	U
108-90-7	Chlorobenzene		0.50	U
100-41-4	Ethylbenzene		0.0059	J
95-47-6	o-Xylene		0.50	U
179601-23-1	m,p-Xylene		0.0077	J
100-42-5	Styrene		0.50	U
75-25-2	Bromoform		0.50	U
98-82-8	Isopropylbenzene		0.50	U
79-34-5	1,1,2,2-Tetrachloroethane		0.50	U
541-73-1	1,3-Dichlorobenzene		0.020	J
106-46-7	1,4-Dichlorobenzene		0.50	U
95-50-1	1,2-Dichlorobenzene		0.50	U
96-12-8	1,2-Dibromo-3-Chloropropane		0.50	U
120-82-1	1,2,4-Trichlorobenzene		0.075	J
87-61-6	1,2,3-Trichlorobenzene		0.062	J

1J - FORM I VOA-TIC  
 VOLATILE ORGANICS ANALYSIS DATA SHEET  
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKDH

Lab Name: TESTAMERICA BURLINGTON Contract: 8E-00302  
 Lab Code: STLV Case No.: MONTGO Mod. Ref No.: \_\_\_\_\_ SDG No.: 200-5483  
 Matrix: (SOIL/SED/WATER) Water Lab Sample ID: MB 200-19483/4  
 Sample wt/vol: 25.0 (g/mL) mL Lab File ID: DHOB04.D  
 Level: (TRACE or LOW/MED) TRACE Date Received: \_\_\_\_\_  
 % Moisture: not dec. \_\_\_\_\_ Date Analyzed: 06/11/2011  
 GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
 Soil Extract Volume: \_\_\_\_\_ (uL) Soil Aliquot Volume: \_\_\_\_\_ (uL)  
 CONCENTRATION UNITS: (ug/L or ug/kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown	6.79	3.2	X J
02	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

## ANALYTICAL REPORT

Job Number: 500-28786-1

Job Description: Montgomery City

For:

Argonne National Laboratory

9700 South Cass Avenue

Building 203

Office B-149

Argonne, IL 60439

Attention: Mr. Clyde Dennis



Approved for release.  
Jim Knapp  
Customer Service Manager  
11/15/2010 3:24 PM

---

Jim Knapp

Customer Service Manager

[jim.knapp@testamericainc.com](mailto:jim.knapp@testamericainc.com)

11/15/2010

These test results meet all the requirements of NELAC for accredited parameters.

The Lab Certification ID#:

TestAmerica Chicago 100201

TestAmerica Burlington VT00008

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 60484

Tel (708) 534-5200 Fax (708) 534-5211 [www.testamericainc.com](http://www.testamericainc.com)



**Job Narrative**  
**500-28786-1**

**Comments**

No additional comments.

**Receipt**

All samples were received in good condition within temperature requirements.

**Metals**

No analytical or quality issues were noted.

**General Chemistry**

Method(s) 300.0, 9056, 9056A: Compounds on the ion chromatography column eluted outside the retention time window on the for the following sample(s): (500-28786-5 MS), (500-28786-5 MSD), (CCV 500-98736/46), (CCV 500-98736/58), (CCV 500-98736/70), MCKCOBB-W-32634 (500-28786-5), MCKCOBB-W-32635 (500-28786-6), MCPWS2-W-32631 (500-28786-2), MCPWS3-W-32632 (500-28786-3), MCTREAT-W-32633 (500-28786-4). This retention time shift was taken into account when reviewing the sample(s) for target compounds.

Method(s) 300.0: The following samples were diluted due to the abundance of non-target analytes: MCKCOBB-W-32634 (500-28786-5), MCPWS1-W-32630 (500-28786-1), MCPWS3-W-32632 (500-28786-3). Elevated reporting limits (RLs) are provided for nitrite.

Method(s) 300.0: The following orthophosphate samples have are affected by a low CCV. The samples are being reported with this low CCV due to hold times having expired. MCKCOBB-W-32634 (500-28786-5), MCKCOBB-W-32635 (500-28786-6), MCPWS1-W-32630 (500-28786-1), MCPWS2-W-32631 (500-28786-2), MCPWS3-W-32632 (500-28786-3), MCTREAT-W-32633 (500-28786-4) The orthophosphate MS/MSD was also out of control.

Method(s) 300.0, 9056, 9056A: Manual integration was performed on the following ion chromatography CCV and CCB samples due to baseline interferences (CCB 500-98736/35).

No other analytical or quality issues were noted.

## EXECUTIVE SUMMARY - Detections

Client: Argonne National Laboratory

Job Number: 500-28786-1

Lab Sample ID	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
<b>500-28786-1</b>	<b>MCPWS1-W-32630</b>					
Bromide		0.63		0.20	mg/L	300.0
Chloride		66	B	2.0	mg/L	300.0
Sulfate		190		20	mg/L	300.0
<i>Dissolved</i>						
Calcium		81	B	5.0	mg/L	6010B
Magnesium		38		5.0	mg/L	6010B
Manganese		0.0010	J	0.015	mg/L	6010B
Potassium		14		5.0	mg/L	6010B
Phosphorus		5.6	J B	250	ug/L	6010B
Silicon		4.6	B	0.10	mg/L	6010B
Sodium		130		50	mg/L	6010B
Zinc		0.0038	J	0.020	mg/L	6010B
<b>500-28786-2</b>	<b>MCPWS2-W-32631</b>					
Bromide		0.29		0.20	mg/L	300.0
Chloride		23		4.0	mg/L	300.0
Sulfate		150		4.0	mg/L	300.0
<i>Dissolved</i>						
Aluminum		0.066	J	0.20	mg/L	6010B
Calcium		84	B	5.0	mg/L	6010B
Iron		0.062	J	0.20	mg/L	6010B
Magnesium		43		5.0	mg/L	6010B
Manganese		0.0023	J	0.015	mg/L	6010B
Potassium		18		5.0	mg/L	6010B
Phosphorus		3.7	J B	250	ug/L	6010B
Silicon		4.2	B	0.10	mg/L	6010B
Sodium		98		5.0	mg/L	6010B
Zinc		0.035		0.020	mg/L	6010B
<b>500-28786-3</b>	<b>MCPWS3-W-32632</b>					
Bromide		0.75		0.20	mg/L	300.0
Chloride		88		4.0	mg/L	300.0
Sulfate		110		4.0	mg/L	300.0
<i>Dissolved</i>						
Calcium		75	B	5.0	mg/L	6010B
Magnesium		36		5.0	mg/L	6010B
Manganese		0.0012	J	0.015	mg/L	6010B
Potassium		13		5.0	mg/L	6010B
Silicon		4.7	B	0.10	mg/L	6010B
Sodium		120		50	mg/L	6010B

## EXECUTIVE SUMMARY - Detections

Client: Argonne National Laboratory

Job Number: 500-28786-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
<b>500-28786-4</b>	<b>MCTREAT-W-32633</b>					
Bromide		0.14	J	0.20	mg/L	300.0
Chloride		16		4.0	mg/L	300.0
Sulfate		110		4.0	mg/L	300.0
<i>Dissolved</i>						
Calcium		75	B	5.0	mg/L	6010B
Iron		0.032	J	0.20	mg/L	6010B
Magnesium		40		5.0	mg/L	6010B
Manganese		0.0015	J	0.015	mg/L	6010B
Potassium		16		5.0	mg/L	6010B
Phosphorus		4.4	J B	250	ug/L	6010B
Silicon		4.1	B	0.10	mg/L	6010B
Sodium		81		5.0	mg/L	6010B
Zinc		0.31		0.020	mg/L	6010B
<b>500-28786-5</b>	<b>MCHEMEYER-W-32634</b>					
Bromide		0.42		0.20	mg/L	300.0
Chloride		57		4.0	mg/L	300.0
Nitrate as N		0.095	J H	0.10	mg/L	300.0
Sulfate		170		4.0	mg/L	300.0
<i>Dissolved</i>						
Calcium		79	B	5.0	mg/L	6010B
Magnesium		37		5.0	mg/L	6010B
Potassium		14		5.0	mg/L	6010B
Phosphorus		4.8	J B	250	ug/L	6010B
Silicon		4.6	B	0.10	mg/L	6010B
Sodium		130		50	mg/L	6010B
Zinc		0.0072	J	0.020	mg/L	6010B

## EXECUTIVE SUMMARY - Detections

Client: Argonne National Laboratory

Job Number: 500-28786-1

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
<b>500-28786-6</b>	<b>MCKCOBB-W-32635</b>				
Bromide		0.30	0.20	mg/L	300.0
Chloride		13	1.0	mg/L	300.0
Nitrate as N		0.065 J H	0.10	mg/L	300.0
Sulfate		200	20	mg/L	300.0
<i>Dissolved</i>					
Calcium		150 B	5.0	mg/L	6010B
Iron		0.032 J	0.20	mg/L	6010B
Magnesium		48	5.0	mg/L	6010B
Manganese		0.23	0.015	mg/L	6010B
Potassium		2.0 J	5.0	mg/L	6010B
Phosphorus		6.6 J B	250	ug/L	6010B
Silicon		5.7 B	0.10	mg/L	6010B
Sodium		150	50	mg/L	6010B
Zinc		0.23	0.020	mg/L	6010B

## METHOD SUMMARY

Client: Argonne National Laboratory

Job Number: 500-28786-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Metals (ICP)	TAL BUR	SW846 6010B	
Sample Filtration	TAL BUR		FILTRATION
Preparation, Total Metals	TAL BUR		SW846 3010A
Anions, Ion Chromatography	TAL CHI	MCAWW 300.0	

### Lab References:

TAL BUR = TestAmerica Burlington

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.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.



## METHOD / ANALYST SUMMARY

Client: Argonne National Laboratory

Job Number: 500-28786-1

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SW846 6010B	Sheldon, Travis F	TFS
MCAWW 300.0	Ficarello, Peter M	PMF

## SAMPLE SUMMARY

Client: Argonne National Laboratory

Job Number: 500-28786-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
500-28786-1	MCPWS1-W-32630	Water	10/22/2010 0000	10/26/2010 1030
500-28786-2	MCPWS2-W-32631	Water	10/22/2010 0000	10/26/2010 1030
500-28786-3	MCPWS3-W-32632	Water	10/22/2010 0000	10/26/2010 1030
500-28786-4	MCTREAT-W-32633	Water	10/22/2010 0000	10/26/2010 1030
500-28786-5	MCHEMEYER-W-32634	Water	10/22/2010 0000	10/26/2010 1030
500-28786-6	MCKCOBB-W-32635	Water	10/22/2010 0000	10/26/2010 1030

# **SAMPLE RESULTS**

Mr. Clyde Dennis  
 Argonne National Laboratory  
 9700 South Cass Avenue  
 Building 203  
 Office B-149  
 Argonne, IL 60439

Job Number: 500-28786-1

Client Sample ID: MCPWS1-W-32630  
 Lab Sample ID: 500-28786-1

Date Sampled: 10/22/2010 0000  
 Date Received: 10/26/2010 1030  
 Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
<b>Method: Dissolved-6010B</b>			Date Analyzed: 11/13/2010 1208		
<b>Prep Method: 3010A</b>			Date Prepared: 11/01/2010 0812		
Aluminum	<0.20	mg/L	0.045	0.20	1.0
Calcium	81 B	mg/L	0.091	5.0	1.0
Iron	<0.20	mg/L	0.030	0.20	1.0
Magnesium	38	mg/L	0.084	5.0	1.0
Manganese	0.0010 J	mg/L	0.00036	0.015	1.0
Potassium	14	mg/L	0.23	5.0	1.0
Phosphorus	5.6 J B	ug/L	2.9	250	1.0
Silicon	4.6 B	mg/L	0.0081	0.10	1.0
Zinc	0.0038 J	mg/L	0.0036	0.020	1.0
<b>Method: Dissolved-6010B Run Type: DL</b>			Date Analyzed: 11/14/2010 0536		
<b>Prep Method: 3010A</b>			Date Prepared: 11/01/2010 0812		
Sodium	130	mg/L	0.61	50	10
<b>Method: 300.0</b>			Date Analyzed: 11/01/2010 1736		
Bromide	0.63	mg/L	0.090	0.20	1.0
Nitrate as N	<0.10 H	mg/L	0.013	0.10	1.0
Orthophosphate as P	<0.20 H * ^	mg/L	0.046	0.20	1.0
<b>Method: 300.0</b>			Date Analyzed: 11/01/2010 1750		
Chloride	66 B	mg/L	0.30	2.0	10
Nitrite as N	<1.0 H	mg/L	0.28	1.0	10
<b>Method: 300.0</b>			Date Analyzed: 11/06/2010 1202		
Sulfate	190	mg/L	5.3	20	100

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Job Number: 500-28786-1

Client Sample ID: MCPWS2-W-32631  
 Lab Sample ID: 500-28786-2

Date Sampled: 10/22/2010 0000  
 Date Received: 10/26/2010 1030  
 Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
<b>Method: Dissolved-6010B</b>			Date Analyzed: 11/13/2010 1216		
<b>Prep Method: 3010A</b>			Date Prepared: 11/01/2010 0812		
Aluminum	0.066 J	mg/L	0.045	0.20	1.0
Calcium	84 B	mg/L	0.091	5.0	1.0
Iron	0.062 J	mg/L	0.030	0.20	1.0
Magnesium	43	mg/L	0.084	5.0	1.0
Manganese	0.0023 J	mg/L	0.00036	0.015	1.0
Potassium	18	mg/L	0.23	5.0	1.0
Phosphorus	3.7 J B	ug/L	2.9	250	1.0
Silicon	4.2 B	mg/L	0.0081	0.10	1.0
Sodium	98	mg/L	0.061	5.0	1.0
Zinc	0.035	mg/L	0.0036	0.020	1.0
<b>Method: 300.0</b>			Date Analyzed: 11/01/2010 1805		
Bromide	0.29	mg/L	0.090	0.20	1.0
Nitrate as N	<0.10 H	mg/L	0.013	0.10	1.0
Nitrite as N	<0.10 H	mg/L	0.028	0.10	1.0
Orthophosphate as P	<0.20 H * ^	mg/L	0.046	0.20	1.0
<b>Method: 300.0</b>			Date Analyzed: 11/06/2010 1217		
Chloride	23	mg/L	0.60	4.0	20
Sulfate	150	mg/L	1.1	4.0	20

Mr. Clyde Dennis  
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 Argonne, IL 60439

Job Number: 500-28786-1

Client Sample ID: MCPWS3-W-32632  
 Lab Sample ID: 500-28786-3

Date Sampled: 10/22/2010 0000  
 Date Received: 10/26/2010 1030  
 Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
<b>Method: Dissolved-6010B</b>			Date Analyzed: 11/13/2010 1220		
<b>Prep Method: 3010A</b>			Date Prepared: 11/01/2010 0812		
Aluminum	<0.20	mg/L	0.045	0.20	1.0
Calcium	75 B	mg/L	0.091	5.0	1.0
Iron	<0.20	mg/L	0.030	0.20	1.0
Magnesium	36	mg/L	0.084	5.0	1.0
Manganese	0.0012 J	mg/L	0.00036	0.015	1.0
Potassium	13	mg/L	0.23	5.0	1.0
Phosphorus	<250	ug/L	2.9	250	1.0
Silicon	4.7 B	mg/L	0.0081	0.10	1.0
Zinc	<0.020	mg/L	0.0036	0.020	1.0
<b>Method: Dissolved-6010B Run Type: DL</b>			Date Analyzed: 11/14/2010 0540		
<b>Prep Method: 3010A</b>			Date Prepared: 11/01/2010 0812		
Sodium	120	mg/L	0.61	50	10
<b>Method: 300.0</b>			Date Analyzed: 11/01/2010 1902		
Bromide	0.75	mg/L	0.090	0.20	1.0
Nitrate as N	<0.10 H	mg/L	0.013	0.10	1.0
Orthophosphate as P	<0.20 H * ^	mg/L	0.046	0.20	1.0
<b>Method: 300.0</b>			Date Analyzed: 11/01/2010 1916		
Nitrite as N	<1.0 H	mg/L	0.28	1.0	10
<b>Method: 300.0</b>			Date Analyzed: 11/06/2010 1300		
Chloride	88	mg/L	0.60	4.0	20
Sulfate	110	mg/L	1.1	4.0	20

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 Argonne, IL 60439

Job Number: 500-28786-1

Client Sample ID: MCTREAT-W-32633  
 Lab Sample ID: 500-28786-4

Date Sampled: 10/22/2010 0000  
 Date Received: 10/26/2010 1030  
 Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
<b>Method: Dissolved-6010B</b>			Date Analyzed: 11/13/2010 1224		
<b>Prep Method: 3010A</b>			Date Prepared: 11/01/2010 0812		
Aluminum	<0.20	mg/L	0.045	0.20	1.0
Calcium	75 B	mg/L	0.091	5.0	1.0
Iron	0.032 J	mg/L	0.030	0.20	1.0
Magnesium	40	mg/L	0.084	5.0	1.0
Manganese	0.0015 J	mg/L	0.00036	0.015	1.0
Potassium	16	mg/L	0.23	5.0	1.0
Phosphorus	4.4 J B	ug/L	2.9	250	1.0
Silicon	4.1 B	mg/L	0.0081	0.10	1.0
Sodium	81	mg/L	0.061	5.0	1.0
Zinc	0.31	mg/L	0.0036	0.020	1.0
<b>Method: 300.0</b>			Date Analyzed: 11/01/2010 1931		
Bromide	0.14 J	mg/L	0.090	0.20	1.0
Nitrate as N	<0.10 H	mg/L	0.013	0.10	1.0
Nitrite as N	<0.10 H	mg/L	0.028	0.10	1.0
Orthophosphate as P	<0.20 H * ^	mg/L	0.046	0.20	1.0
<b>Method: 300.0</b>			Date Analyzed: 11/06/2010 1314		
Chloride	16	mg/L	0.60	4.0	20
Sulfate	110	mg/L	1.1	4.0	20

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Job Number: 500-28786-1

Client Sample ID: MCHEMEYER-W-32634  
 Lab Sample ID: 500-28786-5

Date Sampled: 10/22/2010 0000  
 Date Received: 10/26/2010 1030  
 Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
<b>Method: Dissolved-6010B</b>			Date Analyzed:	11/13/2010 1228	
<b>Prep Method: 3010A</b>			Date Prepared:	11/01/2010 0812	
Aluminum	<0.20	mg/L	0.045	0.20	1.0
Calcium	79 B	mg/L	0.091	5.0	1.0
Iron	<0.20	mg/L	0.030	0.20	1.0
Magnesium	37	mg/L	0.084	5.0	1.0
Manganese	<0.015	mg/L	0.00036	0.015	1.0
Potassium	14	mg/L	0.23	5.0	1.0
Phosphorus	4.8 J B	ug/L	2.9	250	1.0
Silicon	4.6 B	mg/L	0.0081	0.10	1.0
Zinc	0.0072 J	mg/L	0.0036	0.020	1.0
<b>Method: Dissolved-6010B Run Type: DL</b>			Date Analyzed:	11/14/2010 0544	
<b>Prep Method: 3010A</b>			Date Prepared:	11/01/2010 0812	
Sodium	130	mg/L	0.61	50	10
<b>Method: 300.0</b>			Date Analyzed:	11/01/2010 1959	
Bromide	0.42	mg/L	0.090	0.20	1.0
Nitrate as N	0.095 J H	mg/L	0.013	0.10	1.0
Orthophosphate as P	<0.20 H * ^	mg/L	0.046	0.20	1.0
<b>Method: 300.0</b>			Date Analyzed:	11/01/2010 2014	
Nitrite as N	<1.0 H	mg/L	0.28	1.0	10
<b>Method: 300.0</b>			Date Analyzed:	11/06/2010 1357	
Chloride	57	mg/L	0.60	4.0	20
<b>Method: 300.0</b>			Date Analyzed:	11/09/2010 1022	
Sulfate	170	mg/L	1.1	4.0	20



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Job Number: 500-28786-1

Client Sample ID: MCKCOBB-W-32635  
 Lab Sample ID: 500-28786-6

Date Sampled: 10/22/2010 0000  
 Date Received: 10/26/2010 1030  
 Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
<b>Method: Dissolved-6010B</b>			Date Analyzed: 11/13/2010 1232		
<b>Prep Method: 3010A</b>			Date Prepared: 11/01/2010 0814		
Aluminum	<0.20	mg/L	0.045	0.20	1.0
Calcium	150 B	mg/L	0.091	5.0	1.0
Iron	0.032 J	mg/L	0.030	0.20	1.0
Magnesium	48	mg/L	0.084	5.0	1.0
Manganese	0.23	mg/L	0.00036	0.015	1.0
Potassium	2.0 J	mg/L	0.23	5.0	1.0
Phosphorus	6.6 J B	ug/L	2.9	250	1.0
Silicon	5.7 B	mg/L	0.0081	0.10	1.0
Zinc	0.23	mg/L	0.0036	0.020	1.0
<b>Method: Dissolved-6010B Run Type: DL</b>			Date Analyzed: 11/14/2010 0548		
<b>Prep Method: 3010A</b>			Date Prepared: 11/01/2010 0814		
Sodium	150	mg/L	0.61	50	10
<b>Method: 300.0</b>			Date Analyzed: 11/01/2010 2154		
Bromide	0.30	mg/L	0.090	0.20	1.0
Nitrate as N	0.065 J H	mg/L	0.013	0.10	1.0
Nitrite as N	<0.10 H	mg/L	0.028	0.10	1.0
Orthophosphate as P	<0.20 H * ^	mg/L	0.046	0.20	1.0
<b>Method: 300.0</b>			Date Analyzed: 11/06/2010 1551		
Chloride	13	mg/L	0.15	1.0	5.0
<b>Method: 300.0</b>			Date Analyzed: 11/09/2010 1037		
Sulfate	200	mg/L	5.3	20	100

## DATA REPORTING QUALIFIERS

Client: Argonne National Laboratory

Job Number: 500-28786-1

Lab Section	Qualifier	Description
Metals		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	B	Compound was found in the blank and sample.
	^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
	*	LCS or LCSD 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

# QUALITY CONTROL RESULTS

## Quality Control Results

Client: Argonne National Laboratory

Job Number: 500-28786-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Prep Batch: 200-8769</b>					
LCS 200-8769/2-A	Lab Control Sample	T	Water	3010A	
MB 200-8769/1-A	Method Blank	T	Water	3010A	
PB 200-8690/1-B	Preparation / Extraction Blank	D	Water	3010A	
500-28786-1	MCPWS1-W-32630	D	Water	3010A	
500-28786-1DL	MCPWS1-W-32630	D	Water	3010A	
500-28786-2	MCPWS2-W-32631	D	Water	3010A	
500-28786-3	MCPWS3-W-32632	D	Water	3010A	
500-28786-3DL	MCPWS3-W-32632	D	Water	3010A	
500-28786-4	MCTREAT-W-32633	D	Water	3010A	
500-28786-5	MCHEMEYER-W-32634	D	Water	3010A	
500-28786-5DL	MCHEMEYER-W-32634	D	Water	3010A	
500-28786-6	MCKCOBB-W-32635	D	Water	3010A	
500-28786-6DL	MCKCOBB-W-32635	D	Water	3010A	
<b>Analysis Batch:200-9526</b>					
LCS 200-8769/2-A	Lab Control Sample	T	Water	6010B	200-8769
MB 200-8769/1-A	Method Blank	T	Water	6010B	200-8769
PB 200-8690/1-B	Preparation / Extraction Blank	D	Water	6010B	200-8769
500-28786-1	MCPWS1-W-32630	D	Water	6010B	200-8769
500-28786-2	MCPWS2-W-32631	D	Water	6010B	200-8769
500-28786-3	MCPWS3-W-32632	D	Water	6010B	200-8769
500-28786-4	MCTREAT-W-32633	D	Water	6010B	200-8769
500-28786-5	MCHEMEYER-W-32634	D	Water	6010B	200-8769
500-28786-6	MCKCOBB-W-32635	D	Water	6010B	200-8769
<b>Analysis Batch:200-9562</b>					
500-28786-1DL	MCPWS1-W-32630	D	Water	6010B	200-8769
500-28786-3DL	MCPWS3-W-32632	D	Water	6010B	200-8769
500-28786-5DL	MCHEMEYER-W-32634	D	Water	6010B	200-8769
500-28786-6DL	MCKCOBB-W-32635	D	Water	6010B	200-8769

**Report Basis**

D = Dissolved

T = Total

## Quality Control Results

Client: Argonne National Laboratory

Job Number: 500-28786-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:500-98736</b>					
LCS 500-98736/42	Lab Control Sample	T	Water	300.0	
MB 500-98736/41	Method Blank	T	Water	300.0	
500-28786-1	MCPWS1-W-32630	T	Water	300.0	
500-28786-2	MCPWS2-W-32631	T	Water	300.0	
500-28786-3	MCPWS3-W-32632	T	Water	300.0	
500-28786-4	MCTREAT-W-32633	T	Water	300.0	
500-28786-5	MCHEMEYER-W-32634	T	Water	300.0	
500-28786-5MS	Matrix Spike	T	Water	300.0	
500-28786-5MSD	Matrix Spike Duplicate	T	Water	300.0	
500-28786-6	MCKCOBB-W-32635	T	Water	300.0	
<b>Analysis Batch:500-99364</b>					
LCS 500-99364/4	Lab Control Sample	T	Water	300.0	
MB 500-99364/3	Method Blank	T	Water	300.0	
500-28786-1	MCPWS1-W-32630	T	Water	300.0	
500-28786-2	MCPWS2-W-32631	T	Water	300.0	
500-28786-2MS	Matrix Spike	T	Water	300.0	
500-28786-2MSD	Matrix Spike Duplicate	T	Water	300.0	
500-28786-3	MCPWS3-W-32632	T	Water	300.0	
500-28786-4	MCTREAT-W-32633	T	Water	300.0	
500-28786-5	MCHEMEYER-W-32634	T	Water	300.0	
500-28786-6	MCKCOBB-W-32635	T	Water	300.0	
<b>Analysis Batch:500-99425</b>					
LCS 500-99425/6	Lab Control Sample	T	Water	300.0	
MB 500-99425/5	Method Blank	T	Water	300.0	
500-28786-5	MCHEMEYER-W-32634	T	Water	300.0	
500-28786-6	MCKCOBB-W-32635	T	Water	300.0	

**Report Basis**

T = Total

## Quality Control Results

Client: Argonne National Laboratory

Job Number: 500-28786-1

### Method Blank - Batch: 200-8769

Lab Sample ID: MB 200-8769/1-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 11/13/2010 1156  
Date Prepared: 11/01/2010 0812

Analysis Batch: 200-9526  
Prep Batch: 200-8769  
Units: mg/L

### Method: 6010B Preparation: 3010A

Instrument ID: METICP7  
Lab File ID: 111310-02.ttx  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Aluminum	<0.20		0.045	0.20
Calcium	<5.0		0.091	5.0
Iron	<0.20		0.030	0.20
Magnesium	<5.0		0.084	5.0
Manganese	<0.015		0.00036	0.015
Potassium	<5.0		0.23	5.0
Silicon	0.0239	J	0.0081	0.10
Sodium	<5.0		0.061	5.0
Zinc	<0.020		0.0036	0.020

### Method Blank - Batch: 200-8769

Lab Sample ID: MB 200-8769/1-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 11/13/2010 1156  
Date Prepared: 11/01/2010 0812

Analysis Batch: 200-9526  
Prep Batch: 200-8769  
Units: ug/L

### Method: 6010B Preparation: 3010A

Instrument ID: METICP7  
Lab File ID: 111310-02.ttx  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Phosphorus	5.09	J	2.9	250

## Quality Control Results

Client: Argonne National Laboratory

Job Number: 500-28786-1

### Preparation / Extraction Blank - Batch: 200-8769

Lab Sample ID: PB 200-8690/1-B  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 11/13/2010 1204  
Date Prepared: 11/01/2010 0812

Analysis Batch: 200-9526  
Prep Batch: 200-8769  
Units: mg/L

Method: 6010B  
Preparation: 3010A  
Dissolved

Instrument ID: METICP7  
Lab File ID: 111310-02.ttx  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Aluminum	<0.20		0.045	0.20
Calcium	0.111	J	0.091	5.0
Iron	<0.20		0.030	0.20
Magnesium	<5.0		0.084	5.0
Manganese	<0.015		0.00036	0.015
Potassium	<5.0		0.23	5.0
Silicon	0.0309	J	0.0081	0.10
Sodium	<5.0		0.061	5.0
Zinc	<0.020		0.0036	0.020

### Preparation / Extraction Blank - Batch: 200-8769

Lab Sample ID: PB 200-8690/1-B  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 11/13/2010 1204  
Date Prepared: 11/01/2010 0812

Analysis Batch: 200-9526  
Prep Batch: 200-8769  
Units: ug/L

Method: 6010B  
Preparation: 3010A  
Dissolved

Instrument ID: METICP7  
Lab File ID: 111310-02.ttx  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Phosphorus	2.96	J	2.9	250

## Quality Control Results

Client: Argonne National Laboratory

Job Number: 500-28786-1

### Lab Control Sample - Batch: 200-8769

**Method: 6010B**  
**Preparation: 3010A**

Lab Sample ID: LCS 200-8769/2-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 11/13/2010 1200  
Date Prepared: 11/01/2010 0812

Analysis Batch: 200-9526  
Prep Batch: 200-8769  
Units: mg/L

Instrument ID: METICP7  
Lab File ID: 111310-02.ttx  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	51.0	51.1	100	80 - 120	
Calcium	50.0	51.5	103	80 - 120	
Iron	50.5	51.3	102	80 - 120	
Magnesium	50.0	50.6	101	80 - 120	
Manganese	0.500	0.464	93	80 - 120	
Potassium	50.0	51.7	103	80 - 120	
Silicon	1.00	1.05	105	80 - 120	
Sodium	50.0	50.7	101	80 - 120	
Zinc	0.500	0.486	97	80 - 120	

### Lab Control Sample - Batch: 200-8769

**Method: 6010B**  
**Preparation: 3010A**

Lab Sample ID: LCS 200-8769/2-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 11/13/2010 1200  
Date Prepared: 11/01/2010 0812

Analysis Batch: 200-9526  
Prep Batch: 200-8769  
Units: ug/L

Instrument ID: METICP7  
Lab File ID: 111310-02.ttx  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Phosphorus	1000	1040	104	80 - 120	



## Quality Control Results

Client: Argonne National Laboratory

Job Number: 500-28786-1

### Method Blank - Batch: 500-98736

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID: MB 500-98736/41  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 11/01/2010 1707  
Date Prepared: N/A

Analysis Batch: 500-98736  
Prep Batch: N/A  
Units: mg/L

Instrument ID: IC4  
Lab File ID: c:\peaknet\data\20101101\I  
Initial Weight/Volume:  
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Bromide	<0.20		0.090	0.20
Chloride	0.110	J	0.030	0.20
Nitrate as N	<0.10		0.013	0.10
Nitrite as N	<0.10		0.028	0.10
Sulfate	0.169	J	0.053	0.20
Orthophosphate as P	<0.20	^	0.046	0.20

### Lab Control Sample - Batch: 500-98736

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID: LCS 500-98736/42  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 11/01/2010 1722  
Date Prepared: N/A

Analysis Batch: 500-98736  
Prep Batch: N/A  
Units: mg/L

Instrument ID: IC4  
Lab File ID: c:\peaknet\data\20101101\I  
Initial Weight/Volume:  
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Bromide	2.00	1.93	96	90 - 110	
Chloride	3.00	3.09	103	90 - 110	
Nitrate as N	2.00	2.00	100	90 - 110	
Nitrite as N	2.00	1.89	95	90 - 110	
Sulfate	5.00	5.17	103	90 - 110	
Orthophosphate as P	2.00	1.74	87	90 - 110	^ *

## Quality Control Results

Client: Argonne National Laboratory

Job Number: 500-28786-1

**Matrix Spike - Batch: 500-98736**

**Method: 300.0**  
**Preparation: N/A**

Lab Sample ID: 500-28786-5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 11/01/2010 2028  
Date Prepared: N/A

Analysis Batch: 500-98736  
Prep Batch: N/A  
Units: mg/L

Instrument ID: IC4  
Lab File ID: c:\peaknet\data\20101101\I  
Initial Weight/Volume:  
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Bromide	0.42	2.00	2.77	118	75 - 125	
Nitrate as N	0.095 J	2.00	2.51	121	75 - 125	
Orthophosphate as P	<0.20	2.00	0.968	48	75 - 125	^ F

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 500-98736**

**Method: 300.0**  
**Preparation: N/A**

MS Lab Sample ID: 500-28786-5  
Client Matrix: Water  
Dilution: 20  
Date Analyzed: 11/01/2010 2042  
Date Prepared: N/A

Analysis Batch: 500-98736  
Prep Batch: N/A

Instrument ID: IC4  
Lab File ID: c:\peaknet\data\20101101\I  
Initial Weight/Volume:  
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 500-28786-5  
Client Matrix: Water  
Dilution: 20  
Date Analyzed: 11/01/2010 2139  
Date Prepared: N/A

Analysis Batch: 500-98736  
Prep Batch: N/A

Instrument ID: IC4  
Lab File ID: c:\peaknet\data\20101101\I  
Initial Weight/Volume:  
Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Nitrite as N	106	107	75 - 125	1	20		

## Quality Control Results

Client: Argonne National Laboratory

Job Number: 500-28786-1

### Method Blank - Batch: 500-99364

Lab Sample ID: MB 500-99364/3  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 11/06/2010 1105  
Date Prepared: N/A

Analysis Batch: 500-99364  
Prep Batch: N/A  
Units: mg/L

Method: 300.0  
Preparation: N/A

Instrument ID: IC4  
Lab File ID: C:\PEAKNET\DATA\20101  
Initial Weight/Volume:  
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Chloride	<0.20		0.030	0.20
Sulfate	<0.20		0.053	0.20

### Lab Control Sample - Batch: 500-99364

Lab Sample ID: LCS 500-99364/4  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 11/06/2010 1120  
Date Prepared: N/A

Analysis Batch: 500-99364  
Prep Batch: N/A  
Units: mg/L

Method: 300.0  
Preparation: N/A

Instrument ID: IC4  
Lab File ID: C:\PEAKNET\DATA\20101  
Initial Weight/Volume:  
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	3.00	3.02	101	90 - 110	
Sulfate	5.00	5.28	106	90 - 110	

## Quality Control Results

Client: Argonne National Laboratory

Job Number: 500-28786-1

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 500-99364

Method: 300.0  
Preparation: N/A

MS Lab Sample ID: 500-28786-2  
Client Matrix: Water  
Dilution: 20  
Date Analyzed: 11/06/2010 1231  
Date Prepared: N/A

Analysis Batch: 500-99364  
Prep Batch: N/A

Instrument ID: IC4  
Lab File ID: C:\PEAKNET\DATA\2010  
Initial Weight/Volume:  
Final Weight/Volume: 100 mL

MSD Lab Sample ID: 500-28786-2  
Client Matrix: Water  
Dilution: 20  
Date Analyzed: 11/06/2010 1245  
Date Prepared: N/A

Analysis Batch: 500-99364  
Prep Batch: N/A

Instrument ID: IC4  
Lab File ID: C:\PEAKNET\DATA\2010  
Initial Weight/Volume:  
Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chloride	111	114	75 - 125	2	20		
Sulfate	101	102	75 - 125	0	20		

## Quality Control Results

Client: Argonne National Laboratory

Job Number: 500-28786-1

### Method Blank - Batch: 500-99425

Lab Sample ID: MB 500-99425/5  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 11/09/2010 0954  
Date Prepared: N/A

Analysis Batch: 500-99425  
Prep Batch: N/A  
Units: mg/L

Method: 300.0  
Preparation: N/A

Instrument ID: IC4  
Lab File ID: C:\PEAKNET\DATA\20101  
Initial Weight/Volume:  
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Sulfate	<0.20		0.053	0.20

### Lab Control Sample - Batch: 500-99425

Lab Sample ID: LCS 500-99425/6  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 11/09/2010 1008  
Date Prepared: N/A

Analysis Batch: 500-99425  
Prep Batch: N/A  
Units: mg/L

Method: 300.0  
Preparation: N/A

Instrument ID: IC4  
Lab File ID: C:\PEAKNET\DATA\20101  
Initial Weight/Volume:  
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfate	5.00	5.47	109	90 - 110	



## Login Sample Receipt Check List

Client: Argonne National Laboratory

Job Number: 500-28786-1

**Login Number: 28786**

**Creator: Kelsey, Shawn M**

**List Number: 1**

**List Source: TestAmerica Chicago**

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

## Login Sample Receipt Check List

Client: Argonne National Laboratory

Job Number: 500-28786-1

**Login Number: 28786**  
**Creator: Keeton, Jamie**  
**List Number: 1**

**List Source: TestAmerica Burlington**  
**List Creation: 10/27/10 03:57 PM**

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	295644
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.5°C, IR GUN ID 96, CF -1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	N/A	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	





## Environmental Science Division

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