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September 25, 2013

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Subject: Corrective Action Plan  
Former Manchester Tank Company (HSI #10765)  
Cedartown, Polk County, Georgia

Dear Mr. Williams:

On behalf of Textron Inc., CDM Smith Inc. is submitting the enclosed Corrective Action Plan to meet the requirements of the Georgia Voluntary Remediation Program for the Former Manchester Tank Company (HSI #10765). If you have any questions concerning this plan, please do not hesitate to contact me at (404) 720-1379 or by email at [duffeyjt@cdmsmith.com](mailto:duffeyjt@cdmsmith.com).

Sincerely,

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Enclosure



## CORRECTIVE ACTION PLAN

**Former Manchester Tank Company**  
Cedartown, Polk County, Georgia

Prepared for Textron Inc.

September 2013

**CDM  
Smith**

# Document Certification

Former Manchester Tank Company  
HSI No.: 10765  
Cedartown, Polk County, Georgia  
Corrective Action Plan  
September 2013

CDM Smith Inc. certifies that the electronic documents stored on the attached compact disks are complete and identical to the paper copy of the original document and the compact disk and included files are virus free.



J. Thomas Duffey  
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I certify that I am a qualified groundwater scientist who has received a baccalaureate or postgraduate degree in the natural sciences or engineering, and have sufficient training and experience in groundwater hydrology and related fields as demonstrated by state registration, professional certifications, or completion of accredited university courses that enable that individual to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport.



J. Thomas Duffey, Georgia PG 000899  
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Seal



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# Section 1

## Introduction

This Corrective Action Plan (CAP) has been prepared by CDM Smith Inc. (CDM Smith) for Textron Inc. (Textron) to meet the requirements of the Georgia Voluntary Remediation Program (VRP) for the Former Manchester Tank Company (Manchester Tank), Hazardous Site Inventory (HSI) Number 10765. The Georgia Environmental Protection Division (EPD) accepted this site into the VRP on June 4, 2010, and approved the Preliminary Remediation Plan (Gallet & Associates, Inc., April 23, 2010) submitted by Trinity Industries, Inc. (Trinity). Since that time, Textron, Inc. (Textron) has assumed the responsibility as the lead VRP participant, and the future actions identified in this CAP supersede those in the previous remediation plan. This CAP is based on additional data collected during investigations conducted by CDM Smith starting in 2012.

Much of the background information regarding the site that was provided in the 2009 Preliminary Remediation Plan remains unchanged and it should be referenced for the following:

- Site location and description;
- Site operation history;
- Summary of previous investigations (2001-2009);
- Water Use Survey reporting requirements; and
- Regional geology and hydrogeology.

The remainder of this introductory section provides a summary of the results from the 2009 Preliminary Remediation Plan implementation, a timeline of regulatory-related events since Textron assumed VRP responsibility, and additional details regarding surrounding land use. Environmental conditions are described in **Section 2**. The site conceptual model is provided in **Section 3**. The proposed Risk Reduction Standards (RRSs) for this site are presented in **Section 4**. An evaluation of remedial technologies is included in **Section 5**. Details regarding the selected corrective action including: technology performance expectations, cost estimates for implementation, the expected timeframe for achieving the RRSs, and submittal of a Compliance Status Report (CSR) are discussed in **Section 6**.

### 1.1 Preliminary Remediation Plan

The corrective actions presented in the 2009 Preliminary Remediation Plan included ozone injection to remediate groundwater. A pilot test using ozone injection was performed at the site in 2011, and performance monitoring during this test did not show promising results. Total volatile organic compound (VOC) concentrations were not significantly reduced, and several monitoring wells showed increased concentrations. Based on operating logs from the pilot test, CDM Smith believes that the high injection pressures required to achieve injection during the pilot test may have displaced the VOCs in groundwater. Because of the high injection pressures that would be required to inject ozone and the potential for expanding the area of groundwater requiring remediation, CDM Smith has concluded that additional remedial technologies should be considered.

## 1.2 Recent Regulatory Interaction Activities

A meeting was held with representatives of EPD on March 28, 2012 to discuss changing the VRP applicant from Trinity to Textron. Since that time, the following regulatory interaction events have occurred:

- April 2, 2012 – An Easement and Right to Implement an Environmental Covenant was filed for the property with the Polk County Clerk of Superior Court. The Covenant prohibits residential use of the property, use of groundwater, and requires implementation of an EPD-approved CAP.
- June 1, 2012 – A Semi-Annual Voluntary Remediation Program Progress Report was submitted. This report included a summary of investigation activities initiated by CDM Smith in May 2012 and an updated VRP application with financial assurance.
- November 15, 2012 – A meeting was held with representatives of EPD to review recent investigation results, the current site conceptual model, and additional data gaps. The schedule for completing investigation activities and submitting a CAP was also discussed.
- November 30, 2012 – A Semi-Annual Voluntary Remediation Program Progress Report was submitted. This report memorialized much of the information discussed at the November 15<sup>th</sup> meeting, including the investigation results and remaining data gaps. This report also included an updated schedule, noting September 2013 as the planned CAP submittal date.
- June 17, 2013 – A Semi-Annual Voluntary Remediation Program Progress Report was submitted. During the associated reporting period, additional offsite access was obtained and groundwater investigation activities were completed, delineating VOCs in groundwater according to the VRP requirements. Soil vapor intrusion analysis and sampling were also performed, and additional soil sampling and statistical analyses were completed for metals delineation purposes.

## 1.3 Surrounding Land Use

The immediate site vicinity is mixed industrial/residential with the Missouri Machine and Plow, LLC (Missouri M&P) site immediately to the east. Missouri M&P was listed on the HSI (HSI No. 10868) during August 2007. In November 2010, EPD accepted a Prospective Purchaser Compliance Status Report for the Missouri M&P site that relieved the site from further response actions related to metals in soil. VOCs in groundwater on Missouri M&P were assumed to have originated from Manchester Tank.

The Hon Company LLC (Hon) is located to the immediate west of the Manchester Tank (**Figure 1-1**). The Hon Company manufactures office furniture and currently uses the Manchester Tank warehouse for storage. Manchester Tank no longer has operations at the site. The Hon site was listed on the HSI (HSI No. 10796) in 2005 for an isopropylbenzene (cumene) release, which has been resolved according to Hon.

Immediately to the south is the former location of Zartic, Inc. (Zartic), a meat processor. The Zartic facility burned to the ground several years ago, and as described further in Section 2.1.3, the nearest groundwater supply well is located on this property. A correctional facility that is no longer in use is located north of the site.

Residential properties are located east of the Missouri M&P site, and Cedar Creek lies beyond the residential area. Additional sensitive receptors such as schools, day care facilities, and hospitals are located to the east beyond Cedar Creek. In addition, a fourth contamination site, The Henkel Corporation Site, is located east of the site on the east bank of Cedar Creek. This site is managed under a Corrective Action Consent Order (No. EPD-HW-1048). This site is undergoing corrective action for VOCs in groundwater.

Access to Manchester Tank is restricted by fencing, but the gates generally remain open because Hon uses the facility for storage and operates 24-hours per day. Access to Missouri M&P is controlled by fences as well.

## Section 2

# Site Characterization

Characterization activities at the site have primarily focused on delineating the horizontal and vertical extents of VOCs in groundwater and metals in soil. For contaminant delineation purposes, the HSRA Type 1 RRSs are included in the data tables and figures of this section; however, the RRSs proposed for corrective action are discussed in Section 4. The characterization results for all CDM Smith activities are summarized below.

## 2.1 Groundwater Investigations

### 2.1.1 Monitoring Well Installation and Sampling

Since starting work in 2012, CDM Smith has performed several phases of work involving groundwater monitoring well installation and sampling to determine VOC delineation horizontally, vertically in bedrock groundwater, and off site.

- ***June - July 2012***

- Thirteen new wells were installed on site and off site. These wells include MW-30A, -31C, -32B, -33A, -34B, -35D, -36C, -37C, -38C, -39C, -40C, -41C, and -42C. All of these wells are located on the Missouri M&P property except for MW-41C and MW-42C, which are Manchester Tank wells.
- Water levels and groundwater samples were collected from the wells listed above and previously existing wells on both the Manchester Tank and the Missouri M&P properties.

- ***September - November 2012***

- Ten new wells were installed on site and off site. These wells include:
  - Manchester Tank site: MW-43D and MW-51C
  - Missouri M&P site: MW-44C, -45C, and -52C
  - Offsite properties and right-of-ways east of Missouri M&P: MW-46C, -47C, -48C, -49C, and -50C
- Groundwater sampling was performed for the new wells installed in the phase and water level measurements were collected from all onsite and offsite wells.

- ***May 2013***

- Two additional wells (MW-53C and MW-54C) were installed off site on the Hon property and sampled.
- An additional well (MW-55D) was installed and sampled on the Missouri M&P site.

The above well locations, in addition to previously installed wells, are shown on **Figure 2-1. Table 2-1** provides a construction summary for all wells. Boring logs for the CDM Smith-installed wells are presented in **Appendix A**.

## 2.1.2 Site Hydrogeology

The site hydrogeology has been classified by CDM Smith into four units: A, B, C, and D. Unit A is the relatively thin, unconsolidated soil residuum and is typically unsaturated but may contain groundwater under water table conditions where it is thick enough. Unit A averages approximately 12 feet in thickness. Unit B is the uppermost bedrock and typically contains groundwater under water table conditions. Unit B limestone has few fractures, which tend to be thin and produce little groundwater. Unit C is similar to Unit B except that the fractures tend to be less frequent and groundwater in Unit C is presumed to be confined to some extent. Unit D is the deeper limestone bedrock. The letter designation following each monitoring well number corresponds to the stratigraphic unit in which it is screened.

The potentiometric surface from water levels collected in November 2012 for Unit A/B and Unit C are presented on **Figure 2-2** and **Figure 2-3**, respectively. The direction of groundwater flow is to the northeast, toward Cedar Creek.

## 2.1.3 Surrounding Groundwater Use

CDM Smith identified groundwater wells in the site vicinity during a water use survey update that was performed in 2012. This update included a “windshield” survey and using data from the USGS National Water Information System. As shown on **Figure 2-4**, ten water wells have been located near the site with the Zartic well (GG71) to the south being the closest well. The Zartic well is the only well within 0.5 miles of the site. This well is no longer in use because the Zartic facility burned down and the structure is no longer present, although the well house remains. Considering that the direction of groundwater flow is to the northeast and that Cedar Creek is located between the site and many of the groundwater wells, groundwater flow from the site would not be expected to reach any of the identified wells.

The City of Cedartown obtains its water supply from Big Spring, a natural limestone spring, located more than one mile east of the site, and the municipal supply is available to the entire site vicinity. Big Spring produces approximately 12 million gallons per day (mgd) of water with approximately 2 mgd serving the water supply system. The spring water is treated prior to distribution. Groundwater from the site would not be expected to impact this spring because it is in a cross-gradient flow direction relative to the site.

## 2.1.4 Groundwater VOC analyses

A detection summary of groundwater VOCs for all groundwater sampling events since June 2012 is presented on **Table 2-2**. The corresponding laboratory reports are provided in **Appendix B**. Table 2-2 also shows each compound’s Type 1, residential land use, RRS. The VOCs that exceed the Type 1 RRSs for groundwater are:

- 1,1,1-Trichloroethane (1,1,1-TCA);
- 1,1,2-Trichloroethane (1,1,2-TCA);
- 1,1-Dichloroethene (1,1-DCE);
- 1,2-Dichloroethane (1,1-DCA);
- cis-1,2-Dichloroethene (cis-1,2-DCE);
- trans-1,2-Dichloroethene (trans-1,2-DCE);
- Tetrachloroethene (PCE);
- Trichloroethene (TCE); and
- Vinyl Chloride (VC).

### 2.1.5 Horizontal VOC Delineation

TCE has the highest number of Type 1 RRS exceedances, is generally detected at higher concentrations than the other VOCs, and is present at all locations exceeding the Type 1 RRSs. As such, it was selected for the presentation of groundwater VOCs. **Figure 2-5** includes the Unit A/B potentiometric surface and distribution of TCE in groundwater. As shown in Figure 2-5, the TCE plume in groundwater appears to be split into a north flow component toward MW-18B and a northeast flow component toward MW-5B. The source of VOCs in groundwater has been assumed to be the former disposal pit located on Manchester Tank, and the recent investigation data supports this assumption. The November 2012 water levels indicate groundwater mounding in the vicinity of MW-3B, and the resulting groundwater flow patterns and TCE distribution correlate well. The extent of TCE in Unit A/B is limited to the Manchester Tank and Missouri M&P properties, with the exception of a small area near GP-2A.

TCE in Unit C/D groundwater (**Figure 2-6**) follows a similar pattern as Unit A/B groundwater except that the interpolated plume is shown as discontinuous. Whether this is true cannot be answered based on current data, although sufficient data are available to complete the delineation requirements and proceed with corrective action planning. Concentrations observed in MW-51C, for example, may be attributable to the former disposal pit or to a small onsite or offsite source near MW-51C. Despite the discontinuity, CDM Smith believes that horizontal delineation in Unit A/B is complete in all directions.

### 2.1.6 Vertical VOC Delineation

Vertical delineation was completed following installation of MW-55D to a depth of 450 feet. There have been no VOC detections in MW-35D or MW-55D. MW-43D is the only deep well that shows VOCs, and it is located in the source area. This data indicates that while some VOCs have migrated downward in the source area, they have not migrated horizontally within Unit D and the primary VOC migration zone in bedrock is in Unit B and Unit C.

## 2.2 Geophysical Surveys

To provide bedrock topography and identify potential preferential groundwater flow paths, geophysical surveys of the site were performed using a very low frequency electromagnetic instrument, ground penetrating radar, and seismic techniques. The geophysical survey transects and the interpreted top of bedrock elevations are shown on **Figure 2-7**. The geophysical surveys did not identify any fractures or preferential flow zones.

## 2.3 Soil Investigation

There are no detailed records of site operations at Manchester Tank; however, an unlined disposal pit was in use at the site sometime during its history. In September and October of 2001, a Limited Phase II Environmental Site Assessment performed at Manchester Tank found chromium, copper, lead, and TCE at levels in soil that exceeded the EPD Notification Concentrations (NCs). Clean closure remedial action at the site occurred in October 2001 and consisted of excavation and proper disposal of impacted soils. Approximately 373 tons of impacted soils were excavated, treated, and transported to a Subtitle D landfill. The results of confirmatory soil samples collected on the excavation sidewalls and the base of the excavation showed concentrations of constituents less than the NCs. The excavation was backfilled and compacted with native soils from the Cedartown area. Additional soil sampling performed in May and June 2007 demonstrated that that VOC concentrations at the site met Type 1-4 RRSs; however, metals in soil remained a delineation issue.

EPD requires that contaminants in soil be delineated to Type 1, residential land use, RRSs, or background, whichever is greater. Previous site investigations included laboratory metals analyses for soil on Manchester Tank, and several metals were found to exceed the Type 1 RRSs. **Table 2-3** shows the previous sample results (SB-1 through SB-9). The metals that exceeded the Type 1 RRS in soil are arsenic, barium, beryllium, cadmium, chromium, cobalt, lead, vanadium, and zinc. Previous attempts to establish site-specific background metal concentrations using samples collected from Manchester Tank did not reduce the number of metals exceeding the Type 1 RRSs. However, most of the metals concentrations were low, and it appeared that many of these metal concentrations could have been associated with background.

Missouri M&P had also previously investigated metals in soil and concluded that the Missouri M&P metals results were background. EPD required no further action from Missouri M&P related to metals in soil. As a result, CDM Smith added the Missouri M&P soil data to the background database for Manchester Tank and developed revised background concentrations using a simplified approach whereby background equates to the average concentration plus two times the standard deviation. These revised background concentrations are included in Table 2-3, but use of these concentrations does not reduce the number of metals exceeding the Type 1 RRSs.

### **2.3.1 95% Confidence Upper Prediction Limit**

CDM Smith conducted a more in-depth statistical analysis of the data to assess the background soil concentrations. The 95% confidence upper prediction limit (UPL95) was determined for the Manchester Tank background samples as an alternative background concentration. The UPL 95 values were calculated using ProUCL Version 4.1, which is a widely accepted method for calculating background by the U.S. Environmental Protection Agency and other state agencies. These results are also summarized in Table 2-3, and when compared to the Manchester Tank samples, several metals were eliminated from further evaluation based on the revised background concentrations. The metals that were retrained as potentially exceeding the Type 1 RRSs include chromium and lead. Lead exceeded in only one sample. Cadmium was also retained because insufficient detections were available to support the UPL95 analysis.

### **2.3.2 Focused Sample Results and Conclusions**

To further investigate the chromium, cadmium, and lead exceedances of the Type 1 RRSs in soil, CDM Smith developed a focused soil sampling program. **Figure 2-8** includes the historical sampling locations, the additional focused sampling locations (SB-10 through SB-18), and the locations exceeding the UPL95 background. A summary of results is presented in Table 2-3, and the corresponding laboratory report is provided as **Appendix C**.

Cadmium has had only two detections and only one, the 6-foot sample at SB-3, exceeds the Type 1 RRS. This same sample is also the only one where the lead concentration of 312 mg/kg exceeds the UPL95 background concentration and is approximately double any other lead result from the site. CDM Smith concluded that this sample was an outlier and, as a result, CDM Smith collected a sample intended to replicate the previous SB-3 sample to determine whether the result could be reproduced. The replicate sample from SB-11 was non-detect for cadmium, and lead was reported at 31.6 mg/kg, which is below the delineation criteria.

Ten additional soil samples were collected for chromium analyses. Four locations were selected to replicate the historical data. These locations included SB-10 through SB-13. Previous exceedances at SB-2 and SB-5 were not reproduced, while exceedances at SB-3 and SB-7 were reproduced. Several

additional soil samples were collected for further chromium delineation and assessment of background. **Figure 2-9** includes a soil chromium delineation map that shows the area estimated to exceed the Type 1 RRS. CDM Smith believes that the Type 1 RRS exceedances area is limited to the west because the elevation of the road is higher than the site, which would limit migration in the upgradient direction, and because site activities were not conducted on the roadway or beyond the west fence line.

## 2.4 Vapor Intrusion Investigation

For offsite residences in the neighborhood to the east of the site where VOCs in groundwater may be present, CDM Smith performed initial vapor intrusion analyses utilizing the EPA vapor intrusion screening level (VISL) calculator (Version 2.0, November 2012) and Johnson and Ettinger Model (JEM). Depending on which model and associated variants were used, TCE and VC had the potential to exceed carcinogenic and non-carcinogenic target risks to residential occupants based on vapor intrusion from groundwater.

Based on the results of the initial analyses, CDM Smith conducted soil gas sampling to better evaluate whether TCE and VC pose potential vapor intrusion risks. Soil gas sampling was performed at three locations, SG-1, -2, and -3 (**Figure 2-10**) adjacent to the residences. These locations were selected for soil sampling because they are located in the area of the highest VOC concentrations in shallow groundwater near the residential area based on data from GP-2A. The soil gas results are summarized in **Table 2-4**, and the corresponding laboratory report is provided as **Appendix D**.

TCE, the most widespread VOC associated with the site, was not detected in any of the soil vapor samples. In general, the detected VOCs in soil vapor were gasoline-related compounds with the exception of acetone, methyl ethyl ketone, and carbon disulfide, which have not been detected in GP-2A. CDM Smith believes that the VOCs detected in the soil vapor samples originate from the sanitary sewer that flows through the residential area.

## Section 3

# Site Conceptual Model

The site is located in the Valley and Ridge physiographic province, which is typically characterized by folded bedrock forming alternating anticlines and synclines that produce the characteristic valleys and ridges. The bedrock beneath the site is the Newalla Limestone that is overlain by a thin veneer of weathered limestone residuum, and the bedrock is present at land surface at several locations. The site hydrogeology has been classified on a site-specific basis to include four units, as summarized below.

- **Unit A Residuum** – This is the uppermost unit and is typically unsaturated, but may contain groundwater under water table conditions where it is thick enough. The residuum ranges from sandy clay to clayey sand, has an average 12-foot thickness, and has a maximum observed thickness of 25 feet. Groundwater flow in the residuum is to the northeast toward Cedar Creek. Borings near Cedar Creek and a reconnaissance along the creek did not identify any alluvial deposits west of the creek. Rather, the west creek bank is composed of residuum and weathered limestone. It appears that the channel of Cedar Creek has not historically migrated any further to the west than its present position and the channel rests on bedrock.
- **Unit B Upper Bedrock** – The uppermost bedrock typically contains groundwater under water table conditions. A definitive demarcation between Units B and underlying Unit C does not exist, but Unit B is assumed to be limited to less than 30 feet of land surface. The Unit B limestone has few fractures, which tend to be thin and produce little groundwater. Of approximately 32 boreholes that penetrate Unit B and have boring logs that include fracture information, 10 boreholes, or approximately 30%, document water producing fractures in Unit B. Most of these fractures were observed at depths less than 20 feet. Unit A and B are mapped together and represent the uppermost groundwater that is under water table conditions.
- **Unit C Bedrock** – This unit is similar to Unit B except that the fractures tend to be less frequent, and groundwater in Unit C is presumed to be confined to some extent. A definitive demarcation between Units C and underlying Unit D does not exist, but Unit C is assumed to be limited to within approximately 95 feet of land surface. Of approximately 26 boreholes that penetrate Unit C and have boring logs that include fracture information, 9 boreholes, or approximately 35%, document water producing fractures in Unit C. Most of these fractures were observed at depths from 40 to 50 feet.
- **Unit D Bedrock** – The limestone bedrock, Newalla Limestone, is a dense, hard, light gray to dark gray, and contains numerous stylolites. Stylolites form from insoluble residue accumulation as calcium carbonate dissolves while the limestone undergoes lithification. This tends to produce limestone with a very low primary porosity. Rock quality designations (RQD) from cores obtained at MW-43D averaged 96% with no observed fractures. The limestone is very dense with horizontal bedding planes. The high RQD values, horizontal bedding planes, and lack of fractures indicate that the limestone in the site area has not been subjected to the structural deformation that is typically associated with the Valley and Ridge. As a result, the bedrock has a relatively low secondary porosity. Drilling of deep exploratory well MW-43D indicated no fractures from approximately 95 feet until approximately 225 feet below land

surface. Fractures were not observed for the entire 450-foot depth drilled for MW-55D. Groundwater is present at depth in both wells. Unit D is primarily a confining unit. However, microfractures and possibly the primary porosity of the limestone bedrock have allowed VOCs to migrate downward into this unit in the source area.

The site stratigraphy is shown on the geologic cross section on **Figure 3-1** along with the monitoring wells, TCE concentrations, and observed fractures. VOCs released in the vicinity of the former disposal pit appear to have migrated vertically downward for a short distance of approximately 5 to 10 feet before encountering bedrock and entering Unit B. Once in groundwater in Unit B, it is apparent that the VOCs continued to migrate downward as much as they migrated laterally. While the distance from the estimated release location to the 1,000 ug/L TCE contour is approximately 250 feet, the vertical depth to this concentration is approximately 250 feet as well. In addition, VOCs extend in the upgradient direction. While this type of VOC migration could be a result of chemical diffusion rather than transport in groundwater, it is also possible that VOCs migrated during the pilot test injections. This conclusion is supported at MW-24B, which had low VOC concentrations prior to injection and 91,000 ug/L of TCE in a post-injection sample.

Mobile free-phase product has not been detected in the groundwater monitoring wells. However, free-phase VOCs in the form of dense non-aqueous phase liquid (DNAPL) may exist in the source area as small immobile droplets, or "ganglia." This low mobility form of DNAPL is generally not recoverable and resides within the rock pore space. The relatively high VOC concentrations in this area do suggest the potential presence of DNAPL.

It appears that downgradient migration of the VOC plume in Unit C from the source area is not occurring because of the lack of continuous fracture zones and the low primary porosity of the bedrock. However, it remains possible that zones having microfractures exist that allow some downgradient migration for short distances as isolated fingers in Unit C. Downgradient migration in Unit D is not expected at all, as shown by MW-55D.

The second portion of the groundwater plume that exists primarily on the Missouri M&P site appears to originate near the manufacturing building. No direct evidence exists suggesting the source but it is likely to have entailed a single direct spill or release in the proximity of MW-51C, either on site or off site. This portion of the plume appears to migrate in a manner that is more consistent with groundwater transport mechanisms because of slightly increased secondary porosity features in Units B and C in this area. A continuous plume is mapped from this area downgradient to near the Missouri M&P property boundary and GP-10A. However, the TCE concentration profile indicates that additional VOC mass could be entering this plume in the vicinity of MW-5B and MW-37C. The source of this additional VOC mass is unclear. Three potential scenarios exist as possible explanations for the source. First, the plume may be the result of two releases at different times. Second, it is possible that an undiscovered VOC source is located on the Missouri M&P site, upgradient of MW-5B and MW-37C. Third, it is possible that VOCs originating from the former disposal pit have somehow managed to migrate to this area without being detected by the monitoring well network.

## Section 4

# Corrective Action Objectives and Scope

The corrective action objectives identified for this CAP are driven by EPD's RRSs, and mixed land uses exist within the area potentially requiring corrective action. The RRSs applicable to the Manchester Tank site are Type 3 and/or Type 4 RRSs. Manchester Tank is an industrial property and is ensured to remain an industrial property in compliance with the existing Environmental Covenant. Textron and Trinity are aware that the existing Environmental Covenant will require an update to incorporate the CAP requirements and to include EPD as a party to the covenant. RRS standards for soil and groundwater are applicable to Manchester Tank.

RRS exceedances potentially originating from the Manchester Tank site are currently present on the Missouri M&P site, upgradient on the Hon Company site, and in a portion of the downgradient residential area. These exceedances are for groundwater only and do not include soil. Type 3 or Type 4 nonresidential RRSs for groundwater are proposed for the Missouri M&P and Hon Company sites in accordance with the Hazardous Response Act (HSRA) Rules for Hazardous Site Response, 391-3-19-.07(5) Risk Reduction Standards. The Type 1 RRSs for groundwater at residential properties will be applied to the residential area.

## 4.1 Soil/Source

The known release source on the Manchester Tank site is believed to be limited to the former disposal pit area that has been excavated, removed, and properly disposed. As discussed in Section 2, Type 1 RRS exceedances for metals in soil are limited to cadmium, chromium, and lead. Considering Manchester Tank will remain an industrial property, Type 3 RRSs for nonresidential properties are proposed as the corrective action objectives for metals in soil.

As summarized in **Table 4-1**, RRSs were derived by the HSRA-prescribed procedure that is applicable for all soil from land surface down to the water table. These values are considered to be protective of groundwater. RRSs were also calculated for surface soil to a 2-foot depth based on toxicity and potential direct human contact. The carcinogenic and non-carcinogenic toxicity concentrations were calculated and values were derived for cadmium and chromium. Lead is an exception because HSRA rules dictate that the Type 3 RRS is 400 mg/kg from surface down to the water table. Table 4-1 compares the maximum concentration in soil on the Manchester Tank site for these metals against the Type 3 RRSs. As shown in this table, the maximum concentrations for all three metals are below their respective Type 3 RRSs. Thus, soil at the site is in compliance with the Type 3 RRSs and corrective action for soil is not required.

## 4.2 Source Area Groundwater

Groundwater at the Manchester Tank site in the immediate vicinity of the former source contains VOC concentrations on the order of 100,000 ug/L. These concentrations diminish drastically in the downgradient direction. The previously completed pilot test and observed hydrogeology have demonstrated that the subsurface conditions in this area are not conducive to VOC treatment using conventional technologies due to the low permeability bedrock. As noted in Section 1.1, previous injection of ozone at high pressures is believed to have dispersed VOCs into previously uncontaminated areas and areas where VOCs were lower than currently observed. The most

promising alternative to high pressure injection for this site involves fracturing the low permeability bedrock to allow treatment access to the VOCs. However, fracturing will create new preferential groundwater flow pathways, and these pathways could also result in extensive migration of VOCs into otherwise uncontaminated areas.

While control measures may be appropriate to eliminate or abate present and potential future threats to human health and the environment in this area, it is not feasible to achieve Type 3 or Type 4 RRSs in groundwater. As a result, Type 5 RRSs are proposed for a limited area of the site. This area generally includes the area exceeding 5,000 ug/L TCE in groundwater. Mobile free-phase product has not been detected in groundwater monitoring wells; however, free-phase VOCs in the form of DNAPL may exist in this area. The requirements associated with the application of Type 5 RRSs for groundwater in this area are summarized below.

- Type 5 RRSs are applicable to areas exceeding 5,000 ug/L TCE in groundwater.
- Engineering controls to prevent the expansion of the area exceeding 5,000 ug/L TCE in groundwater, institutional controls, and/or monitoring will be required to prevent VOC migration beyond this area and to control potential exposures.
- Beyond this area at the site boundary, the overall corrective action plan shall apply the Type 3 and/or Type 4 RRSs for groundwater migrating downgradient.

## 4.3 VOC Migration in Groundwater

For the nonresidential properties (the Hon and Missouri M&P sites) in the areas of the site, Type 4 groundwater RRSs are proposed. The exception to this is in cases where the Type 4 RRS is below laboratory practical quantitation limits. In such cases, the Type 3 RRSs will be used. For groundwater, Type 3 RRSs are the same as Type 1 and are taken from Table 1 of Appendix III of the HSRA rules. Type 4 RRSs are derived based on toxicity and human contact. **Table 4-2** shows the maximum concentration, the Type 1/3 groundwater RRSs, and the derivation of Type 4 RRSs for those compounds that exceed their respective Type 1 groundwater RRSs. These values were derived by the HSRA-prescribed procedure for calculating the carcinogenic and non-carcinogenic toxicity concentrations. As shown in Table 4-2, the following VOCs have been detected above the proposed non-residential RRSs:

1,1,2-TCA;	trans-1,2-DCE
1,1-DCE;	TCE; and
1,2-DCA;	VC.
cis-1,2-DCE;	

VOCs in groundwater migrating beyond the specified non-residential properties and originating from the Manchester Tank site are limited to a small portion of the nearby residential area. The Type 1 RRSs for groundwater will be applied for this area.

## 4.4 Soil Vapor

CDM Smith applied the VISL calculator to assess the soil gas results, the results of which are shown on **Table 4-3**. The VISL calculation sheets are included in **Appendix F**. Table 4-3 includes calculations of the residential land use target concentrations for indoor air and soil gas. One VOC, benzene, exceeded the calculated target soil gas concentration. However, benzene is not a site related VOC. CDM Smith

also calculated the indoor air concentrations from the soil gas results using the VISL calculator. For these calculations, the laboratory reporting limit was used in the calculation for sample results that were below the reporting limit. Carcinogenic risks and hazard quotients were also calculated from the calculated indoor air concentrations. Benzene again showed a potential risk. The remainder of the detected VOCs showed risks within the acceptable ranges. However, the reporting level for 1,1,2-trichloroethane of 11 mg/m<sup>3</sup> exceeded the target soil gas concentration of 2.1 mg/m<sup>3</sup>. Neither benzene nor 1,1,2-trichloroethane were detected in groundwater at GP-2A. Based on this analysis, CDM Smith concludes that corrective actions to mitigate vapor intrusion are not required for this site.

## 4.5 Corrective Action Scope

The corrective action scope includes the areas that exceed the applicable groundwater RRSs based on property uses described above. **Figure 4-1** and **Figure 4-2** show the areas of exceedance for TCE (Type 4 RRS = 5.2 ug/L and Type 1 RRS = 5.0 ug/L) in Unit A/B and Unit C, respectively. Considering the low RRS for TCE, the small difference in the two RRSs for TCE, and the prevalence of TCE exceedances of RRSs compared to other compounds, the areas of TCE exceedances are expected to delineate the area subject to corrective action. The extent requiring corrective action is based on the highest concentration of TCE found at each well over time. For Unit A/B, this area is inclusive of monitoring wells:

MW-4B	MW-15B	MW-16A
MW-5B	MW-18B	MW-26A
MW-8B	MW-24B	MW-28A
MW-9B	MW-32B	MW-29A
MW-10B	GP-2A	MW-30A
MW-11B	MW-6A	

For Unit C/D, the area of exceeding the TCE Type 4 RRS is inclusive of monitoring wells:

MW-7C	MW-31C	MW-41C
MW-12C	MW-36C	MW-51C
MW-13C	MW-37C	MW-52C
MW-21C	MW-38C	MW-54C
MW-22C	MW-39C	MW-43D

## Section 5

# Remedial Technology Evaluation

An evaluation of remedial technologies has been completed for the Manchester Tank site. This evaluation included a focused screening of potential technologies, technology ranking, technical and cost comparisons of the selected technologies, and final remedial alternative selection. The evaluation process and results are summarized below.

## 5.1 Technology Identification and Screening

Remedial technologies were identified and screened for the source area groundwater and for groundwater that has migrated from the source area. Consideration was given to the fact that remedial strategies could vary, depending on the area that was the focus for remediation.

### 5.1.1 Source Area Groundwater

Remedial technologies applicable to the source area groundwater were identified and ranked according to their ability to meet the RRSs, be protective of human health, be effective on DNAPL, be effective in bedrock, and reduce the operation and maintenance (O&M) requirements. In addition, the potentially negative secondary effects of each technology were considered. The source area groundwater technologies were identified and evaluated, as summarized below and in **Table 5-1**.

#### Groundwater Extraction

Groundwater extraction involves pumping groundwater from strategic locations. Extracted groundwater is typically treated on site and either disposed of off site or reinjected to improve contaminant flushing. In general, it is an effective technology for controlling contaminant migration but is not effective alone at reducing source area concentrations.

For this site, groundwater extraction was generally considered to be incapable of treating the source area groundwater to the RRSs and was not considered capable of removing potential DNAPL from primary porosity of the bedrock. However, because groundwater extraction is optimal for preventing VOC migration from the source area, it has benefits toward the protection of human health. Given a sufficient quantity of wells and flow, groundwater extraction has been demonstrated to be effective in bedrock. This technology would require O&M to be carried out for a long period of time but the requirements are moderate. Negative secondary effects are not associated with this technology, and groundwater extraction was retained for cost analysis.

#### *In Situ* Chemical Oxidation (ISCO)

ISCO involves treatment of constituents in place, typically via injection of oxidizing agents. Oxidation chemically converts hazardous constituents to non-hazardous or less toxic compounds that are more stable, less mobile, and/or inert. The oxidizing agents most commonly used are ozone, hydrogen peroxide, hypochlorites, chlorine, and chlorine dioxide.

ISCO can be effective on DNAPL, can treat down to the RRSs, and requires little O&M. It also is considered protective of human health; although a negative secondary effect involves a remediation contractor handling large volumes of hazardous materials (i.e., the oxidizing agents). From a technical application perspective, hydrofracturing would likely be required to uniformly deliver the oxidants

through the formation in the groundwater source zone. Hydrofracturing can have serious negative secondary effects because contaminants can be spread in this process. As a result, this technology was eliminated from further consideration.

### ***In Situ Biological Treatment***

Similar to ISCO, in situ biological treatment is done in place and involves converting hazardous constituents into non-hazardous or less toxic compounds. Environmental conditions are typically altered through injecting oxygen, nutrients, and if necessary, microorganisms to promote microbial degradation of constituents. In contrast to ISCO, the injected solutions are non-hazardous. However, for the Manchester Tank site, hydrofracturing would again be required to deliver the bioremediation amendments. Considering the negative secondary effects described above, this technology was eliminated from further consideration.

### ***Electrical Resistance Heating (ERH)***

ERH is also an in situ process. It involves passing alternating current electricity between subsurface electrodes to heat the surrounding soil and groundwater. Hazardous constituents are evaporated in the process and captured via a soil vapor extraction system.

ERH is capable of meeting the RRSs, can be effective for DNAPL, and is protective of human health. While in operation, ERH is very O&M intensive, but these systems typically operate for approximately one year or less. While feasible, implementation at this site would present several challenges due to the hydrogeology. The shallow bedrock and depth of treatment in bedrock are likely to result in expensive drilling costs and extended treatment duration. For comparison purposes, ERH was retained for cost analysis.

## **5.1.2 Groundwater Outside of the Source Area**

The technologies identified for the diffuse groundwater plume were evaluated for performance reliability, effectiveness on bedrock and residuum, appropriateness for the observed concentrations, and O&M frequency. During an initial technology identification process, it became obvious that the treatment of the entire area exceeding the RRSs in groundwater was not practical because of the difficulty in delivering treatment solutions to the formation. In addition, such an approach would be very disruptive to Missouri M&P operations. Thus, the technologies focus on a barrier approach to prevent VOCs in groundwater from migrating. The resulting identification and screening of technologies for groundwater outside of the source area are presented below and in **Table 5-2**.

### ***ISCO Barrier***

This technology is similar to that described in Section 5.1.1 except that in this case, oxidizing agents would be injected to create a “wall” that treats groundwater as flow passes through the barrier. This technology is considered a reliable treatment and barrier method. However, because of the dense, low porosity nature of the bedrock, it was again believed that hydrofracturing would be required to implement this technology. O&M would be required to maintain the oxidant levels in the barrier over time, but ISCO would be capable of treating the observed VOC concentrations in groundwater down to the RRSs. As a potentially negative secondary effect, prolonged treatment using ISCO in a barrier could result in a plume of poor quality groundwater downgradient because of the reaction residues. This technology was eliminated from further consideration.

## **Biological Barrier**

A biological barrier would be similar to the ISCO barrier except that oxygen, nutrients, and/or microorganisms would be used to promote constituent degradation. This technology is also considered a reliable treatment and barrier method, and the effects on downgradient groundwater quality are not a concern as they are with ISCO. However, hydrofracturing would be required, and as such, this technology was also eliminated from consideration.

## **Hydraulic Control**

As described in Section 5.1.1, hydraulic control through groundwater extraction is effective in controlling VOC migration and reducing the VOC mass in groundwater. This is a highly reliable technology and is effective in residuum, as well as bedrock. The O&M requirements are moderate but are required for the long term. This technology is also generally acceptable to third parties and was retained for cost analysis.

## **5.2 Technology Cost Evaluation**

Two technologies, groundwater extraction and ERH, were retained for a cost evaluation for source area groundwater based on the technical evaluation. At this stage of evaluation, the costs are conceptual for relative comparison to each other. A more detailed cost estimate of the proposed remedy is presented in Section 6 of this CAP.

Hydraulic control using groundwater extraction barriers was the only technology retained for the remainder of the groundwater plume. As a result, cost estimates were developed for two combined remedial alternatives rather than for each separate technology. Remedial Alternative 1 consists of hydraulic containment with source area ERH treatment and Remedial Alternative 2 consists of hydraulic containment with source area groundwater extraction.

### **5.2.1 Remedial Alternative 1 – Hydraulic Containment with Source Area ERH**

A cost estimate was obtained from an ERH vendor for the source area groundwater treatment. The scope of work assumed that approximately 100,000 cubic yards ( $\text{yd}^3$ ) of aquifer would require treatment. The items in the ERH cost estimate included electrodes and installation, surface installation, start-up, and operation. The estimated operation duration was approximately 4 months, and the cost was approximately \$5,000,000. Note that due to the hydrogeology, the operation duration could easily be 8 months or more to achieve treatment objectives, with the cost exceeding more than \$10,000,000.

The hydraulic containment scope assumed seven extraction wells with a combined flow of approximately 40 gallons per minute (gpm). The treatment system was assumed to consist of an air stripper for VOC removal with discharge to a publicly-owned treatment works (POTW). Installation of the hydraulic control system, including wells and the treatment system, was estimated to be approximately \$1.2M with an additional \$237,000 for O&M and monitoring per year. Assuming an operation cycle of 10 years with O&M beginning at the end of year 2 when treatment system construction is complete, this alternative would cost approximately \$8 million.

### **5.2.2 Remedial Alternative 2 – Hydraulic Containment with Source Area Groundwater Extraction**

The cost estimate for this alternative is based on the same assumptions for groundwater extraction under Remedial Alternative 1 with the addition of two extraction wells and associated treatment

capacity. The scope for this alternative includes nine extraction wells with a combined flow of approximately 50 gpm. The treatment system was assumed to consist of an air stripper for VOC removal with discharge to a POTW. Installation of the hydraulic control system and source area wells was estimated to be approximately \$1.4M with an additional \$237,000 for O&M and monitoring per year. Assuming an operation cycle of 10 years with O&M beginning at the end of year 2 when treatment system construction is complete, this alternative would cost approximately \$3.2 million.

## 5.3 Remedy Selection

The following summarizes the major advantages and disadvantages of the two remedial alternatives being considered:

Remedial Alternative	Advantages	Disadvantages
1 – Hydraulic Containment with Source Area ERH	<ul style="list-style-type: none"> <li>• Thermal destruction of constituents in the source area</li> <li>• Controls VOC migration beyond industrial properties</li> <li>• Is expected to meet the proposed RRRs under this CAP</li> </ul>	<ul style="list-style-type: none"> <li>• A long-term hydraulic containment system is still required for groundwater outside of the source area</li> <li>• Treatment into bedrock is very expensive due to the amount of drilling</li> <li>• Experience with this technology in bedrock is limited</li> <li>• The duration of treatment, which has a significant impact on cost, is difficult to predict because of the low porosity bedrock</li> <li>• This alternative is expected to cost at least \$5 million more than Alternative 2 over a 10 year operation cycle</li> <li>• There is much more uncertainty in the cost of this alternative compared to Alternative 2</li> </ul>
2 – Hydraulic Containment with Source Area Groundwater Extraction	<ul style="list-style-type: none"> <li>• Proven technology to control migration of VOCs in groundwater</li> <li>• Effective in both residuum and bedrock</li> <li>• Is expected to meet the proposed RRSs under this CAP</li> <li>• Long-term O&amp;M requirements are moderate</li> <li>• Significantly less cost and less uncertainty in the cost when compared to Alternative 1</li> </ul>	<ul style="list-style-type: none"> <li>• A long-term containment and treatment system with O&amp;M and monitoring will be required</li> <li>• Limited reduction of VOCs in the source area compared to Alternative 1</li> </ul>

In addition to these advantages and disadvantages, it is important to consider that the groundwater plume is almost entirely limited to the Manchester Tank and adjacent Missouri M&P properties and that there are currently no apparent risks to human health. Factoring this, that both alternatives are expected to meet the proposed RRSs, the proven ability of groundwater extraction to control VOC migration, and the significantly less cost, Alternative 2 was selected for corrective action implementation.

## Section 6

# Corrective Action Description

Figures 4-1 and 4-2 show the areas requiring corrective action and the ambient groundwater flow direction. The corrective action objective for the site is to achieve Type 3/4 RRSs for groundwater except for the source area (Type 5 RRSs) and a small portion of the nearby residential neighborhood (Type 1 RRSs), as noted in Section 4. The selected corrective action for the site is onsite containment and treatment of the dissolved plume. The major corrective action tasks are listed below and described in detail in the remainder of this section. Detailed descriptions of the selected corrective action requirements and components are also provided in this section.

- Design Data Collection
- Final Design;
- Bidding, Procurement, and Construction;
- Monitoring; and
- Compliance Status Report.

## 6.1 Design Data Collection

Additional data must be collected to support the final design of the corrective action. Activities required to fill the design data gaps include installing wells along the property lines and performing well capacity and aquifer performance tests.

### 6.1.1 Exploratory Borings

Exploratory wells will be installed in the planned barrier zones so that extraction tests can be performed and capture zones estimated. It is recognized that obtaining sufficient groundwater flow to achieve capture will be a challenge, and multiple exploratory borings may be required before sufficient pumping rates can be achieved. **Figure 6-1** shows the containment barrier transects where the exploratory borings will be installed.

The exploratory borings will be constructed by initially installing 10-inch casing into bedrock and extending the boring into rock with a 6-inch diameter open bore using air drilling techniques. The drilling process will provide the first indication as to the groundwater production from each exploratory boring. Each exploratory boring will be left as open-hole construction unless the boring suffers from sediment infilling; in which case, 4-inch temporary PVC screen and well casing will be installed for subsequent flow testing. As shown on Figure 6-1, exploratory borings will be installed in four areas/barriers. In each location, the exploratory borings will be initially installed using an optimized spacing across each area. If sufficient groundwater flow is not achieved, midpoint exploratory borings will be installed. A summary of each area/transect is provided below:

- **Source Area** – This area is located near the source removal area and has the highest groundwater TCE concentrations. Exploratory borings will be installed along the center of the outlined area. The overall length of this area is approximately 375 feet. Up to approximately 13

exploratory borings will be installed to a depth of 100 feet in this area. The exploratory borings installed in this area will include both Unit A/B and Unit C.

- **Transect 1** - This area is located along the Missouri M&P west property line and has been located to capture the VOC plume originating near MW-51C. CDM Smith estimates that one productive well will be required in this area and three exploratory borings are planned for contingency purposes. The exploratory borings in this area will have a total depth of 100 feet.
- **Transect 2** - This transect is located along the Missouri M&P west property line and has been located to capture the majority of the plume that is moving toward the Missouri M&P site. It is approximately 400 feet in length, and will have up to 14 exploratory borings along its length. The exploratory borings will be installed to a depth of 40 feet.
- **Transect 3** - This transect is located between the Missouri M&P east property line and the adjacent residential area to capture the portion of the plume near the residential neighborhood. It is approximately 780 feet in length, and up to 26 exploratory borings will be installed along its length. The exploratory borings will be to a depth of 100 feet. The exploratory borings installed along this transect will include both Unit A/B and Unit C.

### **6.1.2 Aquifer Testing**

Upon completion of the exploratory borings, the borings that have the potential to produce sufficient groundwater based on observations during drilling will be tested for flow. The selected borings will undergo capacity and water quality testing. Well capacity tests will be accomplished using a submersible pump, flow control valves, and water level data loggers. Groundwater will be extracted at the maximum sustainable rate for approximately two hours. Drawdown in the boring and surrounding wells will be recorded continuously using data loggers, and well production capacity and radius of influence will be estimated for each boring.

Groundwater samples will also be collected from each boring and analyzed for VOCs, iron, and hardness by a laboratory. This data will be used to determine which wells will be most effective for plume containment and to estimate the contaminant loading of the extraction system. Other water quality parameters will be collected to evaluate conditions that may be detrimental to air stripping, which is the proposed corrective action technology for this site. Data collected during the well capacity and quality testing will be analyzed to determine which of those borings provide the most efficient means of containment for each area/transect.

## **6.2 Final Design**

Construction design and/or work plan documents will be prepared in sufficient detail to allow the controlled execution of the work in an effective manner while providing the necessary documentation to support that containment is being achieved.

### **6.2.1 Extraction Wells**

As determined by the aquifer testing, select exploratory borings in the source area and along transects 1, 2, and 3 will be converted to extraction wells. Final extraction well construction will be determined based on the well capacity and water quality tests discussed above. CDM Smith anticipates that containment can be achieved using nine extraction wells with an average flow rate of 5 gpm each, or approximately 50 gpm total flow. Extraction wells will remain open boreholes unless sediment infilling or specific fractures are found that are particularly efficient to achieve containment. In such

cases, the exploratory boring will be reamed to a 10-inch diameter with 6" PVC screen and casing installed. Each extraction well will have a submersible pump and associated pump control equipment at the well head. A totalizing flow meter will also be installed at each wellhead to determine flow from each well. **Figure 6-2** shows the likely extraction well layout using nine wells.

### **6.2.2 Treatment System**

Specific details for the treatment system will be determined following design data collection and discussions with the POTW. CDM Smith has assumed a relatively simple system consisting of an air stripper being the only required means of VOC removal though even an air stripper may not be needed depending on the requirements of the POTW. **Figure 6-3** shows the anticipated treatment system schematic. Piping from the extraction wells to the system will be dual wall high-density polyethylene (HDPE). With the exception of the extraction well along Transect 1, all wells will manifold into a common header. The header pipe will be 2-inch carrier pipe inside 4-inch containment pipe, both of which are HDPE. Piping between each extraction well and the header pipe will be 1-inch inside 2-inch HDPE. All piping will be buried below grade with approximately 2 feet of cover. Piping from the extraction well at Transect 1 will run directly to the treatment system, above grade, along the wall of the building.

The treatment system will be constructed in the northwest corner of the existing building. This area of the building is unoccupied, and its existing construction as a warehouse makes it ideal for construction of the treatment system. CDM Smith anticipates the footprint of the system will be approximately 25 feet by 15 feet. Included in the footprint will be a 6-foot deep sump for secondary containment. The entire treatment system footprint will be surrounded by a 6-inch high curb, and the concrete will be refinished or lined to seal any cracks.

As shown in Figure 6-3, the process equipment for the treatment system will be straightforward. Groundwater from the extraction wells will discharge into a 1,000-gallon polyethylene influent equalization tank. An influent pump will transfer water from the tank to the air stripper, where a blower will remove the VOCs from groundwater. CDM Smith will design the air stripper to reduce VOC concentrations in groundwater by 99%. The exhaust air from the air stripper will discharge directly to the atmosphere through a stack above the building roof. Treated groundwater will be discharged to an effluent equalization tank before final discharge to the POTW lines located north of the building.

### **6.2.3 Treated Water Discharge**

CDM Smith expects that the treated groundwater will be discharged to the sewer line that is located to the north of the building (Figure 6-2). CDM Smith will coordinate with the Polk County Water Authority to secure the required permit for discharge. The discharge line from the treatment system will consist of 3-inch buried PVC pipe with approximately 2 feet of cover.

### **6.2.4 Treatment System Control**

Treatment system control will be automatic with safety interlocks that will stop groundwater extraction and treated water discharge in the event of process excursions. In addition to local operation, the system will have remote monitoring and operation control for O&M personnel.

### **6.2.5 Operation and Maintenance**

CDM Smith will create an O&M manual for the system prior to startup. The O&M manual will include manuals for all system components, startup and operation procedures, and routine maintenance checklists. In addition to remote monitoring, CDM Smith expects that routine site visits will be

performed weekly. During these routine visits, system parameters will be recorded, and a visual inspection will be made of the treatment system and wellheads. CDM Smith also assumes that non-routine site visits will be required about once per month to address possible treatment system performance excursions or events that require troubleshooting.

## 6.3 Bidding, Procurement, and Construction

Textron has not determined the contracting mechanism that will be used for the construction. Options include preparing formal bid specifications that can be used to solicit competitive bids, a design-build approach, or a hybrid approach where select items are contracted to multiple contractors using a combination of the contracting mechanisms.

## 6.4 Monitoring

A groundwater monitoring program will be implemented to evaluate treatment system operation, system performance, and plume status.

### 6.4.1 Treatment System Operation

The permit issued by the Polk County Water Authority will determine the frequency and constituent analysis required for operation of the treatment system. However, CDM Smith assumes that sampling will be performed once per month and that the air stripper influent and effluent will be sampled.

### 6.4.2 System Performance Monitoring

System performance monitoring will be performed initially on a quarterly basis. The purpose of this sampling will be to monitor the impact and performance of the groundwater extraction system in the areas of interest. Water levels and VOC samples will be collected from all extraction wells and select wells in each area. The number and location of the wells for the system performance monitoring will be determined during the final design; however, CDM Smith has assumed the following number of wells will be selected from each area:

- ***Source Area*** – 4 wells;
- ***Transect 1*** – 1 well;
- ***Transect 2*** – 3 wells; and
- ***Transect 3*** – 6 wells.

The wells selected for system performance monitoring may be existing monitoring wells or open boreholes installed during the investigation phase. Any boreholes selected for monitoring purposes will be converted to 2-inch PVC monitoring wells using standard well construction techniques (sand pack, bentonite seal, and grout). Screen intervals and other construction details will be determined following selection of extraction wells based on monitoring needs. For costing purposes, CDM Smith assumes that all 14 monitoring locations will be converted from open boreholes to 2-inch monitoring wells.

### 6.4.3 Plume Status Monitoring

Plume status monitoring will be performed on a semiannual basis to determine the impact of the extraction system on the groundwater VOC plume. Ten groundwater monitoring wells are anticipated

for water level measurements and groundwater VOC sample collection. The final number and location of wells for the plume status monitoring will be determined during the final design.

Two years after the startup of the groundwater extraction system, the plume status monitoring will be expanded to include those wells sampled in the system performance monitoring event. After two years, the separate quarterly system performance monitoring events will be discontinued.

#### 6.4.4 Reporting

Groundwater monitoring reports will be submitted on an annual basis to EPD. The report will include tabulated analytical results, a potentiometric surface map, operational data for the groundwater treatment system, and conclusions regarding the containment process.

### 6.5 Compliance Status Report

Two years after startup of the groundwater extraction and treatment system, a compliance status report (CSR) will be prepared that conforms to the EPD's requirements. The CSR will document the site investigations, update the horizontal and vertical extent of contamination in groundwater, and determine the effectiveness of the onsite containment strategy using groundwater extraction. The following list of EPD's checklist items will be attached to the CSR.

- Concise statement of report findings;
- Property owner verification;
- Qualified groundwater scientist statement;
- Source description;
- Extent of groundwater contamination;
- Description of potential environmental receptors;
- Identification of affected properties;
- Potentially responsible party contact information; and
- Description of remediation.

### 6.6 Corrective Action Schedule

**Figure 6-4** includes the proposed schedule for corrective action at the Manchester Tank site. The design data collection activities, including the investigation borings and aquifer performance testing, are expected to require approximately seven months. The design will then be finalized, requiring approximately six months. Treatment system construction activities are expected to begin during month 17 and will continue for an estimated three months. Groundwater monitoring will be performed at the start of the groundwater extraction and treatment system, at month 20. The CSR report is scheduled to be performed two years following the startup of the extraction system with groundwater monitoring continuing through year ten.

## 6.7 Corrective Action Cost Estimate

**Table 6-1** includes the cost estimate for the planned corrective action at the Manchester Tank site from design data collection through construction and ongoing monitoring through year ten. These costs represent CDM Smith's best estimates of scope based on the most-probable field conditions and contractor costs. A 15% contingency cost was also added to the estimate as a conservative measure. A cost summary developed from Table 6-1 is presented below.

Exploratory Borings	\$ 406,000
Aquifer Testing	\$ 114,000
Investigation Derived Waste	\$ 41,000
Monitor Well Installation	\$ 10,000
Design and Bidding	\$ 58,000
Treatment System Construction	\$ 800,000
Treatment System O&M (Through Year 10)	\$ 1,619,000
Monitoring (Through Year 10)	\$ 291,000
Compliance Status Report	\$ 15,000
15% Contingency	\$ 503,000
<b>Corrective Action Total    \$ 3,857,000</b>	

## Section 7

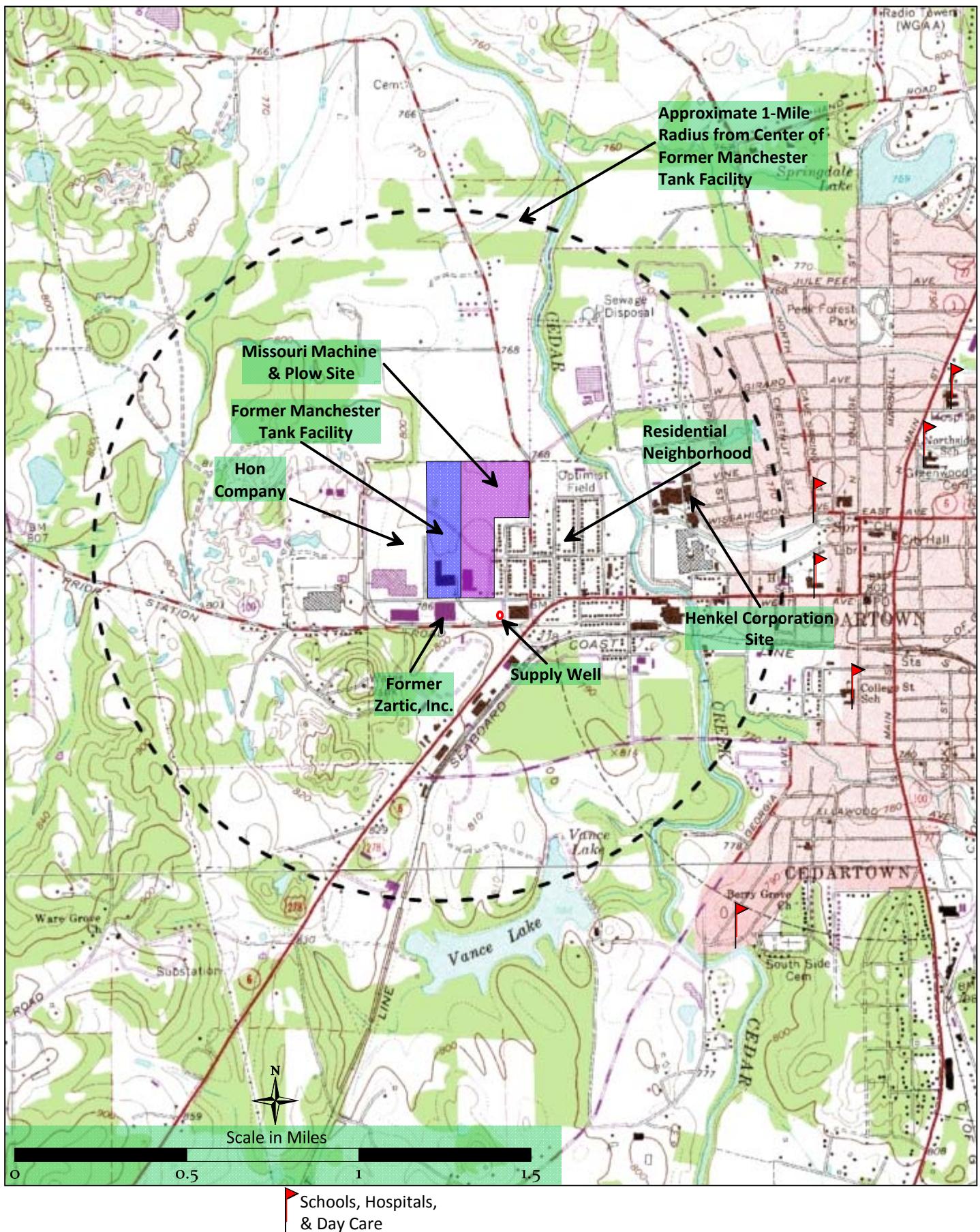
### References

Environmental Protection Agency. May 2013. Regional Screening Table.  
[http://www.epa.gov/reg3hwmd/risk/human/rb-concentration\\_table/](http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/)

Gallet & Associates, Inc. July 23, 2009. Corrective Action Plan. Georgia Environmental Protection Division. Hazardous Sites Response Action Program. Former Manchester Tank. 811 West Avenue Cedartown, Polk County, Georgia. HSI Site # 10765.

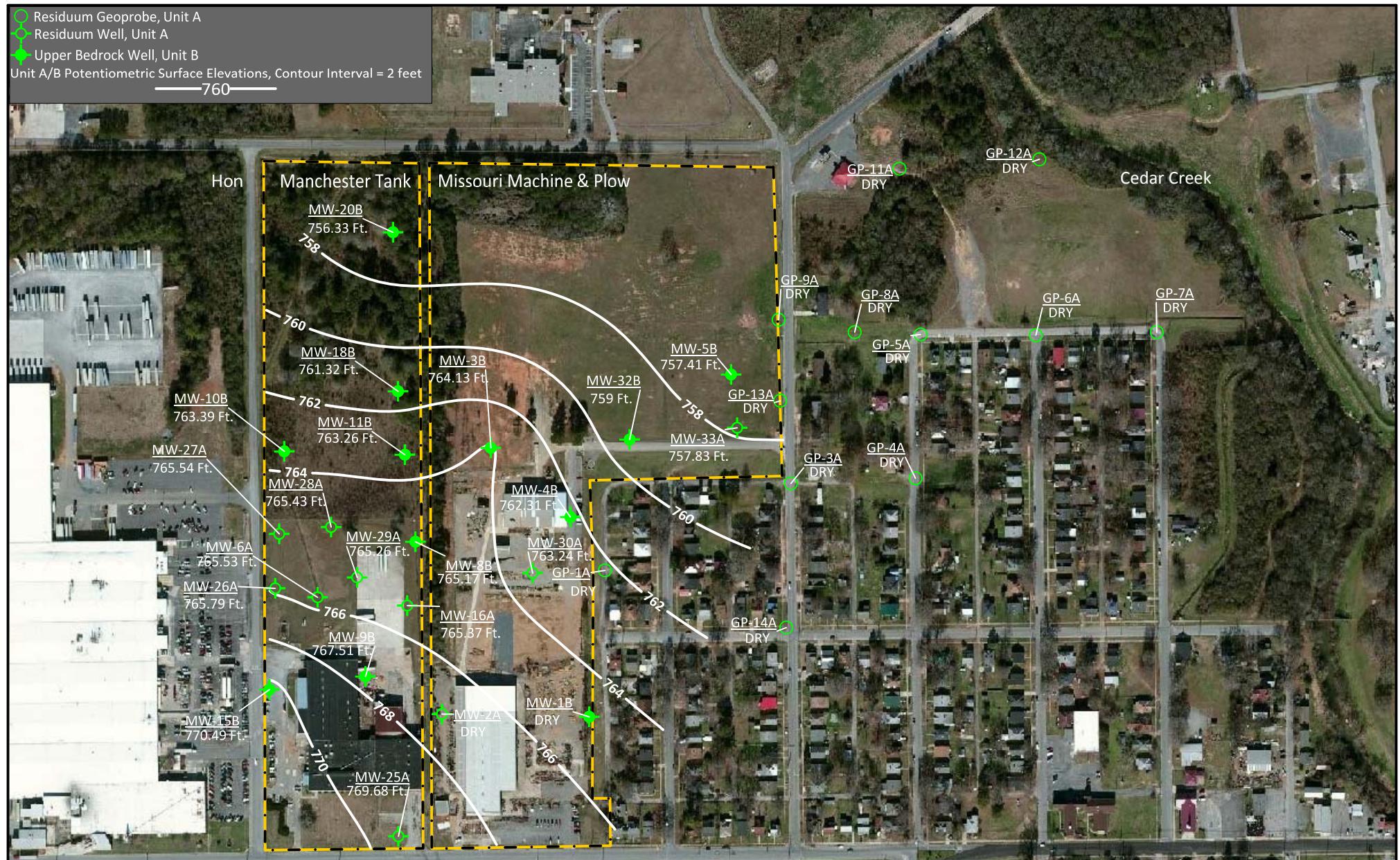
## Figures

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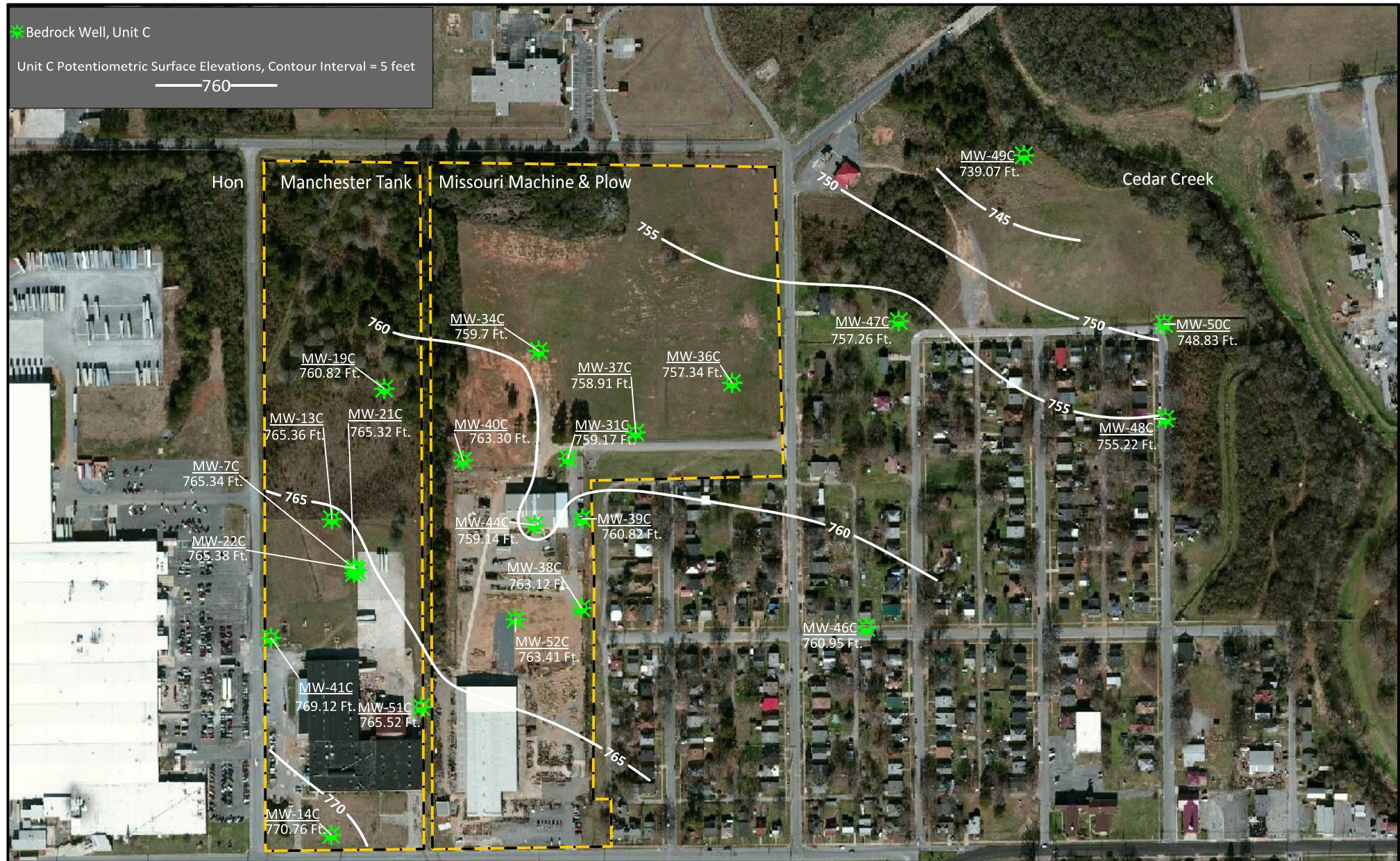
**Figure 1-1: Surrounding Land Use**  
**Corrective Action Plan**  
**Former Manchester Tank Company Site**  
**(HSI #10765)**  
**Cedartown, Polk County, Georgia**





NOTE: Posted values are potentiometric surface in feet above mean sea level.  
Water levels were recorded during 11/2012.

**Figure 2-2: Unit A/B Potentiometric Surface**  
**Corrective Action Plan**  
**Former Manchester Tank Company Site**  
**(HSI #10765)**  
**Cedartown, Polk County, Georgia**



NOTE: Posted values are for potentiometric surface in feet above mean sea level (NAVD88)

Water levels were recorded during 11/2012.

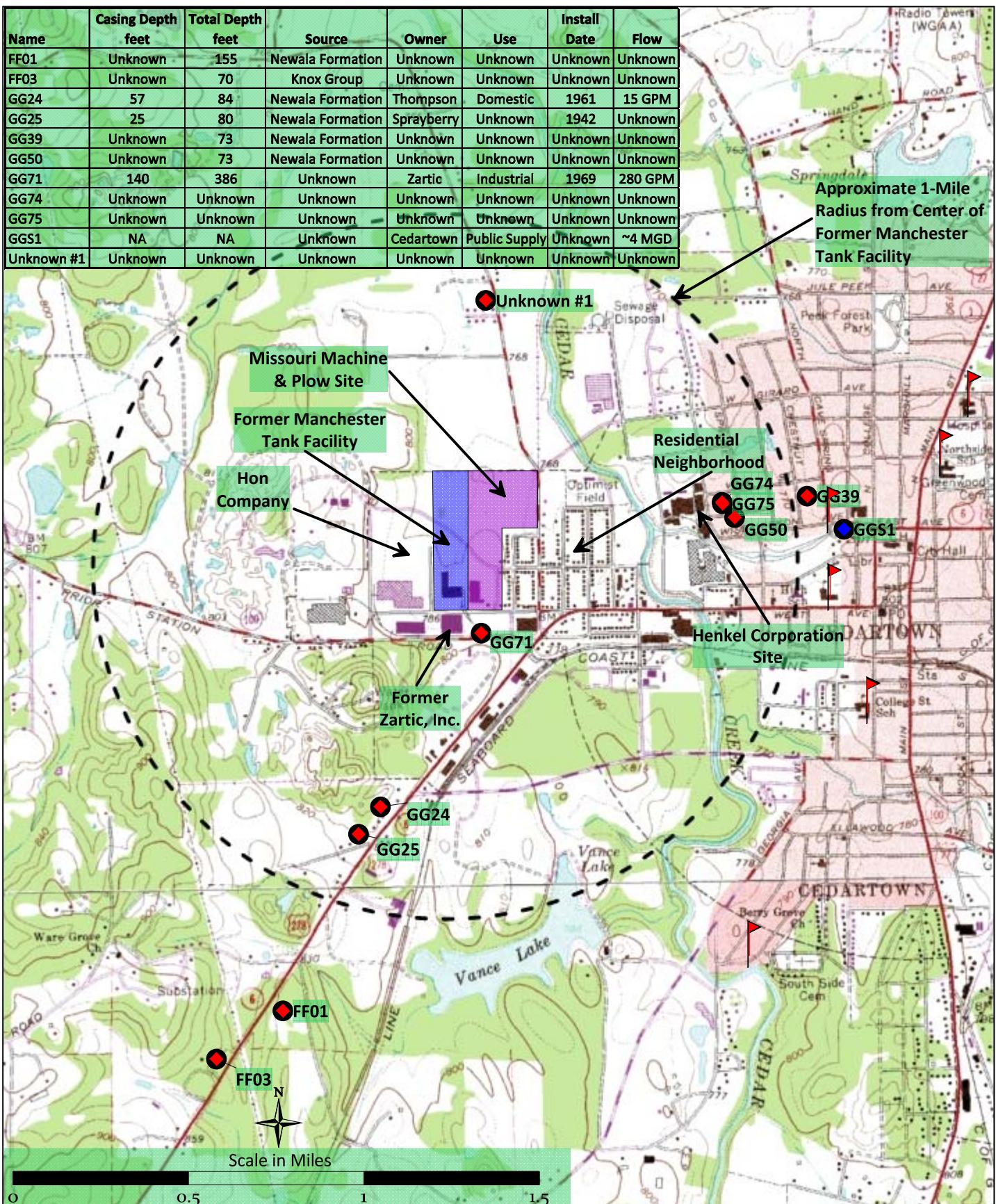


Scale in Feet

0 400 800

**Figure 2-3: Unit C Potentiometric Surface**  
 Corrective Action Plan  
 Former Manchester Tank Company Site  
 (HSI #10765)  
 Cedartown, Polk County, Georgia

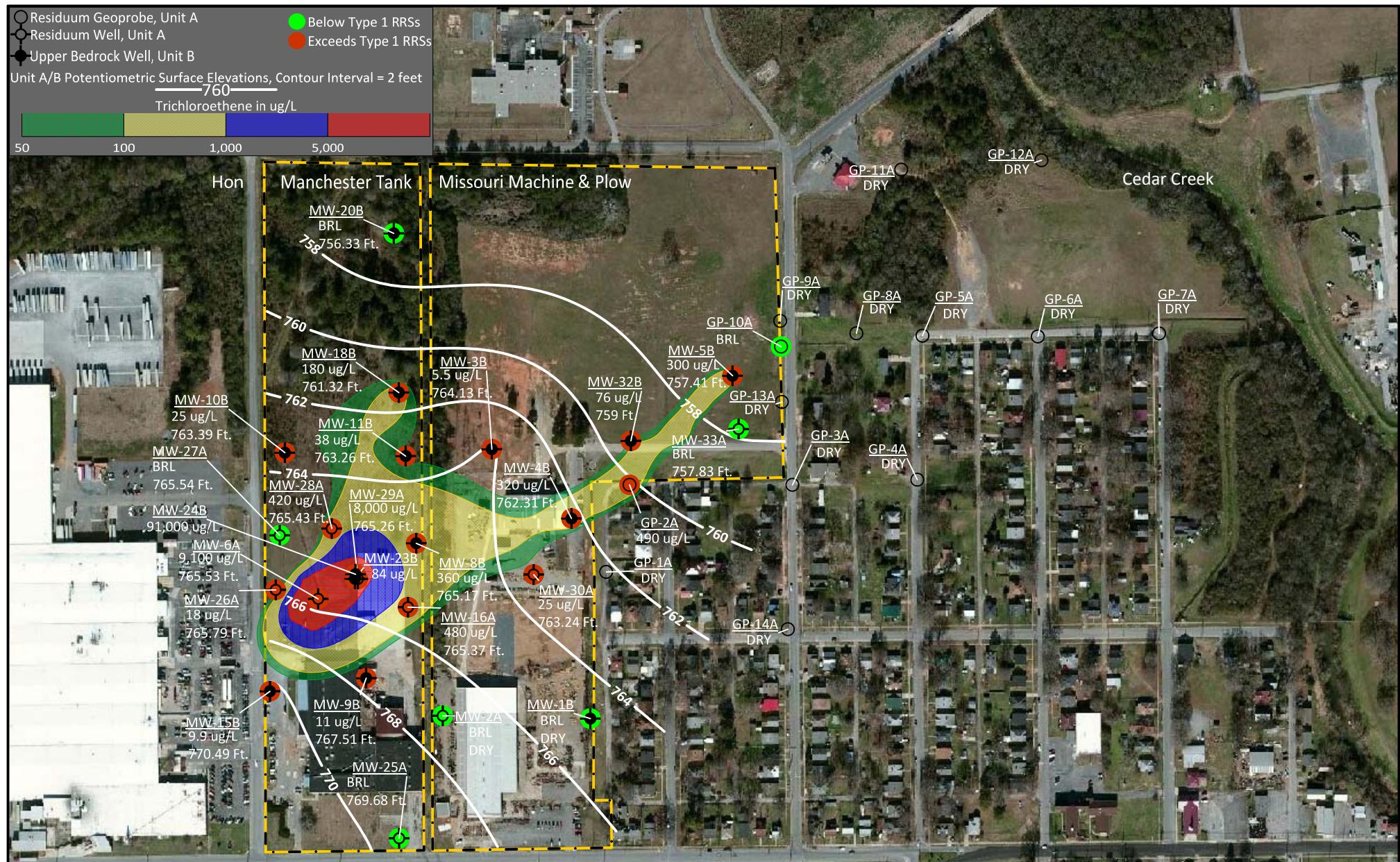
Name	Casing Depth feet	Total Depth feet	Source	Owner	Use	Install Date	Flow
FF01	Unknown	155	Newala Formation	Unknown	Unknown	Unknown	Unknown
FF03	Unknown	70	Knox Group	Unknown	Unknown	Unknown	Unknown
GG24	57	84	Newala Formation	Thompson	Domestic	1961	15 GPM
GG25	25	80	Newala Formation	Sprayberry	Unknown	1942	Unknown
GG39	Unknown	73	Newala Formation	Unknown	Unknown	Unknown	Unknown
GG50	Unknown	73	Newala Formation	Unknown	Unknown	Unknown	Unknown
GG71	140	386	Unknown	Zartic	Industrial	1969	280 GPM
GG74	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
GG75	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
GGS1	NA	NA	Unknown	Cedartown	Public Supply	Unknown	~4 MGD
Unknown #1	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown



- Non-Public Water Supply Well
- Water Supply Well
- City of Cedartown Public Water Supply Spring

- Schools, Hospitals, & Day Care

**Figure 2-4: Groundwater Use**  
Corrective Action Plan  
Former Manchester Tank Company Site  
(HSI #10765)  
Cedartown, Polk County, Georgia



NOTE: Posted values are trichloroethene in groundwater and potentiometric surface.

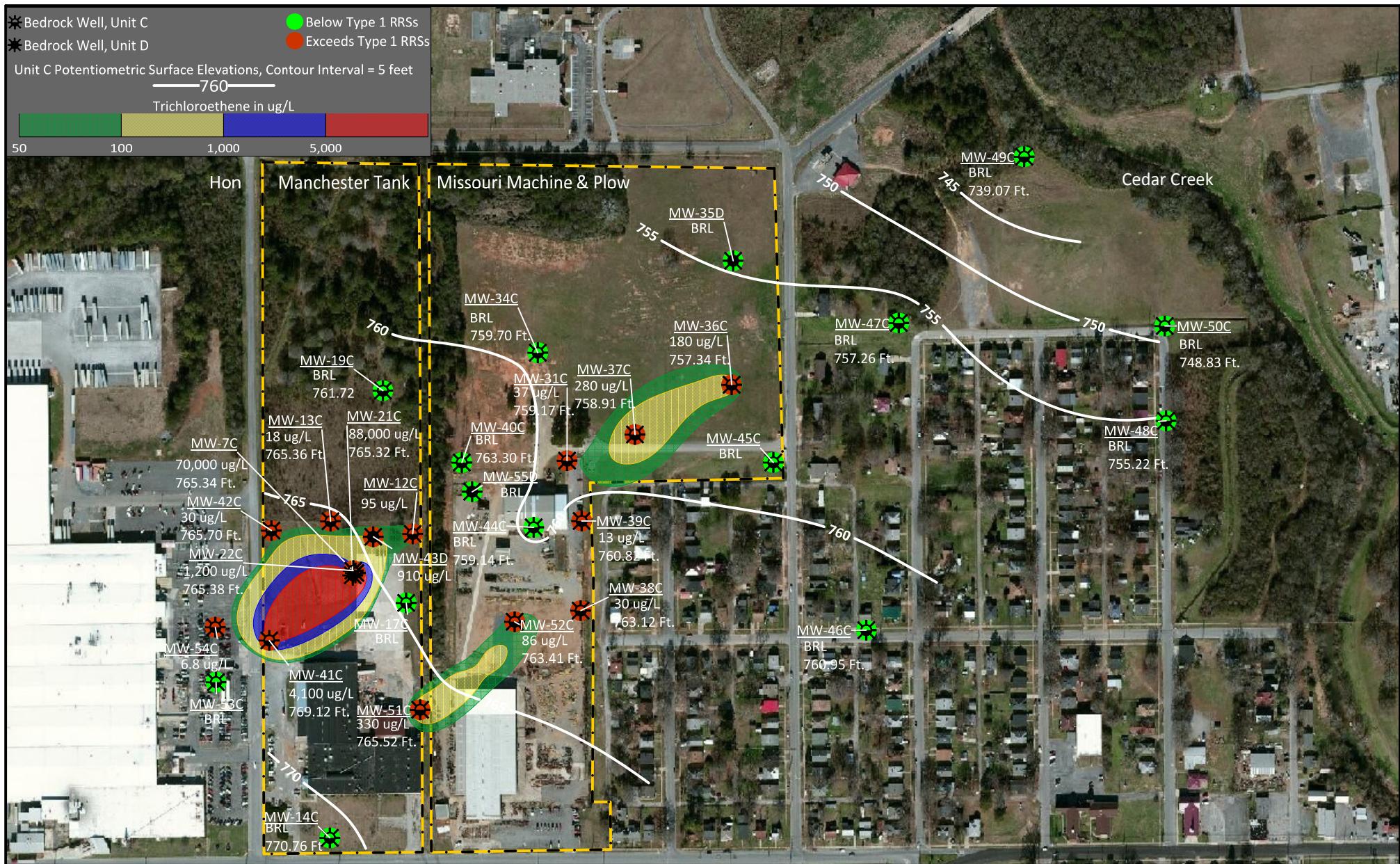
Sampling was performed from 6/2012 to 10/2012 and water levels were recorded during 11/2012.



Scale in Feet

0 400 800

**Figure 2-5: Unit A/B Investigation Results**  
**Corrective Action Plan**  
**Former Manchester Tank Company Site**  
**(HSI #10765)**  
**Cedartown, Polk County, Georgia**



**NOTE:** Posted values are trichloroethene in groundwater and potentiometric surface

Sampling was performed from 6/2012 to 3/2013 and water levels were recorded during 11/2012.



Scale in Feet

0 400 800

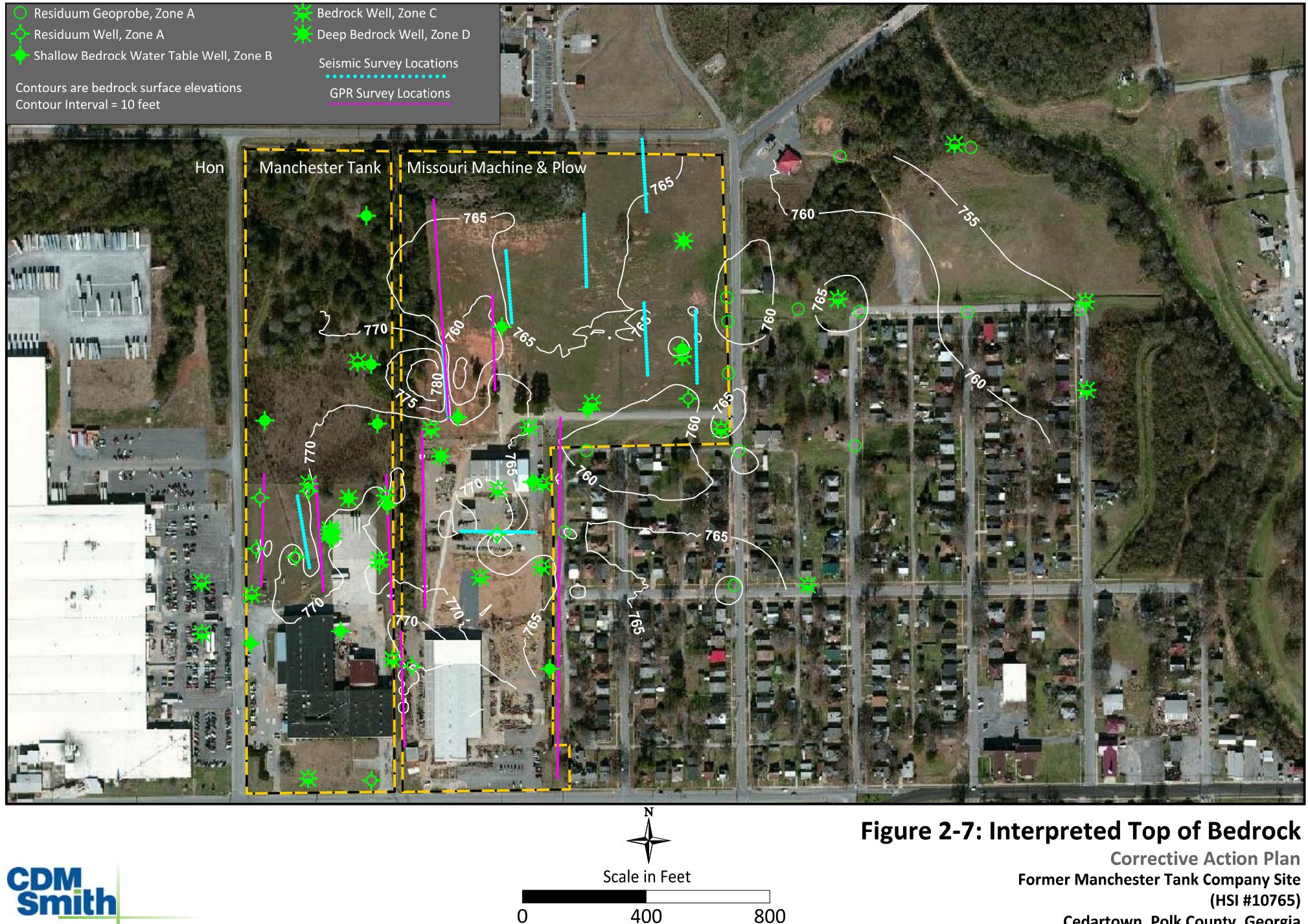
# **Figure 2-6: Unit C/D Investigation Results**

## **Corrective Action Plan**

### **Former Manchester Tank Company Site**

#### **(HSI #10765)**

### **Cedartown, Polk County, Georgia**

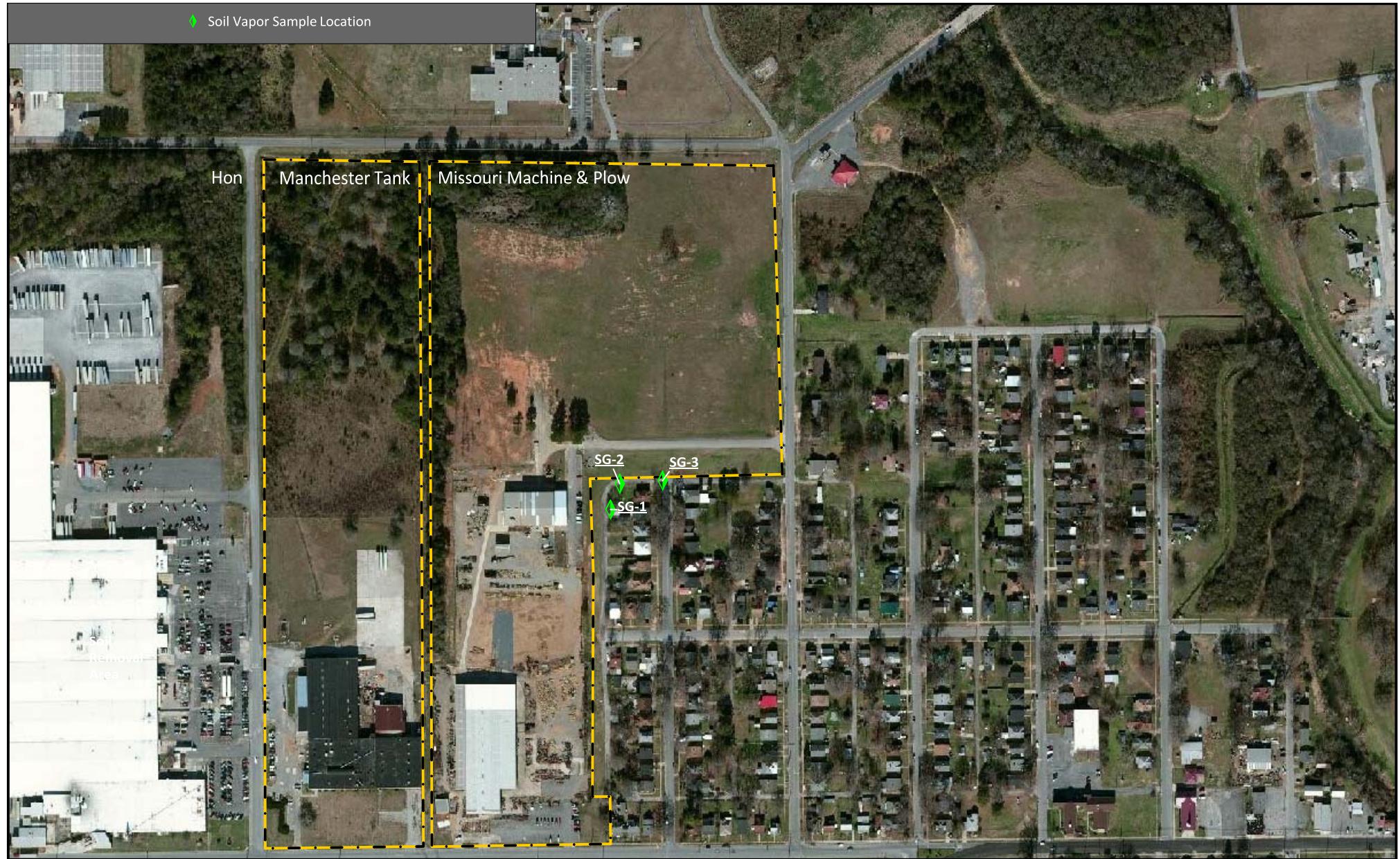




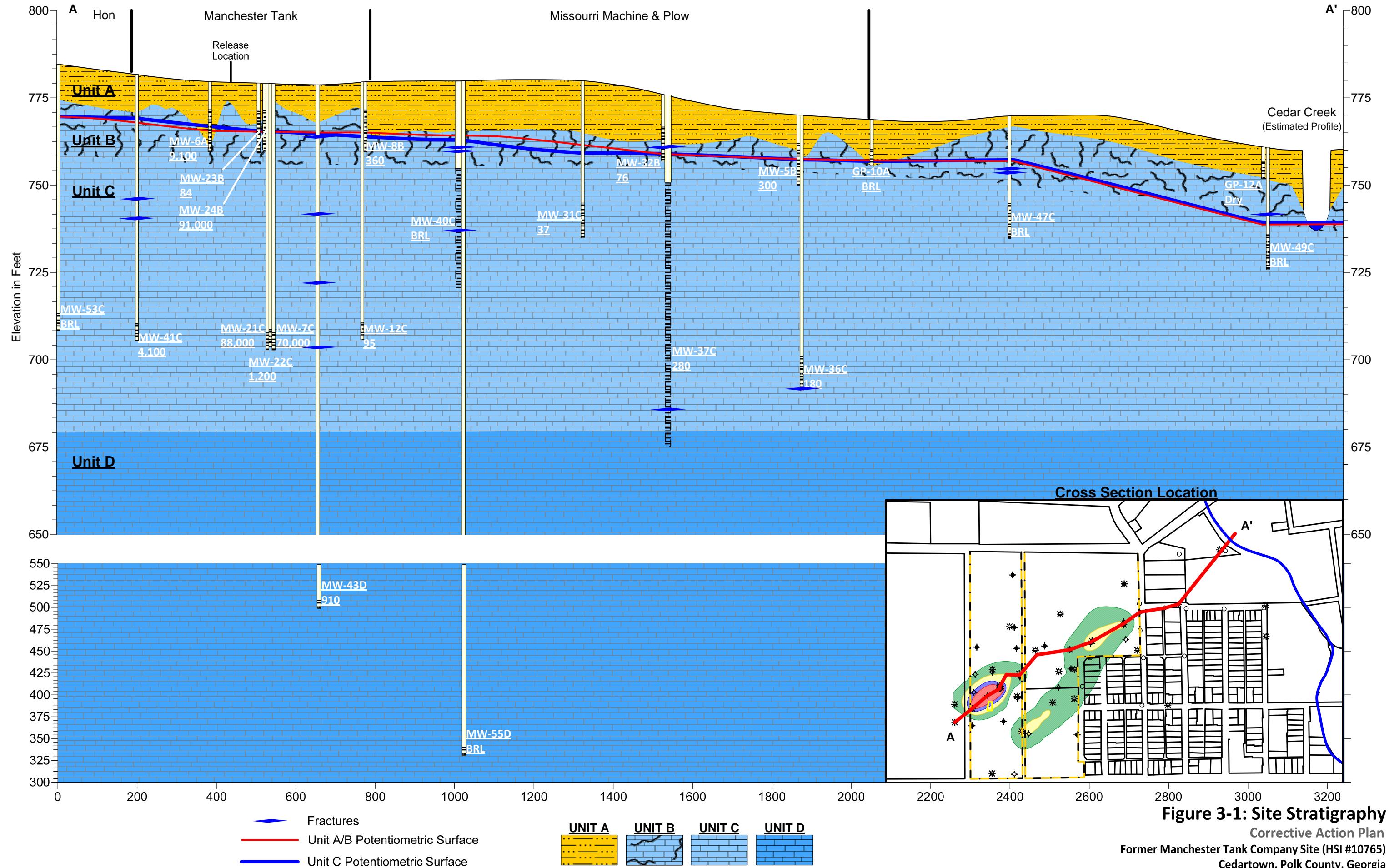
**Figure 2-8**  
**Soil Sample Locations**  
 Corrective Action Plan  
 Former Manchester Tank Company Site  
 (HSI #10765)  
 Cedartown, Polk County, Georgia

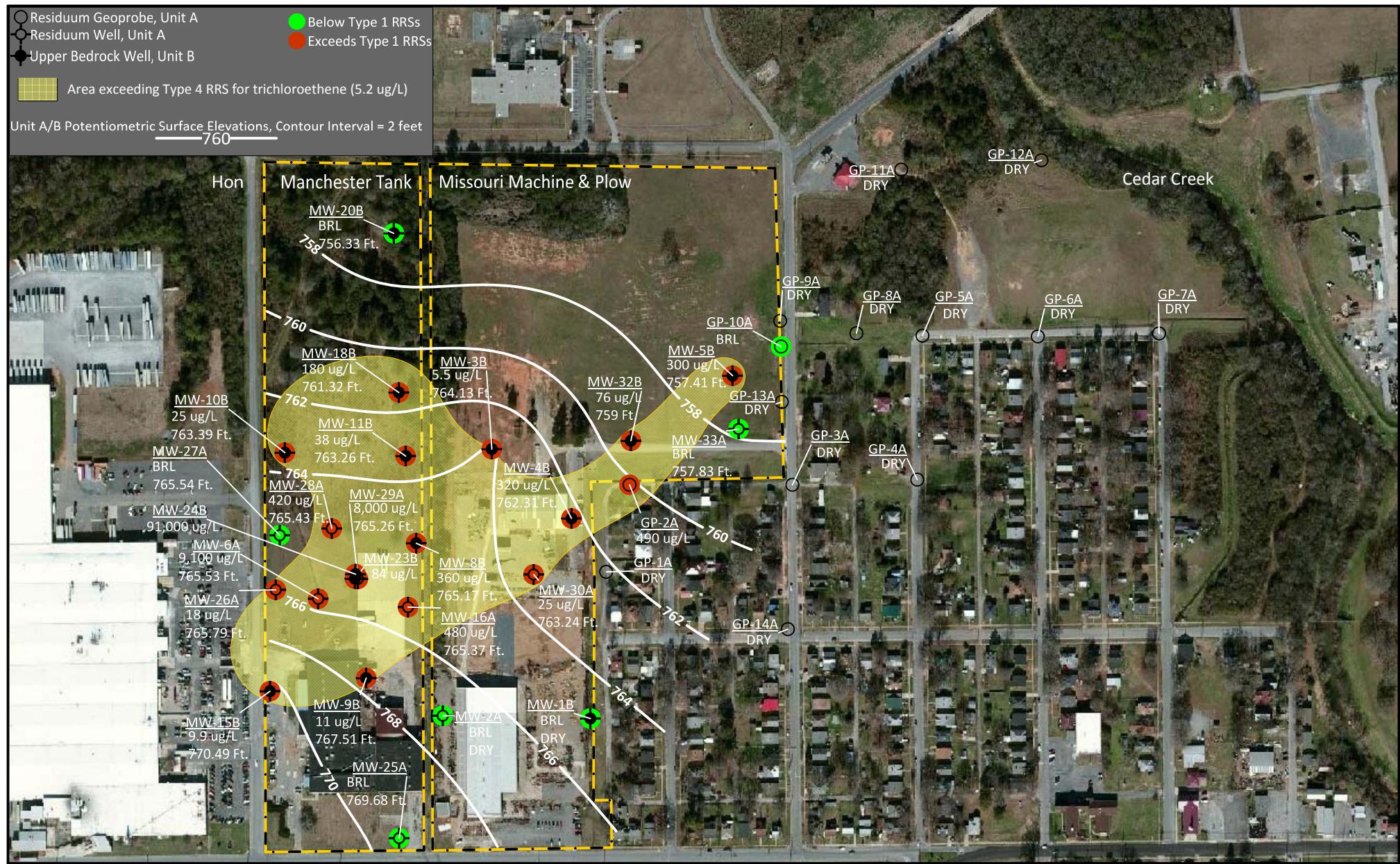


**Figure 2-9**  
**Soil Chromium Delineation**  
**Corrective Action Plan**  
**Former Manchester Tank Company Site**  
**(HSI #10765)**  
**Cedartown, Polk County, Georgia**



**Figure 2-10: Soil Gas Sample Locations**  
Corrective Action Plan  
Former Manchester Tank Company Site  
(HSI #10765)  
Cedartown, Polk County, Georgia





NOTE: Posted values are trichloroethene in groundwater and potentiometric surface.

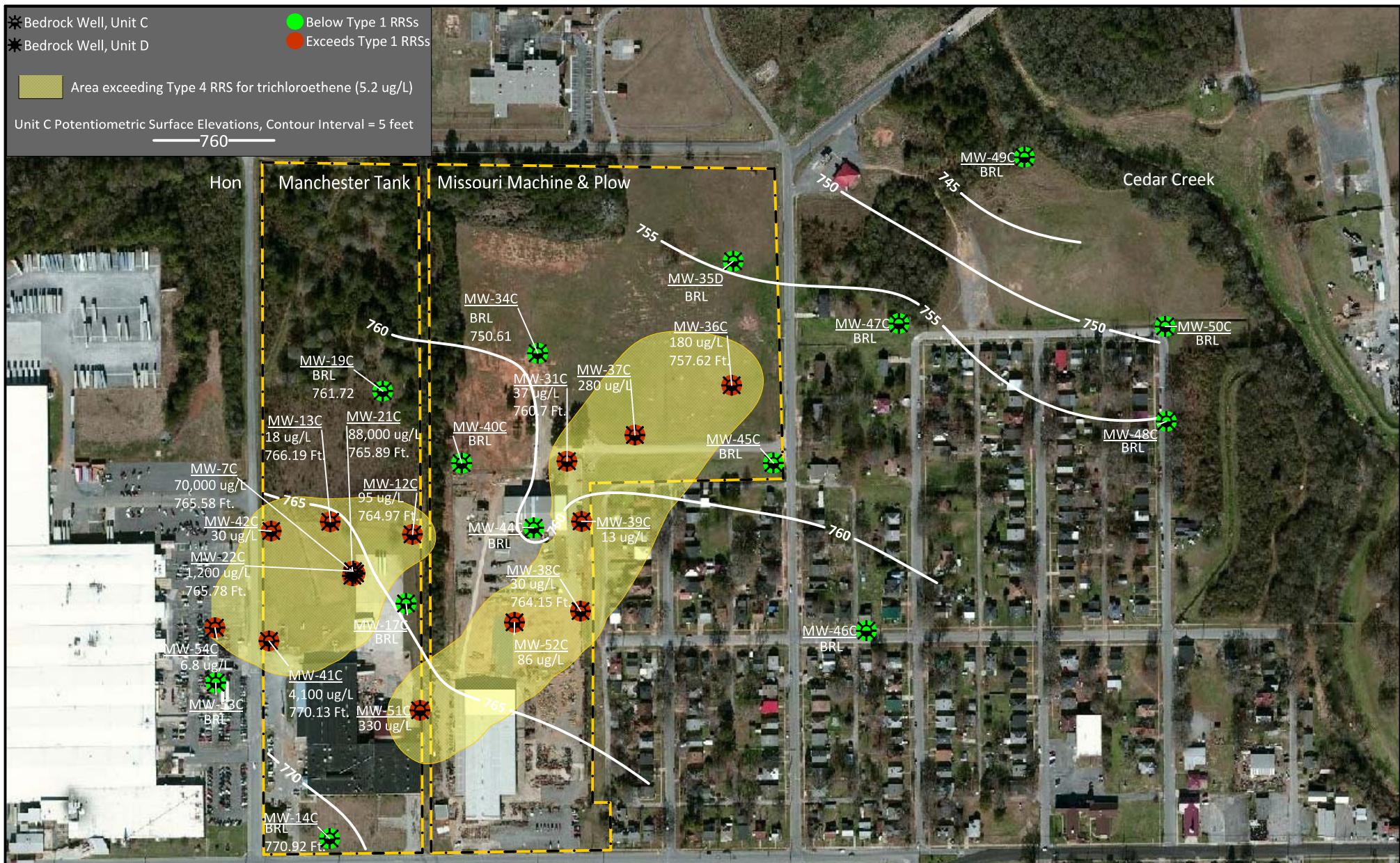
Sampling was performed from 6/2012 to 10/2012 and water levels were recorded during 11/2012.



Scale in Feet

0 400 800

**Figure 4-1: Unit A/B Type 4 RRS Exceedances**  
**Corrective Action Plan**  
**Former Manchester Tank Company Site**  
**(HSI #10765)**  
**Cedartown, Polk County, Georgia**



**NOTE:** Posted values are trichloroethene in groundwater and potentiometric surface

Sampling was performed from 6/2012 to 3/2013 and water levels were recorded during 11/2012.

**Figure 4-2: Unit C/D Type 4 RRS Exceedances**

## Corrective Action Plan

## **Former Manchester Tank Company Site**

(HSI #10765)

## **Cedartown, Polk County, Georgia**



Scale in Feet

0 400 800



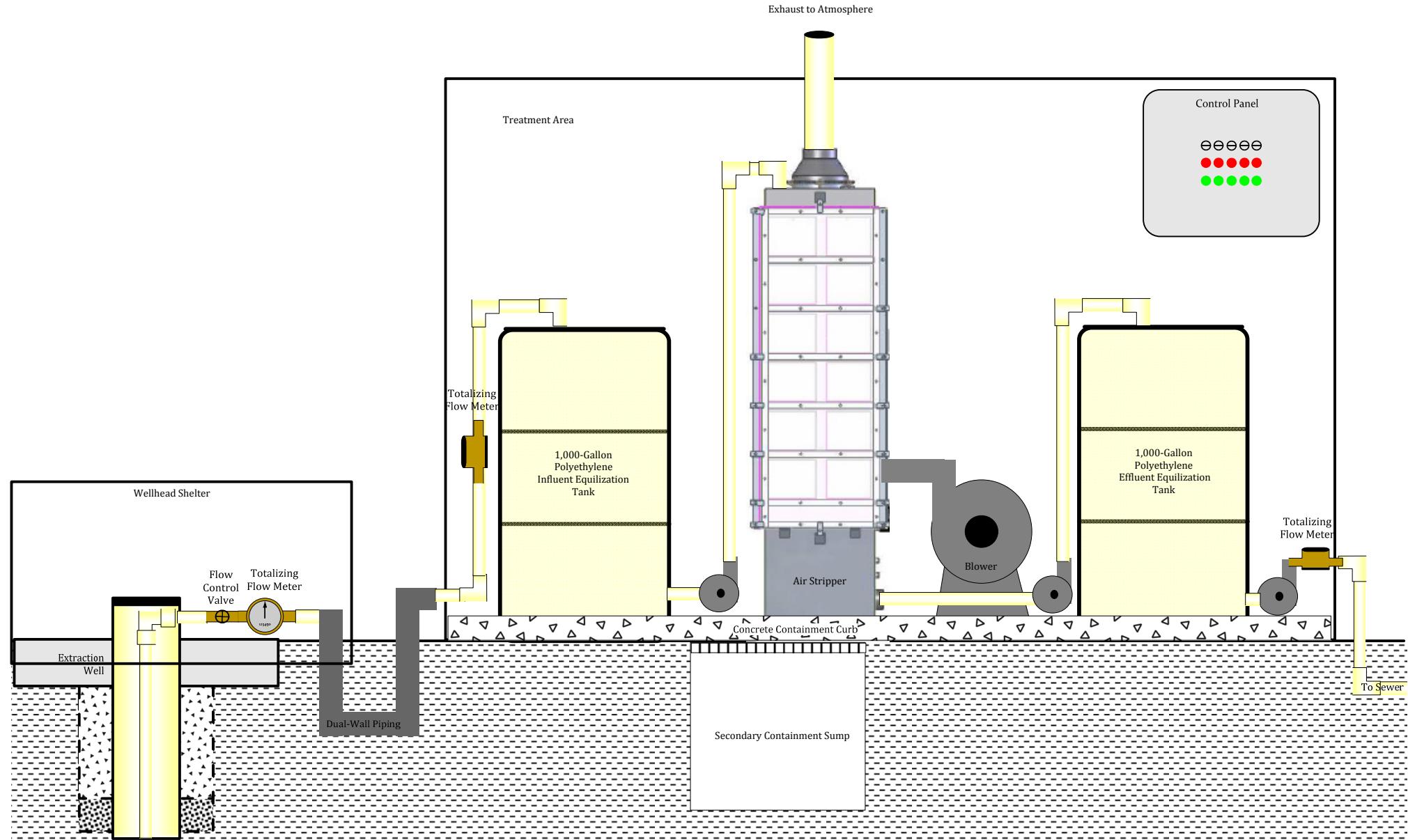
**Figure 6-1: Groundwater Extraction Locations**

Corrective Action Plan  
Former Manchester Tank Company Site  
(HSI #10765)  
Cedartown, Polk County, Georgia

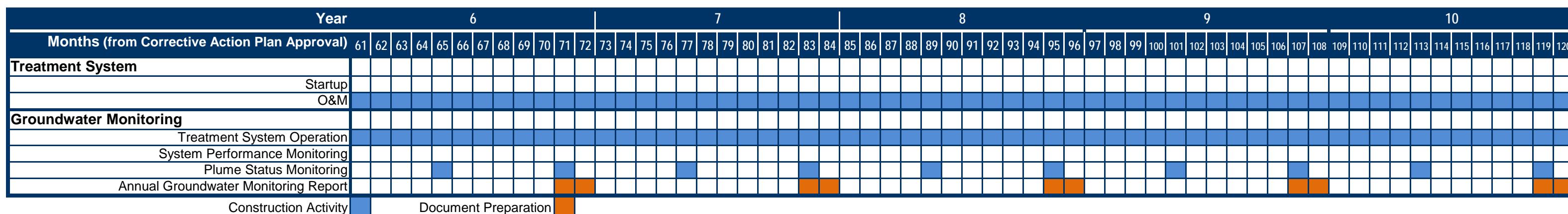
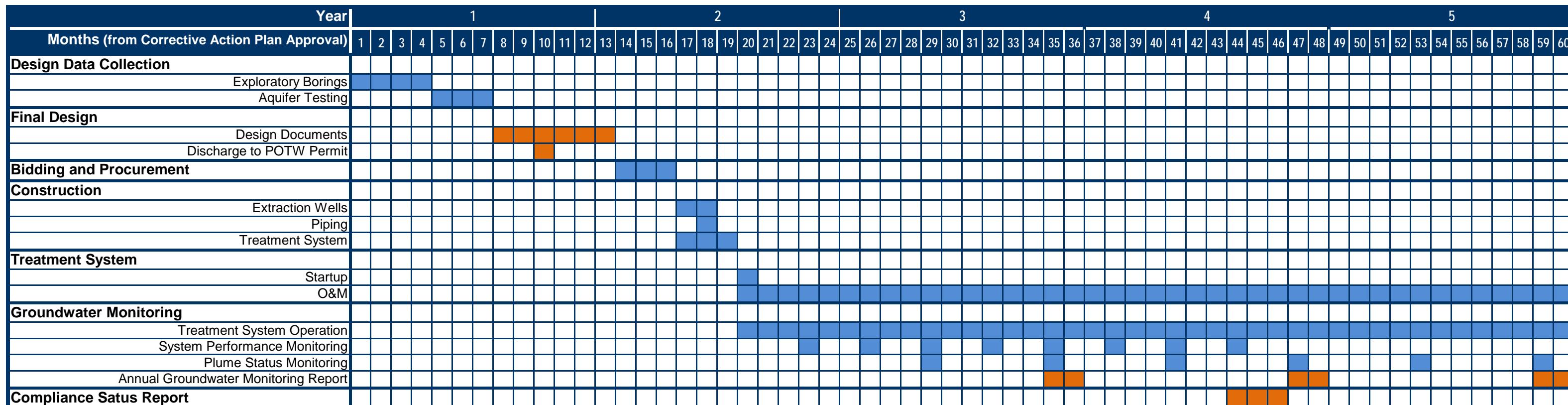


**Figure 6-2: Conceptual Extraction Well Layout**

Corrective Action Plan  
Former Manchester Tank Company Site  
(HSI #10765)  
Cedartown, Polk County, Georgia



**Figure 6-3: Treatment System Schematic**  
**Corrective Action Plan**  
**Former Manchester Tank Company Site**  
**(HSI #10765)**  
**Cedartown, Polk County, Georgia**



**Figure 6-4: Corrective Action Schedule**

## Corrective Action Plan

# Former Manchester Tank Company Site (HSI #10765) Cedartown, Polk County, Georgia

## Tables

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**Table 2-1: Monitoring Well Summary and Recent Water Levels**

Corrective Action Plan

Former Manchester Tank Company Site (HSI #10765)

Cedartown, Polk County, Georgia

Well ID	Installed By	Installation Date	Location	Well Type	Unit Code	Top of Casing Elevation (ft AMSL)	Well Diameter (inches)	Surface Casing		Open Interval		Total Depth (ft bgs)	Depth to Water - 11/15/12 (ft bgs)	Groundwater Elevation (ft AMSL)	Remarks
								Diameter (inches)	Depth (ft bgs)	From (ft bgs)	To (ft bgs)				
MW-1B	B&C	2/16/2010	Missouri M&P	Residuum Well	A	784.42	2	NA	NA	8	20	20.2	DRY	-	
MW-2A	B&C	2/17/2010	Missouri M&P	Residuum Well	A	781.25	2	NA	NA	2	13	12.2	DRY	-	
MW-3B	B&C	2/17/2010	Missouri M&P	Residuum Well	A	778.88	2	NA	NA	3	15	15.0	14.8	764.13	
MW-4B	B&C	2/18/2010	Missouri M&P	Residuum Well	A	779.82	2	NA	NA	10	22	21.3	17.5	762.31	
MW-5B	B&C	2/18/2010	Missouri M&P	Residuum Well	A	767.07	2	NA	NA	4	16	16.3	9.7	757.41	
MW-6A	G&A	8/22/2006	Manchester Tank	Residuum Well	A	776.63	2	NA	NA	8	20	22.4	11.1	765.53	
MW-7C	G&A	5/28/2007	Manchester Tank	Bedrock Well	C	776.67	2	4	10.5	68	73.5	74.2	11.3	765.34	Screen set in open-rock bore
MW-8B	G&A	5/22/2007	Manchester Tank	Shallow Rock Well	B	776.02	2	NA	NA	8.5	20	19.4	10.9	765.17	
MW-9B	G&A	5/22/2007	Manchester Tank	Shallow Rock Well	B	778.63	2	NA	NA	16	28.5	28.1	11.1	767.51	Screen set in open rock bore
MW-10B	G&A	5/23/2007	Manchester Tank	Shallow Rock Well	B	774.08	2	NA	NA	4	23.5	23.9	10.7	763.39	
MW-11B	G&A	5/24/2007	Manchester Tank	Shallow Rock Well	B	775.45	2	NA	NA	23.5	33	33.4	12.2	763.26	Screen set in open-rock bore
MW-12C	G&A	4/18/2008	Manchester Tank	Bedrock Well	C	775.93	2	4	50	69	75	75.3	5.8	770.09	Screen set in open-rock bore
MW-13C	G&A	4/18/2008	Manchester Tank	Bedrock Well	C	775.16	2	4	50	69	75	75.4	9.8	765.36	Screen set in open-rock bore
MW-14C	G&A	2/24/2011	Manchester Tank	Bedrock Well	C	783.66	2	4	50	67	75	75.4	12.9	770.76	No screen, diffuser 70'-75'
MW-15B	G&A	2/23/2011	Manchester Tank	Shallow Rock Well	B	783.39	2	NA	NA	8	25	25.2	12.9	770.49	
MW-16A	G&A	2/23/2011	Manchester Tank	Residuum Well	A	776.92	2	NA	NA	8	15	14.9	11.6	765.37	Residuum Injection Well
MW-17C	G&A	2/24/2011	Manchester Tank	Bedrock Well	C	776.92	2	4	50	67	75	72.0	61.2	715.68	No screen, diffuser 70'-75'
MW-18B	G&A	2/23/2011	Manchester Tank	Shallow Rock Well	B	772.92	2	NA	NA	6	18	18.2	11.6	761.32	
MW-19C	G&A	4/28/2011	Manchester Tank	Bedrock Well	C	773.40	2	4	50	72	80	79.5	12.6	760.82	No screen, diffuser 75'-80'
MW-20B	G&A	2/23/2011	Manchester Tank	Shallow Rock Well	B	769.20	2	NA	NA	66	18	19.2	12.9	756.33	
MW-21C	G&A		Manchester Tank	Bedrock Well	C	777.13	1	Unknown	Unknown	Unknown	Unknown	72.0	11.8	765.32	Deep Injection Point
MW-22C	G&A		Manchester Tank	Bedrock Well	C	776.78	1	Unknown	Unknown	Unknown	Unknown	75.5	11.4	765.38	Deep Injection Point
MW-23B	G&A		Manchester Tank	Shallow Rock Well	B	777.04	1	Unknown	Unknown	Unknown	Unknown	19.5	-	-	Shallow Injection Point
MW-24B	G&A		Manchester Tank	Shallow Rock Well	B	776.87	1	Unknown	Unknown	Unknown	Unknown	18.9	-	-	Shallow Injection Point
MW-25A	G&A	8/21/2006	Manchester Tank	Shallow Rock Well	B	782.26	2	NA	NA	88	20	20.4	12.6	769.68	
MW-26A	G&A	8/22/2006	Manchester Tank	Residuum Well	A	778.32	2	NA	NA	8	20	21.8	12.5	765.79	
MW-27A	G&A	8/23/2006	Manchester Tank	Shallow Rock Well	B	775.43	2	NA	NA	8	20	20.4	9.9	765.54	
MW-28A	G&A	8/23/2006	Manchester Tank	Shallow Rock Well	B	775.00	2	NA	NA	8	20	20.6	9.6	765.43	
MW-29A	G&A	8/23/2006	Manchester Tank	Shallow Rock Well	B	776.66	2	NA	NA	8	20	20.4	11.4	765.26	
MW-30A	CDM Smith	7/2/2012	Missouri M&P	Residuum Well	A	780.44	2	NA	NA	23.8	33.8	33.8	17.2	763.24	Pre-Pack Screen
MW-31C	CDM Smith	7/1/2012	Missouri M&P	Bedrock Well	C	779.53	2	NA	NA	35.3	45.3	45.3	20.4	759.17	
MW-32B	CDM Smith	6/27/2012	Missouri M&P	Shallow Rock Well	B	772.97	2	NA	NA	9.0	19.0	19.0	14.0	759.00	
MW-33A	CDM Smith	6/25/2012	Missouri M&P	Residuum Well	A	767.08	1	NA	NA	8.6	13.6	13.6	9.3	757.83	
MW-34B	CDM Smith	7/15/2012	Missouri M&P	Shallow Rock Well	B	775.59	2	NA	NA	48	58	58.0	15.9	759.70	
MW-35D	CDM Smith	7/1/2012	Missouri M&P	Deep Bedrock Well	D	769.93	2	NA	NA	100	120	120.0	13.5	756.39	
MW-36C	CDM Smith	7/2/2012	Missouri M&P	Bedrock Well	C	766.71	2	6	21.5	79	69	79.0	9.4	757.34	Pre-Pack Screen
MW-37C	CDM Smith	6/28/2012	Missouri M&P	Bedrock Well	C	773.11	6	6	25	Open Borehole		101.0	14.2	758.91	
MW-38C	CDM Smith	6/29/2012	Missouri M&P	Bedrock Well	C	779.77	6	6	25	Open Borehole		50.0	16.7	763.12	
MW-39C	CDM Smith	7/1/2012	Missouri M&P	Bedrock Well	C	779.35	6	6	25	Open Borehole		100.0	18.5	760.82	
MW-40C	CDM Smith	7/15/2012	Missouri M&P	Bedrock Well	C	779.06	6	6	25	Open Borehole		60.0	15.8	763.30	

**Table 2-1: Monitoring Well Summary and Recent Water Levels**

Corrective Action Plan

Former Manchester Tank Company Site (HSI #10765)

Cedartown, Polk County, Georgia

Well ID	Installed By	Installation Date	Location	Well Type	Unit Code	Top of Casing Elevation (ft AMSL)	Well Diameter (inches)	Surface Casing		Open Interval		Total Depth (ft bgs)	Depth to Water - 11/15/12 (ft bgs)	Groundwater Elevation (ft AMSL)	Remarks
								Diameter (inches)	Depth (ft bgs)	From (ft bgs)	To (ft bgs)				
MW-41C	CDM Smith	7/13/2012	Manchester Tank	Bedrock Well	C	781.38	2	6	25	65.3	75.3	75.3	12.3	769.12	
MW-42C	CDM Smith	7/16/2012	Manchester Tank	Bedrock Well	C	776.67	6	6	25	Open Borehole		160.0	11.0	765.70	
MW-43D	CDM Smith	10/8/2012	Manchester Tank	Deep Bedrock Well	D	776.78	2	6	125	241	251	251.0	13.6	763.20	
MW-44C	CDM Smith	10/11/2012	Missouri M&P	Bedrock Well	C	780.37	2	NA	NA	30.5	40.5	40.5	21.2	759.14	
MW-45C	CDM Smith	10/11/2012	Missouri M&P	Bedrock Well	C	767.26	2	NA	NA	25.4	35.4	35.4	25.3	741.93	
MW-46C	CDM Smith	10/10/2012	Off site	Bedrock Well	C	770.49	2	NA	NA	25.5	35.5	35.5	9.5	760.95	
MW-47C	CDM Smith	10/9/2012	Off site	Bedrock Well	C	762.93	2	NA	NA	25.5	35.5	35.5	5.7	757.26	
MW-48C	CDM Smith	10/10/2012	Off site	Bedrock Well	C	766.75	2	NA	NA	35.7	25.7	35.7	11.5	755.22	
MW-49C	CDM Smith	10/9/2012	Off site	Bedrock Well	C	764.38	2	NA	NA	35.4	25.4	35.4	25.3	739.07	
MW-50C	CDM Smith	10/9/2012	Off site	Bedrock Well	C	765.25	2	NA	NA	35.4	25.4	35.4	16.4	748.83	
MW-51C	CDM Smith	10/11/2012	Manchester Tank	Bedrock Well	C	779.73	2	NA	NA	25.4	15.4	25.4	14.2	765.52	
MW-52C	CDM Smith	10/11/2012	Missouri M&P	Bedrock Well	C	780.05	2	NA	NA	30.5	40.5	40.5	16.6	763.41	

Notes:

B&amp;C - Brown &amp; Caldwell

G&amp;A - Gallett &amp; Associates

Missouri M&amp;P - Missouri Machine and Plow

bgs - below ground surface

ft AMSL - feet above mean sea level (NAVD 1988)

NA - Not Applicable

**Table 2-2: Groundwater Sampling Results Summary**

Corrective Action Plan

Former Manchester Tank Company Site (HSI #10765)

Cedartown, Polk County, Georgia

Well ID	Sample Date	Compounds and Type 1 Risk Reduction Standards in ug/L														
		1,1,1-TCA 200	1,1,2-TCA 5	1,1-DCA 4,000	1,1-DCE 7	1,2-DCA 5	cis-1,2-DCE 70	trans-1,2-DCE 100	Acetone 4,000	Isopropylbenzene *	MEK 2,000	PCE 5	Toluene 1,000	TCE 5	Vinyl Chloride 2	Xylenes 10,000
<b>Unit A / B Wells and Borings</b>																
GP-2A	10/2/2012	86			16		320	5.6						490		
GP-10A	10/3/2012															
MW-1B	7/17/2012															
MW-4B	7/17/2012	43			9.7		170							320		
MW-5B	7/16/2012	34			13		180							300		
MW-6A	7/18/2012	49	11	110	440	5.2	11,000	160					7.3	9,100	93	
MW-8B	7/18/2012	33			18		480	7						360		
MW-9B	7/18/2012						190							11		
MW-10B	7/16/2012						8.8							25		
DUP-1	7/16/2012						6.6							24		
MW-11B	7/16/2012						130							38		
MW-15B	7/18/2012						52							9.9		
MW-16A	7/18/2012	37			25		830	11						480		
MW-18B	7/16/2012	5.8		5.3	10		620	6						180		
MW-20B	7/16/2012															
MW-24B	7/19/2012	1,200	81	520	2,300	35	140,000	2,100					19	57	91,000	330
MW-25A	7/17/2012						6.4									
MW-26A	7/18/2012						73							18		
MW-27A	7/18/2012															
DUP-3	7/18/2012															
MW-28A	7/18/2012	23			17		210							420		
MW-29A	7/18/2012	300	6	74	270		13,000	210						8,000	2.7	
DUP-4	7/18/2012	340	7.5	100	330		15,000	240						8,100	3	
MW-30A	7/3/2012						11							21		
	7/17/2012						12							25		
MW-32B	7/1/2012	16					80							96	2.6	
	7/17/2012	21		5			160							76	3.4	
MW-33A	6/27/2012															
	7/17/2012															
MW-34B	7/17/2012															

**Table 2-2: Groundwater Sampling Results Summary**

Corrective Action Plan

Former Manchester Tank Company Site (HSI #10765)

Cedartown, Polk County, Georgia

Well ID	Sample Date	Compounds and Type 1 Risk Reduction Standards in ug/L														
		1,1,1-TCA 200	1,1,2-TCA 5	1,1-DCA 4,000	1,1-DCE 7	1,2-DCA 5	cis-1,2-DCE 70	trans-1,2-DCE 100	Acetone 4,000	Isopropylbenzene *	MEK 2,000	PCE 5	Toluene 1,000	TCE 5	Vinyl Chloride 2	Xylenes 10,000
<b>Unit C Wells</b>																
MW-7C	7/18/2012	200	24	510	1,400	17	63,000	600				6.8	7.7	70,000	50	
MW-12C	7/18/2012						80							95		
MW-13C	7/18/2012						21							18		
MW-14C	7/18/2012															
MW-17C	7/18/2012															
MW-19C	7/16/2012															
MW-21C	7/19/2012	98	12	340	1,000	9.3	29,000	270				22	88,000	62		
MW-22C	7/19/2012	20		16	14		960	5.7	680		260		1,200			
MW-31C	7/1/2012						16							19		
	7/17/2012	5.7					25							37		
DUP-2	7/17/2012						23							40		
MW-36C	7/16/2012				9.2		55							180		
MW-37C	7/1/2012						9.4							15		
	7/17/2012	21					130							280		
MW-38C	7/2/2012	20			10		150							290		
	7/17/2012						17							30		
MW-39C	7/1/2012				7.6		51							180		
	7/2/2012													13		
	7/18/2012															
MW-40C	7/17/2012															
MW-41C	7/18/2012	5.6		86	320		7,900	88						9,200	310	
	10/30/2012			86	270		6,300	65						6,200	150	
	2/28/2013			91	120		4,900	54						4,100	100	
MW-42C	1/23/2013													30		
MW-44C	10/30/2012															
MW-45C	10/30/2012															
MW-46C	10/15/2012															
MW-47C	10/15/2012															
MW-48C	10/15/2012															
MW-49C	10/15/2012															
MW-50C	10/15/2012															
MW-51C	10/15/2012						250			9.9				330	35	
MW-52C	10/15/2012							21						86		
MW-53C	3/6/2013															
MW-54C	3/6/2013													6.8		

**Table 2-2: Groundwater Sampling Results Summary**

Corrective Action Plan

Former Manchester Tank Company Site (HSI #10765)

Cedartown, Polk County, Georgia

Well ID	Sample Date	Compounds and Type 1 Risk Reduction Standards in ug/L														
		1,1,1-TCA 200	1,1,2-TCA 5	1,1-DCA 4,000	1,1-DCE 7	1,2-DCA 5	cis-1,2-DCE 70	trans-1,2-DCE 100	Acetone 4,000	Isopropylbenzene *	MEK 2,000	PCE 5	Toluene 1,000	TCE 5	Vinyl Chloride 2	Xylenes 10,000
<b>Unit D Wells</b>																
MW-35D	7/2/2012 7/17/2012															
MW-43D	10/15/2012 2/28/2013	26 16		10 9.9	54 52		290 240					20 8.5	1,400 910			20.4 6.3
MW-55D	5/23/2013															

**Notes:**

DCA - Dichloroethane

PCE - Tetrachloroethene

DCE - Dichloroethene

TCA - Trichloroethane

MEK - Methyl Ethyl Ketone

TCE - Trichloroethene

All units are micrograms per liter (ug/L)

Blank cells indicate that the compound was not detected above the practical quantitation limit (PQL). The PQL for all samples is 5 ug/L with the exception of acetone (50 ug/L), MEK (50 ug/L), and vinyl chloride (2 ug/L).

Highlighted cells indicate the concentration is greater than the EPD Type 1 Risk Reduction Standard (residential, standard exposure assumptions).

\* A Risk Reduction Standard does not exist for isopropylbenzene. In this case, the RRS is the PQL, or 5 ug/L.

**Table 2-3: Soil Data Summary**

Corrective Action Plan

Former Manchester Tank Company Site (HSI #10765)

Cedartown, Polk County, Georgia

Metal	As	Ba	Be	Cd	Cr	Co	Pb	V	Zn
EPD's Type 1 RRS	20	1,000	2	2	100	20	75	100	100
<i>Site-Specific Background<sup>(1)</sup></i>	41	270	3.6	(3)	78	40	97	130	120
Manchester Background UPL95 <sup>(2)</sup>	63	2,700	9.6	(3)	77	140	250	200	240
<b><i>Historical Sampling Results (2007)</i></b>									
SB-1 (0-2')	35.9	1,810	<1.11	<1.11	46.7	58.9	108	133	25
SB-1 (5-7')	15.9	86	<5.95	<5.95	62.4	<5.95	120	150	89
SB-2 (0-2')	16.4	48.4	<1.22	<1.22	108	25.8	78.3	91	155
SB-2 (5-7')	30.4	70.1	<5.81	<5.81	76.1	12.5	106	181	160
SB-2 (10-12')	46.2	248	3.11	<1.25	71.6	20	80.7	109	146
SB-3 (0-2')	15.9	101	<1.11	<1.11	105	20.2	116	95	41
SB-3 (5-7')	36.9	1,860	<5.56	6 <sup>(4)</sup>	38.4	124	312 <sup>(4)</sup>	197	70
SB-3 (14-16')	20.4	96.8	3.08	<1.35	25.5	8	46.2	68	94
SB-4 (0-2')	7.13	111	<1.1	<1.1	25.6	10.6	36.5	36	23
SB-4 (5-6')	24.4	218	1.7	<1.19	27.7	15.1	66.4	85	55
SB-5 (0-2')	13.5	134	<1.19	<1.19	288	10.9	74.6	87	137
SB-5 (5-7')	24	254	<5.95	<5.95	98.8	15.2	169	162	43
SB-5 (10-11')	25	94.9	2.69	<1.28	81.4	10.5	70.3	94	91
SB-6 (0-2')	<12.2	211	<6.1	<6.1	82.2	12.2	104	156	88
SB-6 (5-7')	23.4	267	<6.41	<6.41	75.1	16.1	102	159	50
SB-7 (0-2')	14.3	140	<1.14	<1.14	231	16.3	104	117	176
SB-7 (5-7')	21.8	305	1.21	<1.14	162	19.2	108	114	133
SB-7 (14-16')	45.4	56.2	4.2	1.32	56.2	21.1	122	122	208
SB-9 (10-12')	13.5	73.8	1.57	<1.14	35.2	4.85	40.8	74	43
<b><i>Recent Sampling Results (2013)</i></b>									
SB-10 (1')					48.3				
SB-11 (1')					135				
SB-11 (6')				<2.73			31.6		
SB-12 (1')					73.3				
SB-13 (1')					157				
SB-13 (6')					64.1				
SB-14 (1')				<2.67	62.7		66.8		
SB-15 (1')				<2.64	125		70.3		
SB-16 (1')				<2.9	31.7		34.8		
SB-17 (1')				<2.77	41.3		44.5		
SB-18 (1')				<2.87	63.4		47.9		

Notes

- The site-specific background concentration is the average plus two standard deviations of concentrations from Manchester Tank background samples and Missouri Machine and Plow site samples, which have been considered background by EPD.
- 95% confidence upper prediction limit (UPL95) for the Manchester background samples. Exceedances are highlighted.
- Insufficient number of detections.
- Excluded as a chemical of potential concern as an outlier

**Table 2-4: Soil Vapor Data Summary**

Corrective Action Plan

Former Manchester Tank Company Site (HSI #10765)

Cedartown, Polk County, Georgia

Analyte & Groundwater Concentration (ug/L) <sup>(1)</sup>	Soil Gas Sample Results						
	SG-1		SG-2		SG-3		
	Result (ug/m <sup>3</sup> )	RL	Result (ug/m <sup>3</sup> )	RL	Result (ug/m <sup>3</sup> )	RL	
<b>1,1,1-Trichloroethane</b>	86	BRL	1.1E+01	BRL	1.1E+01	BRL	1.1E+01
<b>1,1,2-Trichloroethane</b>		BRL	1.1E+01	BRL	1.1E+01	BRL	1.1E+01
<b>1,1-Dichloroethane</b>		BRL	8.1E+00	BRL	8.1E+00	BRL	8.1E+00
<b>1,1-Dichloroethene</b>	16	BRL	7.9E+00	BRL	7.9E+00	BRL	7.9E+00
<b>1,2-Dichloroethane</b>		BRL	8.1E+00	BRL	8.1E+00	BRL	8.1E+00
<b>Acetone</b>		BRL	1.2E+02	BRL	1.2E+02	9.7E+02	1.2E+02
Benzene		BRL	6.4E+00	BRL	6.4E+00	2.5E+02	6.4E+00
Carbon disulfide		BRL	1.6E+01	2.5E+01	1.6E+01	BRL	1.6E+01
<b>cis-1,2-Dichloroethene</b>	320	BRL	7.9E+00	BRL	7.9E+00	BRL	7.9E+00
Cyclohexane		BRL	6.9E+00	BRL	6.9E+00	7.3E+01	6.9E+00
<b>Methyl Ethyl Ketone</b>		BRL	1.6E+01	1.5E+01	BRL	4.9E+01	1.5E+01
n-Butane	NA	1.7E+01	1.2E+01	BRL	1.2E+01	2.5E+03	1.2E+01
n-Butyl benzene		BRL	1.1E+01	1.1E+01	BRL	1.1E+01	
n-Heptane	NA	BRL	8.2E+00	BRL	8.2E+00	1.1E+02	8.2E+00
n-Hexane		BRL	7.0E+00	BRL	7.0E+00	2.8E+02	7.0E+00
<b>Tetrachloroethene</b>		BRL	2.0E+00	BRL	2.0E+00	BRL	2.0E+00
<b>Toluene</b>		BRL	2.6E+01	7.5E+00	3.3E+01	7.5E+00	4.5E+01
<b>trans-1,2-Dichloroethene</b>	5.6	BRL	7.9E+00	BRL	7.9E+00	BRL	7.9E+00
<b>Trichloroethene</b>	490	BRL	1.1E+01	BRL	1.1E+01	BRL	1.1E+01
<b>Vinyl Chloride</b>		BRL	5.1E+00	BRL	5.1E+00	BRL	5.1E+00
<b>Xylene (total)</b>		BRL	1.0E+01	8.7E+00	2.7E+01	8.7E+00	2.0E+01
							8.7E+00

<sup>1</sup> Groundwater concentration is from adjacent Unit A sample GP-2A.ug/m<sup>3</sup> - micrograms per cubic meter

RL - Reporting Limit

BRL - Below Reporting Limit

**Bold** analytes have been previously detected in groundwater.

NA - Not analyzed

**Table 4-1: Soil Type 3 RRSs**

Corrective Action Plan

Former Manchester Tank Facility (HSI #10765)

Cedartown, Polk County, Georgia

**RAGS Equation 7**

Commercial/Industrial Soil - Noncarcinogenic Effects

$C_{\text{soil}}^1 = \frac{\text{THI} \times \text{BW} \times \text{AT} \times 365 \text{ days/year}}{\text{EF} \times \text{ED} \times [(1/\text{RfD}_o \times 10^{-6} \text{ kg/mg} \times \text{IR}_{\text{soil}}) + (1/\text{RfD}_i \times \text{IR}_{\text{air}} \times \{1/\text{VF} + 1/\text{PEF}\})]}$			
Parameter	Definition (units)	Default Value	Source
$C_{\text{soil}}$	Concentration in soil (mg/kg)	Calculated	Not applicable
THI	Target hazard index (unit less)	1	RAGS Part B
$\text{RfD}_o$	Oral chronic reference dose ((mg/kg-dy) <sup>-1</sup> )	Chemical-specific	Not applicable
$\text{RfD}_i$	Inhalation chronic reference dose ((mg/kg-dy) <sup>-1</sup> )	Chemical-specific	Not applicable
BW	Adult body weight (kg)	70	RAGS Part B
AT	Averaging time (yr)	25	RAGS Part B
EF	Exposure frequency (dy/yr)	250	RAGS Part B
ED	Exposure Duration (yr)	25	RAGS Part B
$\text{IR}_{\text{air}}$	Workday inhalation rate ( $\text{m}^3/\text{dy}$ )	20	RAGS Part B
$\text{IR}_{\text{soil}}$	Daily soil ingestion rate (mg/dy)	50	RAGS Part B
PEF	Particulate emission factor ( $\text{m}^3/\text{kg}$ )	4.63E+09	RAGS Part B
$\text{RfC}_i$	Inhalation reference concentration (mg/m <sup>3</sup> )	( $\text{RfD}_i \times 70$ ) / 20 $\text{m}^3/\text{d}$	Not applicable

**RAGS Equation 6**

Commercial/Industrial Soil - Carcinogenic Effects

$C_{\text{soil}}^1 = \frac{\text{TR} \times \text{BW} \times \text{AT} \times 365 \text{ days/year}}{\text{EF} \times \text{ED} \times [(SF_i \times \text{IR}_{\text{air}} \times \{1/\text{VF} + 1/\text{PEF}\}) + (SF_o \times 10^{-6} \text{ kg/mg} \times \text{IR}_{\text{soil}})]}$			
Parameter	Definition (units)	Default Value	Source
$C_{\text{soil}}$	Concentration in soil (mg/kg)	Calculated	Not applicable
$\text{TR}_{\text{A/B}}$	Class A/B target excess lifetime cancer risk (unit less)	1.E-05	HSRA Rules
$\text{TR}_{\text{C}}$	Class C target excess lifetime cancer risk (unit less) <sup>1</sup>	1.E-04	HSRA Rules
$SF_i$	Inhalation cancer slope factor ((mg/kg-dy) <sup>-1</sup> )	Chemical-specific	Not applicable
$SF_o$	Oral cancer slope factor ((mg/kg-dy) <sup>-1</sup> )	Chemical-specific	Not applicable
BW	Adult body weight (kg)	70	RAGS Part B
AT	Averaging time (yr)	70	RAGS Part B
EF	Exposure frequency (dy/yr)	250	RAGS Part B
ED	Exposure Duration (yr)	25	RAGS Part B
$\text{IR}_{\text{air}}$	Daily inhalation rate ( $\text{m}^3/\text{dy}$ )	20	RAGS Part B
$\text{IR}_{\text{soil}}$	Daily soil ingestion rate (mg/dy)	50	RAGS Part B
PEF	Particulate emission factor ( $\text{m}^3/\text{kg}$ )	4.63E+09	RAGS Part B

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Compound	CAS No.	Maximum Detected Concentration (mg/kg)	Item 1(i) HSRA Appendix I (mg/kg)	Item 1(ii) HSRA Appendix III Table 1 x 100	Groundwater Protection Soil RRS Higher of 1 (i) and (ii)	Carcinogen Class - TR	$\text{RfD}_o$	$\text{SF}_o$	$\text{RfC}_i$	$\text{RfD}_i$	IUR	$\text{SF}_i$	$C_{\text{soil}}$ Non-car (mg/kg)	$C_{\text{soil}}$ Car (mg/kg)	Soil RRS 2 feet or less (mg/kg)	depth to GW or less (mg/kg)
Cadmium	7440439	6	39	0.5	39	B 1.E-05	1.0E-03		1.0E-05	2.86E-06	1.80E-03	6.3	1,984	105,152	39	39
Chromium	7440473	288	1,200	10	1,200	None	1.5E+00						3,066,000		1,200	1,200
Lead	7439921	312	400	2	400	B 1.E-05									400	400

CAS - Chemical Abstract System

HSRA - Hazardous Site Response Act

Item 1(i) - Notification Concentration in mg/kg

Appendix III Table 1 - Groundwater Criteria in mg/L

<sup>1</sup> Volatization Factor (VF) excluded from calculation because all COPC are metals and do not vol.

## DATA SOURCE:

U.S. EPA Regional Screening Level Summary Table, [http://www.epa.gov/reg3hwmd/risk/human/rb-concentration\\_table/index.htm](http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm), May 2013.

**Table 4-2: Groundwater Type 4 RRSs**

Corrective Action Plan

Former Manchester Tank Facility (HSI #10765)

Cedartown, Polk County, Georgia

**RAGS Equation 2**

Commercial/Industrial Soil - Noncarcinogenic Effects

$C_{\text{water}} = \frac{\text{THI} \times \text{BW} \times \text{AT} \times 365 \text{ days/year}}{\text{EF} \times \text{ED} \times [((1/\text{RfD}_i) \times K \times \text{IR}_a) + ((1/\text{RfD}_o) \times \text{IR}_w)]}$			
Parameter	Definition (units)	Default Value	Source
$C_{\text{water}}$	Concentration in groundwater (mg/L)	Calculated	Not applicable
THI	Target hazard index (unit less)	1	RAGS Part B
$\text{RfD}_o$	Oral chronic reference dose ( $(\text{mg/kg-dy})^{-1}$ )	Chemical-specific	Not applicable
$\text{RfD}_i$	Inhalation chronic reference dose ( $(\text{mg/kg-dy})^{-1}$ )	Chemical-specific	Not applicable
BW	Adult body weight (kg)	70	RAGS Part B
AT	Averaging time (yr)	25	RAGS Part B
EF	Exposure frequency (dy/yr)	250	RAGS Part B
ED	Exposure Duration (yr)	25	RAGS Part B
$\text{IR}_a$	Workday inhalation rate ( $\text{m}^3/\text{dy}$ )	20	RAGS Part B
K	Water to air volatilization factor ( $\text{L}/\text{m}^3$ )	0.5	RAGS Part B
$\text{IR}_w$	Ingestion rate of water (L/Day)	1	RAGS Part B
$\text{RfC}_i$	Inhalation reference concentration ( $\text{mg}/\text{m}^3$ )	$\text{RfD}_i \times 70) / 20 \text{ m}^3/\text{dy}$	Not applicable

**RAGS Equation 1**

Commercial/Industrial Soil - Carcinogenic Effects

$C_{\text{water}} = \frac{\text{TR} \times \text{BW} \times \text{AT} \times 365 \text{ days/year}}{\text{EF} \times \text{ED} \times [(\text{SF}_i \times \text{IR}_a \times K) + (\text{SF}_o \times \text{IR}_w)]}$			
Parameter	Definition (units)	Default Value	Source
$C_{\text{soil}}$	Concentration in soil (mg/kg)	Calculated	Not applicable
$\text{TR}_{A/B}$	lass A/B target excess lifetime cancer risk (unit less)	1.E-05	HSRA Rules
$\text{SF}_i$	Inhalation cancer slope factor ( $(\text{mg}/\text{kg-dy})^{-1}$ )	Chemical-specific	Not applicable
$\text{SF}_o$	Oral cancer slope factor ( $(\text{mg}/\text{kg-dy})^{-1}$ )	Chemical-specific	Not applicable
BW	Adult body weight (kg)	70	RAGS Part B
AT	Averaging time (yr)	70	RAGS Part B
EF	Exposure frequency (dy/yr)	250	RAGS Part B
ED	Exposure Duration (yr)	25	RAGS Part B
$\text{IR}_a$	Daily inhalation rate ( $\text{m}^3/\text{dy}$ )	20	RAGS Part B
K	Water to air volatilization factor ( $\text{L}/\text{m}^3$ )	0.5	RAGS Part B
$\text{IR}_w$	Ingestion rate of water (L/day)	1	RAGS Part B
IUR	Inhalation unit risk factor ( $\text{ug}/\text{m}^3$ )	$(\text{SF}_i \times 20)/70,000$	RAGS Part B

0

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Compound	CAS No.	Maximum Detected Concentration (ug/L)	Type 1/3 RRS Table 1 HSRA Appendix III (Type 3 RRS)	$\text{RfD}_o$	$\text{SF}_o$	$\text{RfC}_i$	$\text{RfD}_i$	IUR	$\text{SF}_i$	$C_{\text{water}}$ Non-car (ug/L)	$C_{\text{water}}$ Car (ug/L)	GW RRS (mg/L)	RRS Type (3/4)	Remarks
1,1,1-Trichloroethane	71556	1,200	200	2		5	1.43			13,627		13,627	4	
1,1,2-Trichloroethane	79005	81	5	0.004	0.057	2E-04	5.71E-05	1.6E-05	0.056	0.6	4.6	5	3	Type 4 non-car concentration below PQL
1,1-Dichloroethene	75354	2,300	7	0.05		0.2	5.71E-02			524		524	4	
1,2-Dichloroethane	107062	35	5	0.006	0.091	0.007	2.00E-03	2.6E-05	0.091	19.8	2.9	5	3	Type 4 car. concentration below PQL
cis-1,2-Dichloroethene	156592	140,000	70	0.002						204.4*		204	4	
trans-1,2-Dichloroethene	156605	2,100	100	0.02		0.06	0.017			161		161	4	
Tetrachloroethylene	127184	19	5	0.006	0.0021	0.04	0.011	2.6E-07	0.001	98	256	98	4	
Trichloroethylene	79016	91,000	5	5.0E-04	0.046	0.002	5.71E-04	4.1E-06	0.014	5.2	15	5.2	4	
Vinyl Chloride	75014	330	2	0.003	0.72	0.1	2.86E-02	4.40E-06	0.015	150	3.3	3.3	4	

CAS - Chemical Abstract System

HSRA - Hazardous Site Response Act

Item 1(i) - Notification Concentration in mg/kg

Appendix III Table 1 - Groundwater Criteria in mg/L

\* The calculation for the noncarcinogenic concentration of cis-1,2-DCE excludes the inhalation factor because the  $\text{RfC}_i$  has not been derived in IRIS or PPRTV documentation

IRIS - Integrated Risk Information System

PPRTV - Provisional Peer Reviewed Toxicity Values

PQL - Laboratory Practical Quantitation Limit

DATA SOURCE:

U.S. EPA Regional Screening Level Summary Table, [http://www.epa.gov/reg3hwmd/risk/human/rb-concentration\\_table/index.htm](http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm), May 2013.

**Table 4-3: Soil Vapor Risk Summary**

Corrective Action Plan

Former Manchester Tank Site (HSI #10765)

Cedartown, Polk County, Georgia

Analyte & Groundwater Concentration (ug/L) <sup>(1)</sup>	Residential Target Indoor Air Concentration (ug/m <sup>3</sup> )	Residential Target Soil Gas Concentration (ug/m <sup>3</sup> )	Soil Gas Sample Results						Risk Calculations			
			SG-1		SG-2		SG-3		Calculated Maximum Indoor Air Concentration (ug/m <sup>3</sup> )	Calculated Vapor Intrusion Carcinogenic Risk	Calculated Vapor Intrusion Hazard Quotient	
			Result (ug/m <sup>3</sup> )	RL	Result (ug/m <sup>3</sup> )	RL	Result (ug/m <sup>3</sup> )	RL				
<b>1,1,1-Trichloroethane</b>	86	5.2E+03	5.2E+04	BRL	1.1E+01	BRL	1.1E+01	BRL	1.1E+01	RL / 10 = 1.1	--	2.1E-04
<b>1,1,2-Trichloroethane</b>	BRL	2.1E-01	2.1E+00	BRL	1.1E+01	BRL	1.1E+01	BRL	1.1E+01	RL / 10 = 1.1	7.2E-06	5.3E+00
<b>1,1-Dichloroethane</b>	BRL	1.5E+01	1.5E+02	BRL	8.1E+00	BRL	8.1E+00	BRL	8.1E+00	RL / 10 = 0.81	5.3E-07	--
<b>1,1-Dichloroethene</b>	16	2.1E+02	2.1E+03	BRL	7.9E+00	BRL	7.9E+00	BRL	7.9E+00	RL / 10 = 0.79	--	3.8E-03
<b>1,2-Dichloroethane</b>	BRL	9.4E-01	9.4E+00	BRL	8.1E+00	BRL	8.1E+00	BRL	8.1E+00	RL / 10 = 0.81	8.7E-06	1.1E-01
<b>Acetone</b>	BRL	3.2E+04	3.2E+05	BRL	1.2E+02	BRL	1.2E+02	9.7E+02	1.2E+02	9.7E+01	--	3.0E-03
<b>Benzene</b>	BRL	3.1E+00	3.1E+01	BRL	6.4E+00	BRL	6.4E+00	2.5E+02	6.4E+00	2.5E+01	8.0E-05	8.0E-01
<b>Carbon disulfide</b>	BRL	7.3E+02	7.3E+03	BRL	1.6E+01	2.5E+01	1.6E+01	BRL	1.6E+01	2.5E+00	--	3.4E-03
<b>cis-1,2-Dichloroethene</b>	320	--	--	BRL	7.9E+00	BRL	7.9E+00	BRL	7.9E+00	RL / 10 = 0.79	--	--
<b>Cyclohexane</b>	BRL	6.3E+03	6.3E+04	BRL	6.9E+00	BRL	6.9E+00	7.3E+01	6.9E+00	7.3E+00	--	1.2E-03
<b>Methyl Ethyl Ketone</b>	BRL	5.2E+03	5.2E+04	1.6E+01	1.5E+01	BRL	1.5E+01	4.9E+01	1.5E+01	4.9E+00	--	9.4E-04
<b>n-Butane</b>	NA	--	--	1.7E+01	1.2E+01	BRL	1.2E+01	2.5E+03	1.2E+01	2.5E+02	--	--
<b>n-Butyl benzene</b>	BRL	--	--	1.1E+01	1.1E+01	BRL	1.1E+01	BRL	1.1E+01	1.1E+00	--	--
<b>n-Heptane</b>	NA	--	--	BRL	8.2E+00	BRL	8.2E+00	1.1E+02	8.2E+00	1.1E+01	--	--
<b>n-Hexane</b>	BRL	7.3E+02	7.3E+03	BRL	7.0E+00	BRL	7.0E+00	2.8E+02	7.0E+00	2.8E+01	--	3.8E-02
<b>Tetrachloroethene</b>	BRL	4.2E+01	4.2E+02	BRL	2.0E+00	BRL	2.0E+00	BRL	2.0E+00	RL / 10 = 0.2	2.1E-08	4.8E-03
<b>Toluene</b>	BRL	5.2E+03	5.2E+04	2.6E+01	7.5E+00	3.3E+01	7.5E+00	4.5E+01	7.5E+00	4.5E+00	--	8.6E-04
<b>trans-1,2-Dichloroethene</b>	5.6	6.3E+01	6.3E+02	BRL	7.9E+00	BRL	7.9E+00	BRL	7.9E+00	RL / 10 = 0.79	--	1.3E-02
<b>Trichloroethene</b>	490	2.1E+00	2.1E+01	BRL	1.1E+01	BRL	1.1E+01	BRL	1.1E+01	RL / 10 = 1.1	4.7E-06	5.3E-01
<b>Vinyl Chloride</b>	BRL	1.6E+00	1.6E+01	BRL	5.1E+00	BRL	5.1E+00	BRL	5.1E+00	RL / 10 = 0.51	3.2E-06	4.9E-03
<b>Xylene (total)</b>	BRL	1.0E+02	1.0E+03	1.0E+01	8.7E+00	2.7E+01	8.7E+00	2.0E+01	8.7E+00	2.70E+00	--	2.6E-02

<sup>1</sup> Groundwater concentration is from adjacent Unit A sample GP-2A.ug/m<sup>3</sup> - micrograms per cubic meter

RL - Reporting Limit

BRL - Below Reporting Limit

**Bold** analytes have been previously detected in groundwater.

NA - Not analyzed

-- Insufficient toxicity data to calculate

## Table 5-1: Source Area Groundwater Technology Screening

Corrective Action Plan

Former Manchester Tank Company Site (HSI #10765)

Cedartown, Polk County, Georgia

Technology	Description	Ability to Meet RRSs	Effectiveness on DNAPL	Effectiveness on Bedrock	O&M Requirements	Secondary Effects	Screening
Groundwater Extraction	Extraction of contaminated groundwater and with treatment on site	Unlikely to meet RRSs in source area	Not effective	Effective in controlling migration but not source area treatment	Long-term (several years) but moderate	None expected	Retained for cost analysis
In Situ Chemical Oxidation (ISCO)	Chemical oxidation of hazardous constituents in place through injection of an oxidizing agent	Unlikely without hydrofracturing	Unlikely to be effective without hydrofracturing	Unlikely to be effective without hydrofracturing	Limited beyond long-term monitoring	Hydrofracturing is likely to cause migration of VOCs into otherwise uncontaminated areas. Additionally, this alternative involves handling and injecting hazardous materials (i.e., oxidizing agents)	Eliminated from further consideration due to potential secondary effects
In Situ Biological Treatment	Microbial degradation of hazardous constituents in place through the injection of oxygen, nutrients, and/or microorganisms	Unlikely without hydrofracturing	Unlikely to be effective without hydrofracturing	Unlikely to be effective without hydrofracturing	Limited beyond long-term monitoring	Hydrofracturing is likely to cause migration of VOCs into otherwise uncontaminated areas.	Eliminated from further consideration due to potential secondary effects
Electrical Resistance Heating (ERH)	Evaporation of hazardous constituents through heating soil and groundwater using electricity	Capable of meeting the RRSs	Effective	Effective though geologic conditions present several challenges	Short-term (typically less than a year) but intensive	None expected	Retained for cost analysis

**Table 5-2: Groundwater Outside of the Source Area Technology Screening**

Corrective Action Plan

Former Manchester Tank Company Site (HSI #10765)

Cedartown, Polk County, Georgia

<b>Technology</b>	<b>Description</b>	<b>Performance Reliability</b>	<b>Effectiveness of Residuum and Bedrock</b>	<b>Appropriateness for Observed Concentrations</b>	<b>O&amp;M Requirements</b>	<b>Secondary Effects</b>	<b>Screening</b>
ISCO Barrier	Chemical oxidation of hazardous constituents through a downgradient barrier	Reliable	Unlikely to be effective without hydrofracturing	Appropriate	Moderate. Conditions must be maintained long-term.	Hydrofracturing is likely to cause migration of VOCs into otherwise uncontaminated areas. Potential for poor quality groundwater downgradient from barrier. Implementation uses hazardous oxidizing agents.	Eliminated from further consideration due to potential secondary effects
Biological Barrier	Microbial degradation of hazardous constituents through a downgradient barrier	Reliable	Unlikely to be effective without hydrofracturing	Appropriate	Moderate. Conditions must be maintained long-term.	Hydrofracturing is likely to cause migration of VOCs into otherwise uncontaminated areas.	Eliminated from further consideration due to potential secondary effects
Hydraulic Containment	Extraction of contaminated groundwater and with treatment on site	Reliable	Effective	Appropriate	Long-term (several years) but moderate	None expected	Retained

**Table 6-1: Corrective Action Cost Estimate**

## Corrective Action Plan

Former Manchester Tank Company Site (HSI #10765)

Cedartown, Polk County, Georgia

EXPLORATORY BORINGS					
Component	Description	Unit Cost	Units	Quantity	Cost
42 Each, 100-foot depth, 6" Open Borehole Installed by Air Hammer					
Air rig Mobilization/Demobilization	1 Air Rig + Crew	\$2,000	Lump Sum	1	\$2,000
Daily Drilling Rate	8 hour day - 3 Man Crew	\$1,250	Day	55	\$68,750
14" Borehole and 10" Casing Installation	Set Casing at top of rock (~15 feet)	\$65	Foot	630	\$40,950
6" Borehole Construction using Air Hammer	Total depth of 100 feet	\$35	Foot	3,570	\$124,950
Well Development	1 Hour per Well	\$150	Hour	42	\$6,300
					100-foot Borehole Total
					\$242,950
14 Each, 40-foot depth, 6" Open Borehole Installed by Air Hammer					
Air rig Mobilization/Demobilization	1 Air Rig + Crew	\$2,000	Lump Sum	1	\$2,000
Daily Drilling Rate	8 hour day - 3 Man Crew	\$1,250	Day	19	\$23,750
14" Borehole and 10" Casing Installation	Set Casing at top of rock (~15 feet)	\$65	Foot	210	\$13,650
6" Borehole Construction using Air Hammer	Total depth of 40 feet	\$30	Foot	350	\$10,500
Well Development	1 Hours per Well	\$150	Hour	14	\$2,100
					40-foot Borehole Total
					\$52,000
		Full-Time Construction Management	\$1,500	Days	74
					\$111,000
					Exploratory Borings Total
					\$406,000

AQUIFER TESTING					
Component	Description	Unit Cost	Units	Quantity	Cost
Test 56 exploratory Borings for Aquifer Performance					
Equipment Rental	5 Data Loggers, 4" submersible pump, controller, generator, and support equipment	\$6,400	Month	1	\$6,400
Well Capacity Test	Test each well to determine maximum sustained flow rate Assume 2 tests completed per day	\$2,120	Day	30	\$63,600
Water Quality Samples	Collect samples for VOC, iron, and water hardness	\$700	Well	56	\$39,200
Data Analysis	Analysis of well capacity tests and chemical analyses	\$5,200	Lump Sum	1	\$5,200
					Aquifer Testing Total
					\$114,000

INVESTIGATION DERIVED WASTE					
Component	Description	Unit Cost	Units	Quantity	Cost
Management of IDW from Exploratory Boring Installation and Aquifer Testing					
Roll-off Rental	Rental of two roll-offs - required to exploratory borehole installation	\$5,000	Month	3	\$15,000
Tank Rental	Rental of 21,000-gallon tank for water - required for exploratory boring installation and aquifer testing	\$2,000	Month	4	\$8,000
Transport/Dispose of Non-Hazardous Soil		\$58	Tons	30	\$1,740
Transport/Dispose of Non-Hazardous Water		\$1.10	Gallon	15,000	\$16,500
					Investigation Derived Waste
					\$41,000

**Table 6-1: Corrective Action Cost Estimate**

Corrective Action Plan

Former Manchester Tank Company Site (HSI #10765)

Cedartown, Polk County, Georgia

MONITOR WELL INSTALLATION					
Component	Description	Unit Cost	Units	Quantity	Cost
Convert 14 open boreholes into 2" PVC monitoring wells					
Daily Rate	8 hour day	\$1,250	Day	3	\$3,750
Well Installation	2" PVC, Slotted Screen, Sand, Grout Bentonite Seal	\$10	Foot	140	\$1,400
Well Covers	Flush Mount Bolt-Down Cover	\$200	Each	14	\$2,800
Well Development	0.5 Hours per Well	\$150	Hour	7	\$1,050
Water Disposal	Non-Hazardous	\$145	Drum	4	\$580
Monitor Well Installation Total					\$10,000

DESIGN & BIDDING					
Component	Description	Unit Cost	Units	Quantity	Cost
Draft Design		\$45,000	Lump Sum	1	\$45,000
Final Design		\$8,000	Lump Sum	1	\$8,000
Bidding		\$5,000	Lump Sum	1	\$5,000
Design & Bidding Total					\$58,000

TREATMENT SYSTEM CONSTRUCTION					
Component	Description	Unit Cost	Units	Quantity	Cost
Site Work		\$21,650	Lump Sum	1	\$21,650
Extraction Well Pumps & Plumbing		\$315,725	Lump Sum	1	\$315,725
Treatment System	Containment, Eq Tank, Air Stripper, Pumps/Piping	\$20,970	Lump Sum	1	\$20,970
Electrical/Controls		\$387,400	Lump Sum	1	\$387,400
Discharge Line		\$54,255	Lump Sum	1	\$54,255
Treatment System Construction Total					\$800,000

TREATMENT SYSTEM O&M					
Component	Description	Unit Cost	Units	Quantity	Cost
Operation and Maintenance of the Treatment System					
O&M Manual		\$4,000	Lump Sum	1	\$4,000
Treatment System Monitoring	2 samples monthly for VOCs	\$200	Samples	2	\$400
	Treatment System Operation Monitoring through year 10		Events	101	\$40,400
Routine O&M	Weekly visit and inspection	\$600	Event	1	\$600
	Routine O&M through year 10		Events	404	\$242,400
Non-routine O&M	Monthly, 2-day visit	\$2,000	Event	1	\$2,000
	Non-routine O&M through year 10		Events	101	\$202,000
Miscellaneous Repairs & Maintenance	Yearly estimate	\$10,000	Event	1	\$10,000
	Non-routine O&M through year 10		Events	9	\$90,000
Sewer Fee	Discharge to Cedartown Sewer System at 50-gpm	\$0.03	cf-month	288,750	\$9,702
	Sewer Discharge Fee through year 10		Months	101	\$979,902
Electric Fee	Power consumption estimate	\$600	Month	1	\$600
	Electric Fee through year 10		Months	101	\$60,600
Treatment System O&M Total					\$1,619,000

**Table 6-1: Corrective Action Cost Estimate**

Corrective Action Plan

Former Manchester Tank Company Site (HSI #10765)

Cedartown, Polk County, Georgia

MONITORING					
Component	Description	Unit Cost	Units	Quantity	Cost
Groundwater Monitoring Program Through Year 10					
System Performance Monitoring	14 wells, VOCs	\$470	Samples	15	\$7,050
	System Performance Monitoring First Two Years		Events	8	\$56,400
Plume Status Monitoring - First Two Years of Operation	10 wells, VOCs	\$470	Samples	11	\$5,170
	System Performance Monitoring First Two Years		Events	3	\$15,510
Expanded Plume Status Monitoring	24 wells, VOCs	\$470	Samples	26	\$12,220
	System Performance Monitoring Two Years of Operation Through Year 10		Events	13	\$158,860
Annual Report		\$7,540	Reports	1	\$7,540
	Annual Sampling and Report Total		Events	8	\$60,320
					<b>Monitoring Total \$291,000</b>

COMPLIANCE STATUS REPORT					
Component	Description	Unit Cost	Units	Quantity	Cost
Prepare CSR Report		\$15,000	Lump Sum	1	\$15,000
					<b>Compliance Status Report Total \$15,000</b>

10-YEAR TOTAL PROJECT COST		
Subtotal		\$3,354,000
Contingency 15%		\$503,000
Project Total		\$3,857,000

Component totals and contingency have been rounded to the nearest \$1,000.

## Appendix A

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### Boring Logs

## MW-30A Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/29/2012
Project No.:	1727-92681	End Date:	7/2/2012
Logged/Checked By:	Daniel Forbes and Nick Fuller/Tom Duffey	Total Depth:	60'
Location Code:	MW-30A	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 24'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 24'-34'; 0.01"

Drilling Method: Direct Push/Air (Geoprobe® Model 6610DT and Drilltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
			Flush Mount Completion	
1		GRAVEL, sandy, fill		
2		CLAY, sandy, trace silt and gravel, pale brown, orangish and reddish brown, sand fine-to medium-grained, soft, dry		
3				
4		SAND, trace silt and clay, clayey from 4.5 to 5 feet, orangish to reddish brown, and light brown, fine-to medium-grained, loose to medium dense, dry		
5	100			
6				
7				
8		SAND, trace silt, clay, and weathered rock, orangish brown, light and reddish brown, fine-to medium-grained, loose to medium dense, dry		
9				
10				
11				
12				
13		SAND, clayey, trace silt, orangish brown, light and reddish brown, fine-to medium-grained, medium dense, dry to moist	Portland Cement	Portland Cement
14				
15				
16		CLAY, sandy, trace silt and weathered rock, yellowish brown, orangish and reddish brown, sand fine-to medium-grained, soft to medium stiff, moist to wet		
17				
18				
19		CLAY, trace silt, fine-grained sand, and weathered limestone, yellowish to reddish brown, and orangish brown, soft, wet		
20				
21				
22				
23				
24				
25				
26		CLAY, trace silt, fine-to medium-grained sand, and weathered limestone, yellowish brown, reddish and orangish brown, soft, wet	Bentonite Seal	Bentonite Seal
27				
28				
29				
30				
31		LIMESTONE, weathered, sandy, clayey, light brown to light gray, sand fine-to coarse-grained, wet	# 2 Sand Filter Pack	# 2 Sand Filter Pack
32				
33		CLAY, trace silt, fine-to medium-grained sand, and weathered limestone, yellowish brown, reddish and orangish brown, soft, wet	2-inch PVC End Cap	2" Schedule 40 PVC Riser
34				
35		LIMESTONE, weathered, sandy, clayey, light brown to light gray, sand fine-to coarse-grained, wet		

## MW-30A Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/29/2012
Project No.:	1727-92681	End Date:	7/2/2012
Logged/Checked By:	Daniel Forbes and Nick Fuller/Tom Duffey	Total Depth:	60'
Location Code:	MW-30A	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 24'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 24'-34'; 0.01"
Drilling Method: Direct Push/Air (Geoprobe® Model 6610DT and Drilltech Model T25KW)			

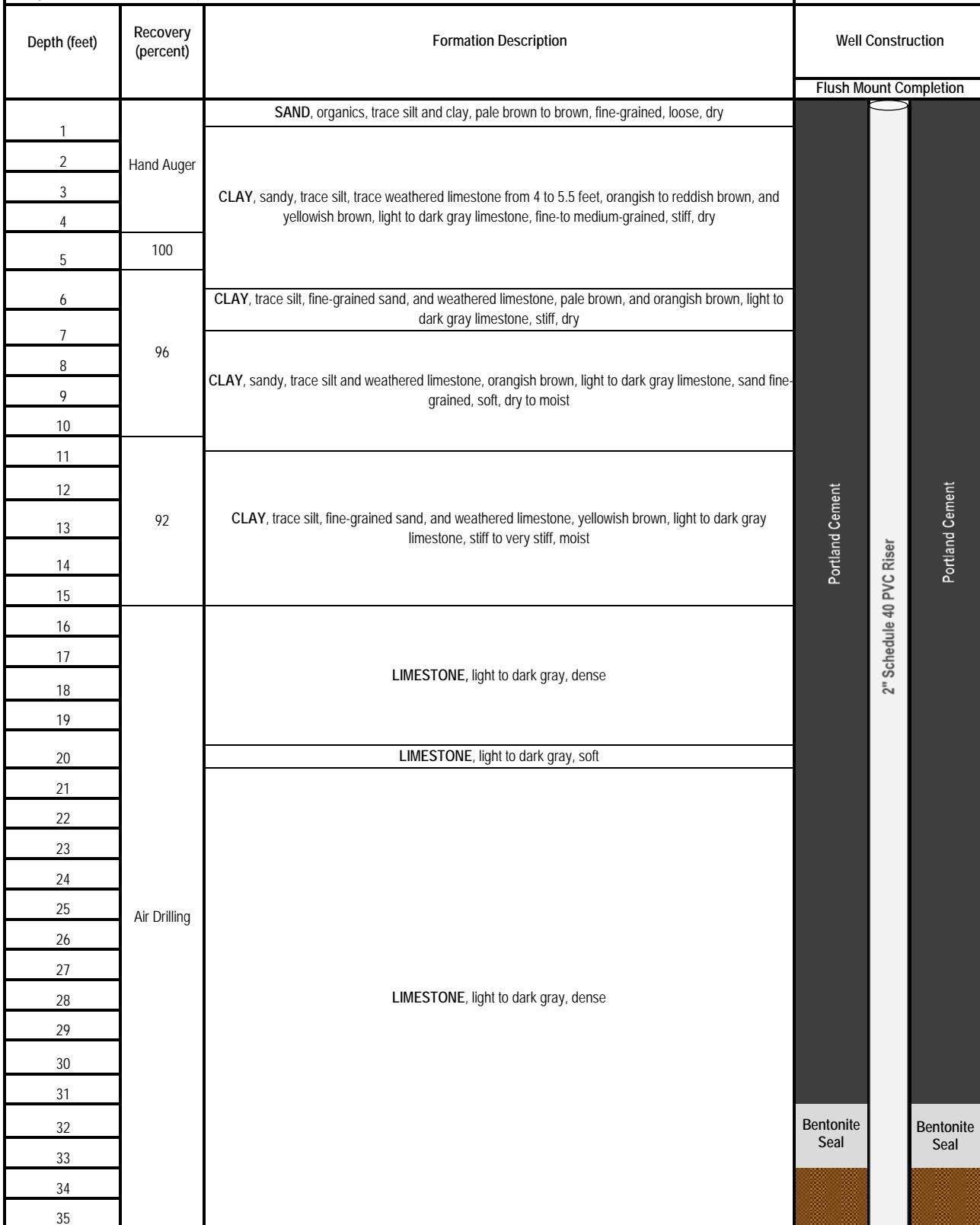
Depth (feet)	Recovery (percent)	Formation Description	Well Construction
36			
37			
38	100	CLAY, trace silt, fine-to medium-grained sand, and weathered limestone, yellowish brown, reddish and orangish brown, soft, wet	
39			
40			
41			
42			
43	No Recovery		
44			
45			
46			
47			
48	100	Calcite crystals from 40 to 45 feet	
49			
50			
51			
52			
53	No Recovery		
54			
55		CLAY, trace silt, fine-to medium-grained sand, and weathered limestone, yellowish brown, reddish and orangish brown, soft, wet Assumed lithology	
56			
57			
58	No Recovery		
59			
60			
61		Boring terminated at 60 feet.	

Collapsed Borehole

# MW-31C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/28/2012
Project No.:	1727-92681	End Date:	7/1/2012
Logged/Checked By:	Daniel Forbes and Nick Fuller/Tom Duffey	Total Depth:	45'
Location Code:	MW-31C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 35'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 35'-45', 0.01"

Drilling Method: Direct Push/Air (Geoprobe® Model 6610DT and Drilltech Model T25KW)



## MW-31C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/28/2012
Project No.:	1727-92681	End Date:	7/1/2012
Logged/Checked By:	Daniel Forbes and Nick Fuller/Tom Duffey	Total Depth:	45'
Location Code:	MW-31C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 35'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 35'-45', 0.01"

Drilling Method: Direct Push/Air (Geoprobe® Model 6610DT and Drilltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
36	Air Drilling	LIMESTONE, light to dark gray, dense	# 2 Sand Filter Pack	
37				
38		LIMESTONE, light to dark gray, and white, soft		
39				
40				
41				
42				
43		LIMESTONE, light gray, dense		
44				
45		Boring terminated at 45 feet.	2-inch PVC End Cap	# 2 Sand Filter Pack
46			→	
47				

# MW-32B Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/26/2012
Project No.:	1727-92681	End Date:	6/27/2012
Logged/Checked By	Daniel Forbes/Tom Duffey	Total Depth:	20'
Location Code:	MW-32B	Surface Casing Dia./Depth	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 10'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 10'-20', 0.01"

Drilling Method: Direct Push/Air (Geoprobe® Model 6610DT and Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction		
			Portland Cement	2" Schedule 40 PVC Riser	Portland Cement
1	Hand Auger	SAND, organics, trace clay, pale to light brown, and orangish brown, fine-grained, loose, dry	Portland Cement		Portland Cement
2		SAND, clayey, trace silt and weathered limestone, light to yellowish brown, light gray limestone, fine-grained, medium dense, dry			
3					
4		CLAY, sandy, trace silt and weathered limestone, light to yellowish brown, light to dark gray limestone, sand fine-grained, stiff, dry	Bentonite Seal		Bentonite Seal
5					
6		SAND, clayey, trace silt and weathered limestone, light to yellowish brown, dark reddish and orangish brown, and black, light gray limestone, fine-to medium-grained, dense, dry			
7					
8		CLAY, trace fine-grained sand, silt, and weathered limestone, light to yellowish brown, dark reddish and orangish brown, and black, light to dark gray limestone, stiff to very stiff, dry			
9					
10	Air Drilling	CLAY, trace fine-grained sand, silt, and weathered limestone, pale orangish to yellowish brown, light to dark gray limestone, soft to stiff, moist	# 2 Sand Filter Pack	2" Schedule 40 PVC Riser	# 2 Sand Filter Pack
11					
12					
13					
14			LIMESTONE, light to dark gray, dense		
15			FRACTURE, water producing		
16					
17					
18			LIMESTONE, light to dark gray, dense		
19					
20					
21			Boring terminated at 20 feet.	2-inch PVC End Cap	# 2 Sand Filter Pack

# MW-33A Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/25/2012
Project No.:	1727-92681	End Date:	6/25/2012
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	13.67'
Location Code:	MW-33A	Surface Casing Dia./Dept:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	1" PVC to 8'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	1" PVC: 8'-13.67', 0.01"

Drilling Method: Direct Push (Geoprobe® Model 6610DT)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
			Flush Mount Completion	
1	Hand Auger	SAND, organics, trace clay, pale to light brown, and light orangish brown, fine-grained, loose, dry	Portland Cement Bentonite Seal	Portland Cement Bentonite Seal
2		SAND, trace clay grading to clayey, trace silt and weathered limestone, light brown to light yellowish brown, light to dark gray limestone, fine-grained, medium dense, dry		
3				
4		CLAY, sandy, trace silt and weathered limestone, light to orangish brown, light to dark gray limestone, sand fine-grained, stiff, dry		
5				
6				
7		CLAY, trace silt, fine-grained sand, and weathered limestone, light to yellowish brown, dark reddish brown and black, light to dark gray limestone, sand fine-grained, stiff to very stiff, dry		
8				
9				
10	100	CLAY, sandy, trace silt and weathered limestone, light to yellowish brown, orangish and dark reddish brown, and black, light to dark gray limestone, sand fine-grained, medium stiff, moist to wet	#2 Sand Filter Pack 1-inch PVC End Cap	#2 Sand Filter Pack #2 Sand Filter Pack
11				
12		CLAY, trace silt, fine-grained sand, and weathered limestone, yellowish to pale brown, light and dark reddish brown, and black, light to dark gray limestone, soft to medium stiff, wet		
13				
14				
15		Refusal at 13.67 feet.		

## MW-34C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/26/2012
Project No.:	1727-92681	End Date:	7/15/2012
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	58'
Location Code:	MW-34B	Surface Casing Dia./Dept:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 48'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 48'-58', 0.01"

Drilling Method: Direct Push/Air (Geoprobe® Model 6610DT and Drilltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
			Flush Mount Completion	
1	Hand Auger	SAND, organics, trace clay, pale to light brown, and orangish brown, fine-grained, loose, dry	Portland Cement	2" Schedule 40 PVC Riser
2		SAND, clayey, trace silt and weathered limestone, light to reddish brown, light to dark gray limestone, fine-grained, medium dense, dry		
3				
4		CLAY, sandy, trace silt and weathered limestone, orangish to reddish brown, and yellowish brown, light to dark gray limestone, stiff, dry		
5	100		Portland Cement	Portland Cement
6				
7				
8				
9		CLAY, trace silt, fine-grained sand, and weathered limestone, yellowish to orangish brown, dark reddish brown and black, light to dark gray limestone, stiff to very stiff, dry to moist		
10	100		Portland Cement	Portland Cement
11				
12				
13		CLAY, weathered limestone, trace silt and fine-grained sand, yellowish to orangish brown, dark reddish brown and black, light to dark gray limestone, stiff to very stiff, moist		
14	Air Drilling		Portland Cement	Portland Cement
15				
16		LIMESTONE, light to dark gray, dense		
17				
18		LIMESTONE, light to dark gray, soft		
19				
20				
21				
22				
23				
24	Air Drilling	LIMESTONE, light to dark gray, dense	Portland Cement	Portland Cement
25				
26				
27				
28				
29				
30				
31		LIMESTONE, light to dark gray, soft		
32				
33				
34	Air Drilling		Portland Cement	Portland Cement
35				
36		LIMESTONE, light to dark gray, dense		
37				
38				
39				
40				

## MW-34C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/26/2012
Project No.:	1727-92681	End Date:	7/15/2012
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	58'
Location Code:	MW-34B	Surface Casing Dia./Dept:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 48'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 48'-58', 0.01"

Drilling Method: Direct Push/Air (Geoprobe® Model 6610DT and Drilltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction		
41			Portland Cement		
42		LIMESTONE, light to dark gray, dense		2" Schedule 40 PVC Riser	
43			Bentonite Seal		Portland Cement
44					Bentonite Seal
45		LIMESTONE, light to dark gray, soft			
46					
47					
48					
49	Air Drilling				
50		FRACTURE	# 2 Sand Filter Pack		
51				2" Schedule 40 PVC Screen, 0.010 Slot	
52					2" Sand Filter Pack
53					
54		LIMESTONE, light to dark gray, dense			
55					
56					
57					
58			2-inch PVC End Cap		
59		Boring terminated at 58 feet.			
60					

## MW-35D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/25/2012
Project No.:	1727-92681	End Date:	7/1/2012
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	120'
Location Code:	MW-35D	Surface Casing Dia./Dept:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 100'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 100'-120', 0.01"

Drilling Method: Direct Push/Air (Geoprobe® Model 6610DT and Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction
			Flush Mount Completion
1	Hand Auger	SAND, clayey, organics, pale to light orangish brown, fine-grained, loose, dry	
2		CLAY, sandy, trace silt and weathered limestone, light to orangish brown, and reddish brown, light to dark gray limestone, sand fine-grained, medium stiff to stiff, dry	
3			
4			
5	75	CLAY, trace silt and fine-grained sand, light to yellowish brown, dark reddish brown and black, stiff to very stiff, dry Limestone fragment from 8 to 8.25 feet	
6			
7			
8			
9	Air Drilling	CLAY, trace silt, fine-grained sand, and weathered limestone, pale yellowish brown, light gray and pale brown, dark gray limestone, soft, moist	
10		LIMESTONE, dark gray, dense	
11		FRACTURE	
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			Portland Cement
22			
23			2" Schedule 40 PVC Riser
24			
25			Portland Cement
26		LIMESTONE, light to dark gray, dense	
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			

## MW-35D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/25/2012
Project No.:	1727-92681	End Date:	7/1/2012
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	120'
Location Code:	MW-35D	Surface Casing Dia./Dept'l	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 100'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 100'-120', 0.01"

Drilling Method: Direct Push/Air (Geoprobe® Model 6610DT and Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			
59			
60	Air Drilling	LIMESTONE, light to dark gray, dense	
61			
62			
63			
64			
65			
66			
67			
68			
69			
70			
71			
72			
73			
74			
75			
76			
77			
78			
79			
80			

## MW-35D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/25/2012
Project No.:	1727-92681	End Date:	7/1/2012
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	120'
Location Code:	MW-35D	Surface Casing Dia./Dept:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 100'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 100'-120', 0.01"

Drilling Method: Direct Push/Air (Geoprobe® Model 6610DT and Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
81			Portland Cement	
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97		LIMESTONE, light to dark gray, dense	Bentonite Seal	Bentonite Seal
98				
99				
100				
101				
102				
103				
104				
105				
106				
107				
108				
109				
110				
111				
112				
113				
114				
115		FRACTURE	# 2 Sand Filter Pack	
116				
117				
118		LIMESTONE, light to dark gray, dense	2' Schedule 40 PVC Screen, 0.010 Slot	# 2 Sand Filter Pack
119				
120				
121		Boring terminated at 120 feet.	2-inch PVC End Cap →	

## MW-36C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/27/2012
Project No.:	1727-92681	End Date:	6/29/2012
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	80'
Location Code:	MW-36C	Surface Casing Dia./Depth	6" Steel Casing to 21.5'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 70'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 70'-80', 0.01"

Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction		
			Flush Mount Completion		
1	Hand Auger	Same lithology as the adjacent boring MW-5. Limestone fragment at 6 feet.	Portland Cement	2" Schedule 40 PVC Riser	Portland Cement
2					
3					
4					
5	Air Drilling	LIMESTONE, weathered, light to dark gray, soft	6" Steel Casing	2" Schedule 40 PVC Riser	6" Steel Casing
6			↓	↑	→
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29		LIMESTONE, light to dark gray, soft			
30	Air Drilling	LIMESTONE, light to dark gray, dense			
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					

## MW-36C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/27/2012
Project No.:	1727-92681	End Date:	6/29/2012
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	80'
Location Code:	MW-36C	Surface Casing Dia./Depth	6" Steel Casing to 21.5'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 70'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 70'-80', 0.01"

Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction		
41				Portland Cement	
42					2" Schedule 40 PVC Riser
43					
44					Portland Cement
45					
46					
47					
48					
49					
50					
51					
52					
53					
54					
55					
56					
57					
58					
59					
60		LIMESTONE, light to dark gray, dense			
61				Bentonite Seal	
62					#2 Sand Filter Pack
63					2-inch PVC End Cap
64					2" Schedule 40 PVC Pre-Packed Screen, 0.010 Slot
65					2" Schedule 40 PVC Riser
66					
67					
68					
69					
70					
71					
72					
73					
74					
75					
76					
77					
78					
79		FRACTURE, mud filled			
80		LIMESTONE, light to dark gray, dense			
81		Boring terminated at 80 feet.			

## MW-37C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/27/2012
Project No.:	1727-92681	End Date:	6/28/2012
Logged/Checked By	Daniel Forbes/Tom Duffey	Total Depth:	101'
Location Code:	MW-37C	Surface Casing Dia./Depth:	6" Steel Casing to 25'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
			Flush Mount Completion	
1	Hand Auger	SAND, organics, trace clay, pale to light brown, and orangish brown, fine-grained, loose, dry	Steel Casing Casing →"/>	
2		SAND, clayey, trace silt and weathered limestone, light to yellowish brown, light gray limestone, fine-grained, medium dense, dry		
3				
4				
5		CLAY, sandy, trace silt and weathered limestone, light to yellowish brown, light to dark gray limestone, sand fine-grained, stiff, dry		
6				
7		SAND, clayey, trace silt and weathered limestone, light to yellowish brown, dark reddish and orangish brown, and black, light gray limestone, fine-to medium-grained, dense, dry		
8				
9		CLAY, trace fine-grained sand, silt, and weathered limestone, light to yellowish brown, dark reddish and orangish brown, and black, light to dark gray limestone, stiff to very stiff, dry		
10				
11	Air Drilling	CLAY, trace fine-grained sand, silt, and weathered limestone, pale orangish to yellowish brown, light to dark gray limestone, soft to stiff, moist		
12				
13				
14		LIMESTONE, light to dark gray, dense		
15				
16		FRACTURE		
17				
18				
19				
20				
21	Air Drilling			
22				
23				
24				
25				
26				
27				
28		LIMESTONE, light to dark gray, dense		
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				

## MW-37C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/27/2012
Project No.:	1727-92681	End Date:	6/28/2012
Logged/Checked By	Daniel Forbes/Tom Duffey	Total Depth:	101'
Location Code:	MW-37C	Surface Casing Dia./Dept:	6" Steel Casing to 25'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
41				
42				
43				
44		LIMESTONE, light to dark gray, dense		
45				
46				
47				
48		LIMESTONE, light to dark gray, soft		
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63		LIMESTONE, light to dark gray, dense		
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				
76				
77				
78		LIMESTONE, light to dark gray, soft		
79				
80		LIMESTONE, light to dark gray, dense		

## MW-37C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/27/2012
Project No.:	1727-92681	End Date:	6/28/2012
Logged/Checked By	Daniel Forbes/Tom Duffey	Total Depth:	101'
Location Code:	MW-37C	Surface Casing Dia./Dept:	6" Steel Casing to 25'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

Drilling Method: Air (Driltech Model T25KW)

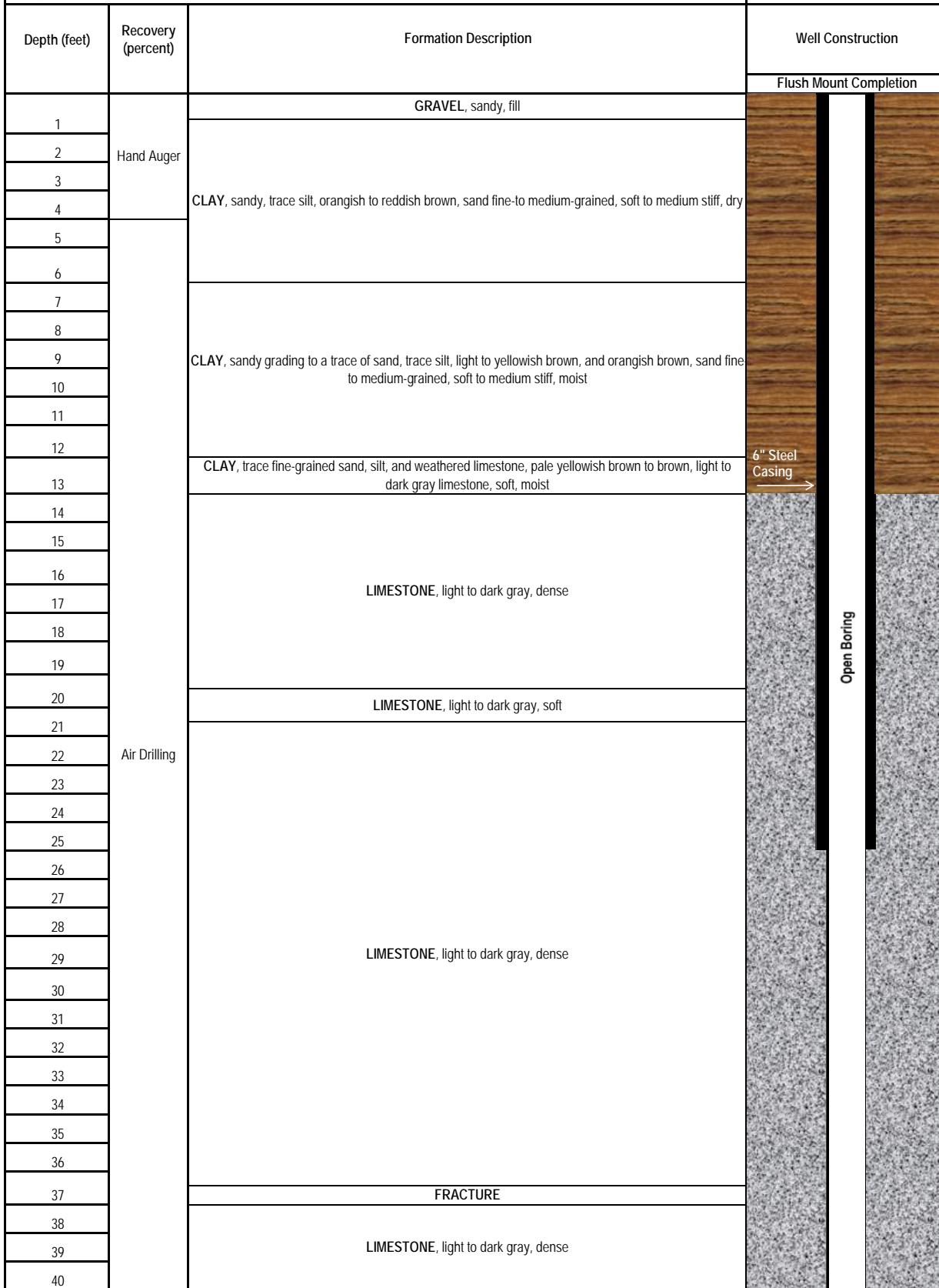
Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
81				
82				
83				
84				
85		LIMESTONE, light to dark gray, dense		
86				
87				
88				
89		FRACTURE		
90				
91				
92				
93				
94				
95				
96		LIMESTONE, light to dark gray, dense		
97				
98				
99				
100				
101				
102		Boring terminated at 101 feet.		

Open Boring

## MW-38C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/27/2012
Project No.:	1727-92681	End Date:	6/29/2012
Logged/Checked By	Daniel Forbes/Tom Duffey	Total Depth:	50'
Location Code:	MW-38C	Surface Casing Dia./Dept:	6" Steel Casing to 25'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

Drilling Method: Air (Driltech Model T25KW)



## MW-38C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/27/2012
Project No.:	1727-92681	End Date:	6/29/2012
Logged/Checked By	Daniel Forbes/Tom Duffey	Total Depth:	50'
Location Code:	MW-38C	Surface Casing Dia./Dept:	6" Steel Casing to 25'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

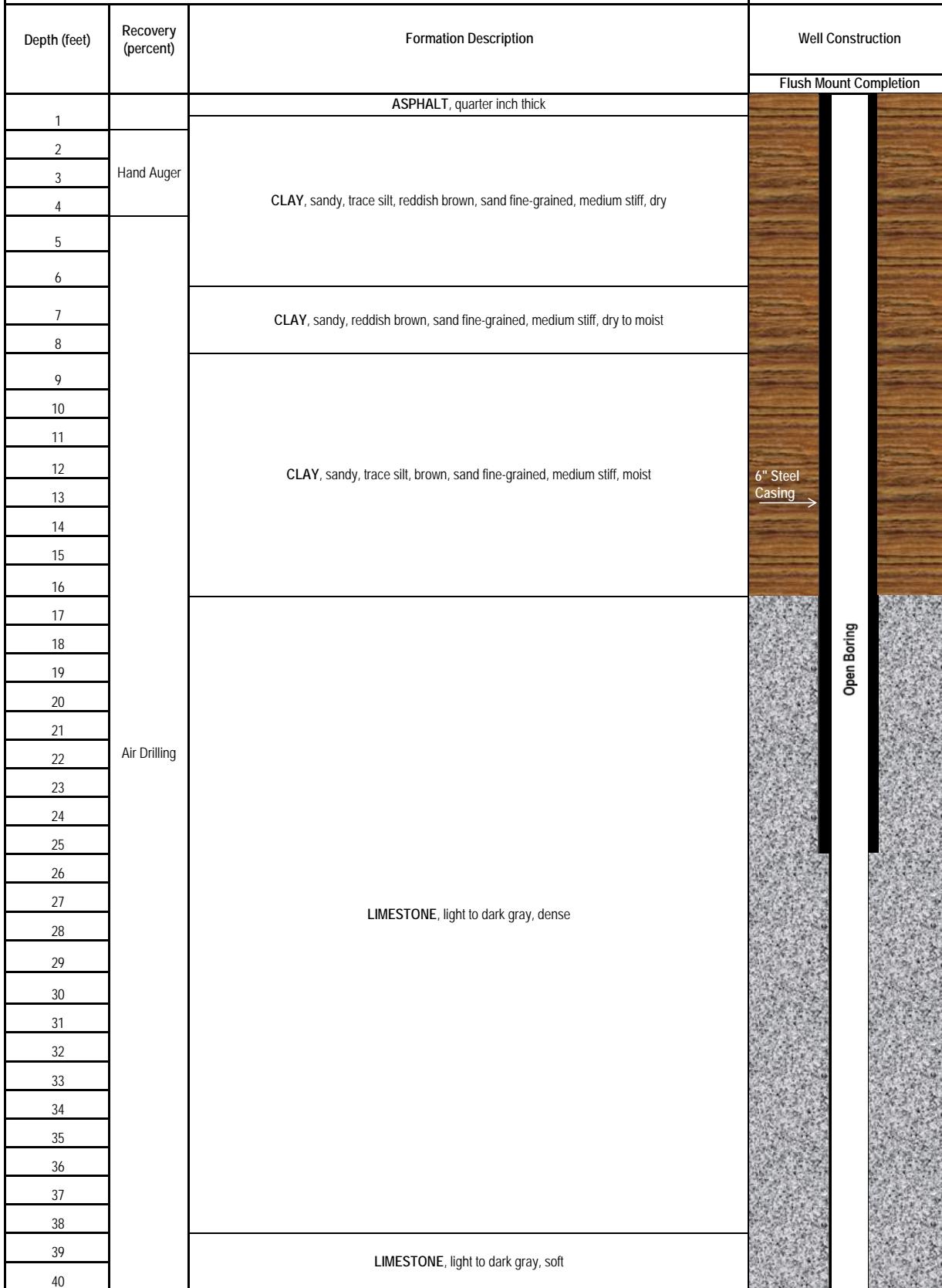
Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
41	Air Drilling	LIMESTONE, light to dark gray, soft to dense		
42				
43				
44				
45		LIMESTONE, light to dark gray, dense		
46				
47				
48		FRACTURE		
49				
50		LIMESTONE, light to dark gray, dense		
51		Boring terminated at 50 feet.		

## MW-39C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/30/2012
Project No.:	1727-92681	End Date:	7/1/2012
Logged/Checked By	Nick Fuller/Tom Duffey	Total Depth:	100'
Location Code:	MW-39C	Surface Casing Dia./Dept:	6" Steel Casing to 25'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

Drilling Method: Air (Driltech Model T25KW)



## MW-39C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/30/2012
Project No.:	1727-92681	End Date:	7/1/2012
Logged/Checked By	Nick Fuller/Tom Duffey	Total Depth:	100'
Location Code:	MW-39C	Surface Casing Dia./Dept:	6" Steel Casing to 25'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
41				
42		LIMESTONE, light to dark gray, dense		
43				
44				
45		LIMESTONE, light to dark gray, soft		
46				
47				
48				
49				
50		LIMESTONE, light to dark gray, dense		
51				
52				
53				
54				
55				
56				
57		LIMESTONE, light to dark gray, and white, soft to dense		
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68		LIMESTONE, light to dark gray, dense		
69				
70				
71				
72				
73				
74				
75				
76				
77				
78		LIMESTONE, light to dark gray, soft to dense		
79				
80				

Air Drilling

## MW-39C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/30/2012
Project No.:	1727-92681	End Date:	7/1/2012
Logged/Checked By	Nick Fuller/Tom Duffey	Total Depth:	100'
Location Code:	MW-39C	Surface Casing Dia./Dept:	6" Steel Casing to 25'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

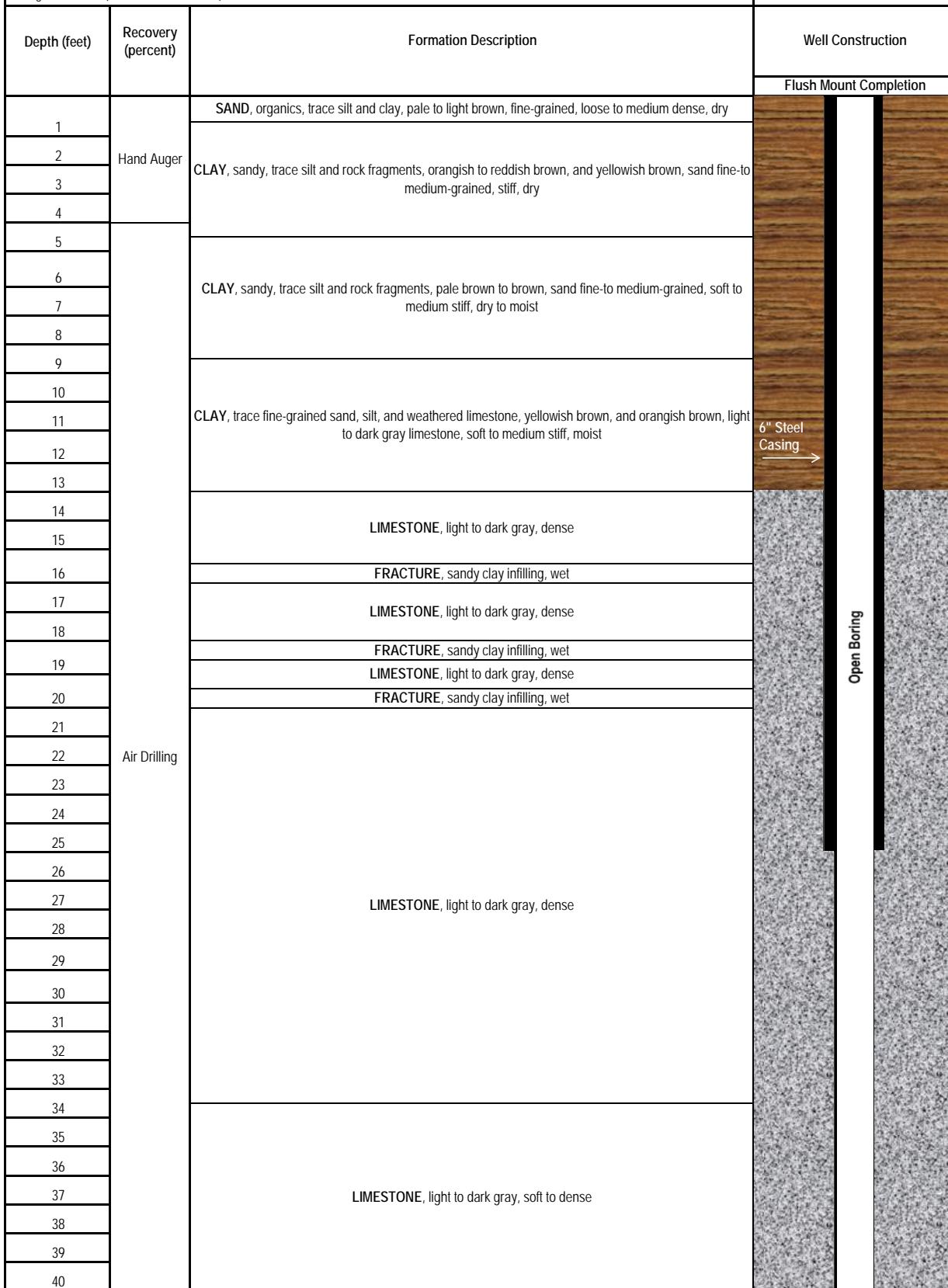
Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
81				
82				
83				
84				
85				
86				
87				
88		LIMESTONE, light to dark gray, dense		
89				
90				
91				
92				
93				
94				
95				
96				
97				
98		LIMESTONE, light to dark gray, and white, soft to dense		
99				
100				
101		Boring terminated at 100 feet.		

## MW-40C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/29/2012
Project No.:	1727-92681	End Date:	7/15/2012
Logged/Checked By	Daniel Forbes/Tom Duffey	Total Depth:	60'
Location Code:	MW-40C	Surface Casing Dia./Dept:	6" Steel Casing to 25'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

Drilling Method: Air (Driltech Model T25KW)



## MW-40C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	6/29/2012
Project No.:	1727-92681	End Date:	7/15/2012
Logged/Checked By	Daniel Forbes/Tom Duffey	Total Depth:	60'
Location Code:	MW-40C	Surface Casing Dia./Dept:	6" Steel Casing to 25'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
41				
42		LIMESTONE, light to dark gray, dense		
43				
44		FRACTURE		
45				
46				
47				
48				
49		LIMESTONE, light to dark gray, dense		
50				
51				
52				
53				
54				
55		LIMESTONE, light to dark gray, soft to dense		
56				
57				
58		LIMESTONE, light to dark gray, dense		
59				
60				
61		Boring terminated at 60 feet.		

## MW-41C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	7/12/2012
Project No.:	1727-92681	End Date:	7/13/2012
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	75'
Location Code:	MW-41C	Surface Casing Dia./Depth	6" Steel Casing to 25'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 65'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 65'-75', 0.01"

Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction		
			Flush Mount Completion	2" Schedule 40 PVC Riser	Portland Cement
1	Hand Auger	CLAY, sandy, silty, organics, trace rock fragments, dark brown, sand fine-grained, stiff, dry			
2					
3					
4		SILT, clayey, sandy grading to trace sand, trace weathered rock, light to yellowish brown, brown to reddish brown from 1 to 2 feet, medium stiff to stiff, dry to moist			
5	Air Drilling				Portland Cement
6					
7					
8					
9		CLAY, silty, trace fine-grained sand and weathered limestone, light to yellowish brown, light to dark gray limestone, soft to medium stiff, moist			
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26		LIMESTONE, light to dark gray, dense			
27					6" Steel Casing
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					

## MW-41C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	7/12/2012
Project No.:	1727-92681	End Date:	7/13/2012
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	75'
Location Code:	MW-41C	Surface Casing Dia./Depth	6" Steel Casing to 25'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 65'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 65'-75', 0.01"

Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction		
			Portland Cement	2" Schedule 40 PVC Riser	Portland Cement
41		LIMESTONE, light to dark gray, dense			
42					
43		FRACTURE			
44					
45					
46					
47					
48					
49					
50		FRACTURE, water producing			
51					
52					
53					
54					
55					
56					
57					
58					
59					
60					
61					
62					
63		LIMESTONE, light to dark gray, dense			
64					
65					
66					
67					
68					
69					
70					
71					
72					
73					
74					
75					
76		Boring terminated at 75 feet.			

## MW-42C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	7/12/2012
Project No.:	1727-92681	End Date:	7/16/2012
Logged/Checked By	Daniel Forbes/Tom Duffey	Total Depth:	160'
Location Code:	MW-42C	Surface Casing Dia./Dept:	6" Steel Casing to 25'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
			Flush Mount Completion	
1		CLAY, sandy, silty, organics, trace rock fragments, brown to dark brown, medium stiff, moist to wet		
2		SAND, silty, clayey, trace organics and rock fragments, light brown, brown and orangish brown, fine-grained, medium dense, moist		
3				
4				
5		SILT, clayey, trace fine-grained sand, light brown, stiff, moist		
6				
7				
8				
9				
10				
11				
12		LIMESTONE, light to dark gray, dense		
13				
14				
15				
16		LIMESTONE, light to dark gray, soft		
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27		LIMESTONE, light to dark gray, dense		
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38		LIMESTONE, light to dark gray, soft		
39				
40		LIMESTONE, light to dark gray, dense		

6" Steel  
Casing →  
  
Open Boring

## MW-42C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	7/12/2012
Project No.:	1727-92681	End Date:	7/16/2012
Logged/Checked By	Daniel Forbes/Tom Duffey	Total Depth:	160'
Location Code:	MW-42C	Surface Casing Dia./Dept:	6" Steel Casing to 25'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61		Air Drilling	LIMESTONE, light to dark gray, dense	
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				
76				
77				
78				
79				
80				

## MW-42C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	7/12/2012
Project No.:	1727-92681	End Date:	7/16/2012
Logged/Checked By	Daniel Forbes/Tom Duffey	Total Depth:	160'
Location Code:	MW-42C	Surface Casing Dia./Dept:	6" Steel Casing to 25'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100		Air Drilling	LIMESTONE, light to dark gray, dense	
101				
102				
103				
104				
105				
106				
107				
108				
109				
110				
111				
112				
113				
114				
115				
116				
117				
118				
119				
120				

## MW-42C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	7/12/2012
Project No.:	1727-92681	End Date:	7/16/2012
Logged/Checked By	Daniel Forbes/Tom Duffey	Total Depth:	160'
Location Code:	MW-42C	Surface Casing Dia./Dept:	6" Steel Casing to 25'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

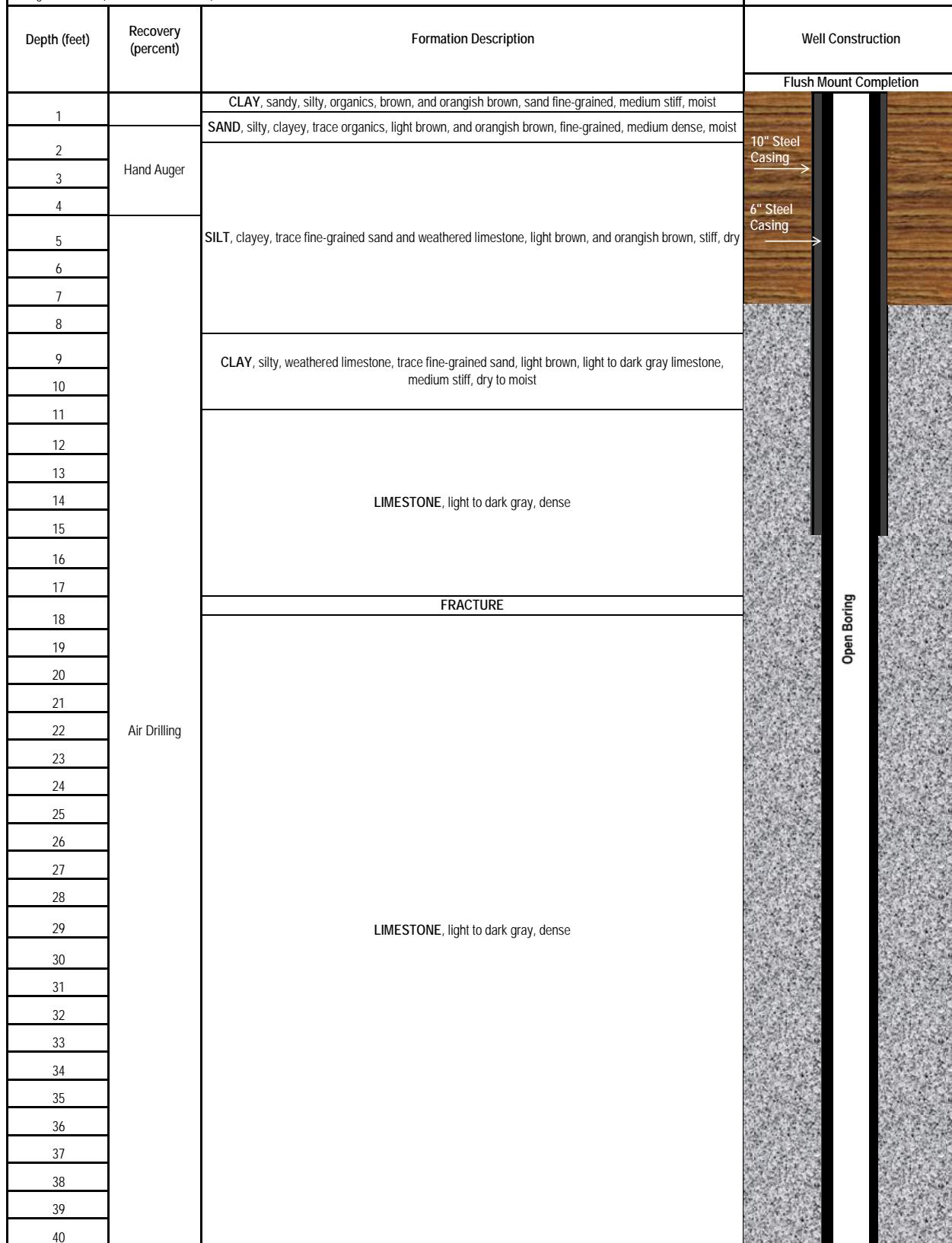
Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
121				
122				
123				
124				
125				
126				
127				
128				
129				
130				
131				
132				
133				
134				
135				
136				
137				
138				
139				
140		Air Drilling	LIMESTONE, light to dark gray, dense	
141				
142				
143				
144				
145				
146				
147				
148				
149				
150				
151				
152				
153				
154				
155				
156				
157				
158				
159				
160				
161		Boring terminated at 160 feet.		

## MW-43D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	7/9/2012
Project No.:	1727-92681	End Date:	7/16/2012
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	220'
Location Code:	MW-43D	Surface Casing Dia./Depth:	10" Steel Casing to 15' 6" Steel Casing to 125'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

Drilling Method: Air (Driltech Model T25KW)



## MW-43D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	7/9/2012
Project No.:	1727-92681	End Date:	7/16/2012
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	220'
Location Code:	MW-43D	Surface Casing Dia./Depth:	10" Steel Casing to 15' 6" Steel Casing to 125'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction
41			
42			
43		LIMESTONE, light to dark gray, dense	
44			
45			
46			
47		FRACTURE, water producing	
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58		LIMESTONE, light to dark gray, dense	
59			
60			
61			
62			
63			
64			
65			
66			
67			
68		FRACTURE	
69			
70			
71			
72			
73			
74			
75		LIMESTONE, light to dark gray, dense	
76			
77			
78			
79			
80			

Well Construction

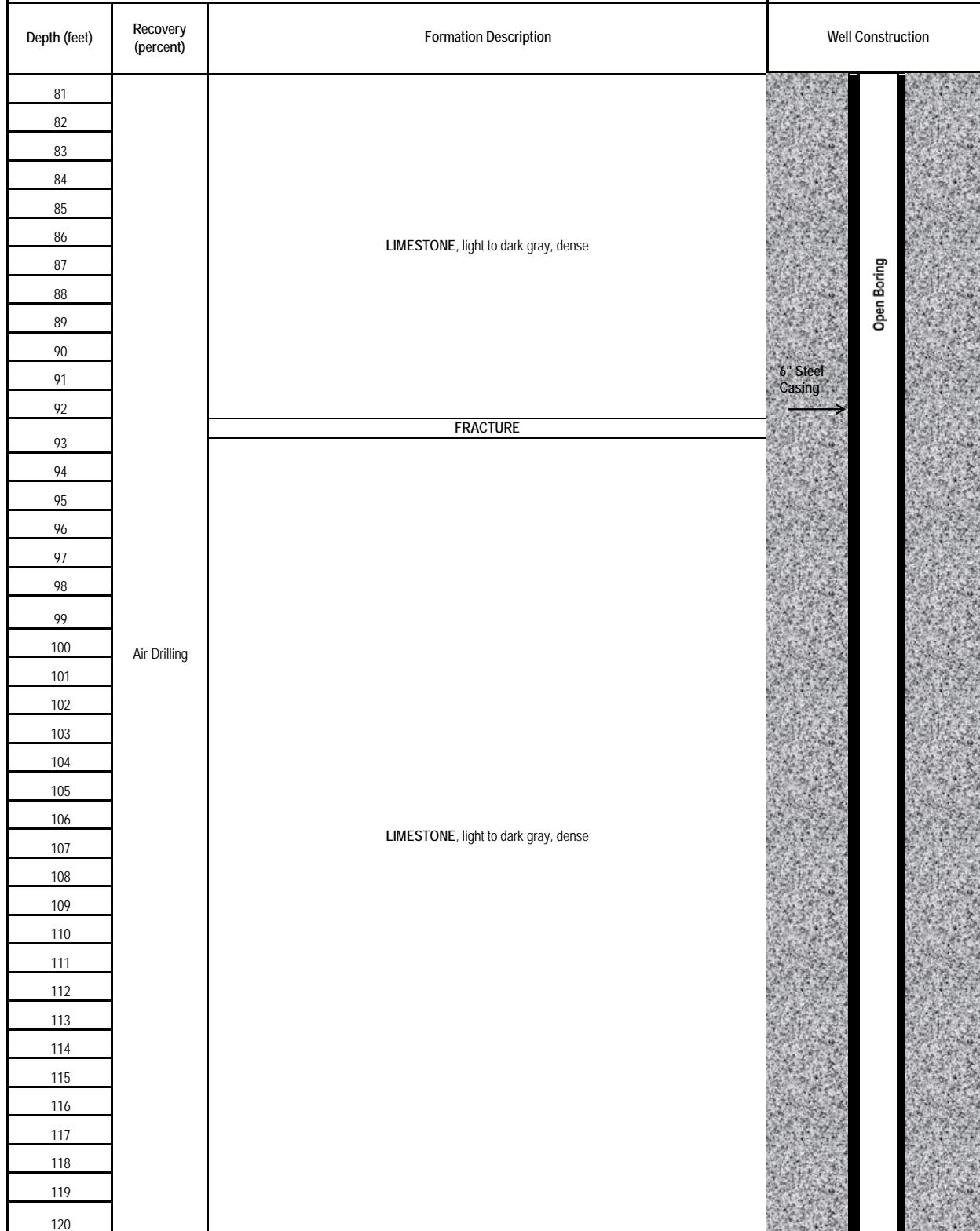
Open Boring

6" Steel  
Casing

## MW-43D Boring Log

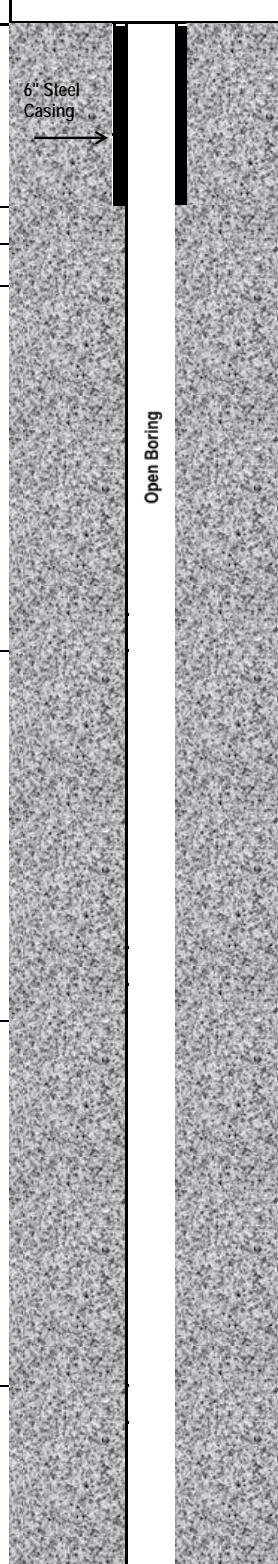
Project:	Cedartown Phase 2 Investigation	Start Date:	7/9/2012
Project No.:	1727-92681	End Date:	7/16/2012
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	220'
Location Code:	MW-43D	Surface Casing Dia./Depth:	10" Steel Casing to 15' 6" Steel Casing to 125'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

Drilling Method: Air (Driltech Model T25KW)



## MW-43D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	7/9/2012	
Project No.:	1727-92681	End Date:	7/16/2012	
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	220'	
Location Code:	MW-43D	Surface Casing Dia./Depth:	10" Steel Casing to 15' 6" Steel Casing to 125'	
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring	
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring	
Drilling Method:	Air (Driltech Model T25KW)			
Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
121				
122				
123				
124				
125		LIMESTONE, light to dark gray, dense		
		Rock Coring Summary (NQ Core Size)		
	Fractures	Core Description	Recovery	Rock Quality Designation
126	Horizontal Fractures: 127.69, 128.33, 131.07, and 132.69	LIMESTONE with stylolites, light to dark gray, hard	91.72%	91.72%
127				
128				
129				
130				
131				
132	High Angle Fracture: 127.75 to 128.75			
133				
134				
135				
136	Horizontal Fractures: 137.59, 139.15, and 143.39	LIMESTONE with stylolites, light to dark gray, hard	98.75%	98.75%
137				
138				
139				
140				
141	Filled High Angle Fractures: 135.75 to 136.75, 143.25 to 144.25			
142				
143				
144				
145				
146	Horizontal Fractures: 147.59 and 153.32	LIMESTONE with stylolites, light to dark gray, hard	100%	100%
147				
148				
149				
150	Filled High Angle Fractures: 144.75 to 145.75, 146.75 to 147.25, 148.05 to 148.65, and 152 to 152.5			
151				
152				
153				
154				
155				
156	Horizontal Fractures: 155.39, 157.11, 157.86, 158.60, 160.66, and 161.88	LIMESTONE with stylolites, light to dark gray, hard	95.42%	95.42%
157				
158				
159				
160				



## MW-43D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	7/9/2012
Project No.:	1727-92681	End Date:	7/16/2012
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	220'
Location Code:	MW-43D	Surface Casing Dia./Depth:	10" Steel Casing to 15' 6" Steel Casing to 125'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description			Well Construction	
161						
162	Filled High Angle Fractures: 155.33 to 160.5, 162.25 to 164.75	LIMESTONE with stylolites, light to dark gray, hard	95.42%	95.42%		
163						
164						
165						
166	Horizontal Fractures: 165.49, 166.09,					
167	167.81, 169.19,					
168	169.75, and 172.56					
169						
170						
171	Filled High Angle Fractures throughout	LIMESTONE with stylolites, light to dark gray, hard	94.79%	94.79%		
172						
173						
174						
175						
176						
177						
178						
179						
180						
181						
182						
183						
184						
185						
186						
187						
188	Air Drilling	LIMESTONE, light to dark gray, dense				
189						
190						
191						
192						
193						
194						
195						
196						
197						
198						
199						
200						

## MW-43D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	7/9/2012
Project No.:	1727-92681	End Date:	7/16/2012
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	220'
Location Code:	MW-43D	Surface Casing Dia./Depth:	10" Steel Casing to 15' 6" Steel Casing to 125'
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	Open Boring
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	Open Boring

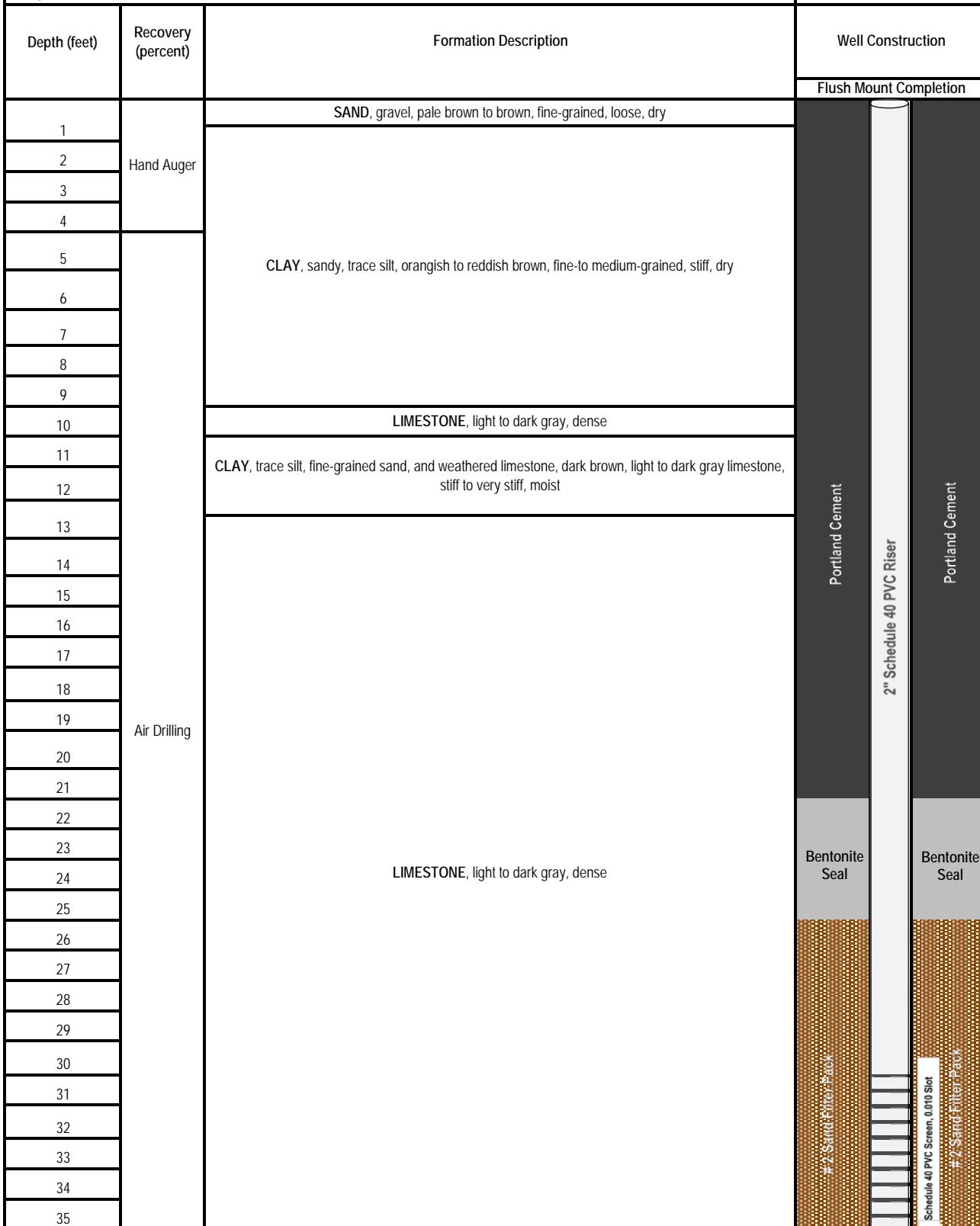
Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction	
			Open Boring	Open Boring
201				
202				
203				
204				
205				
206				
207				
208				
209				
210	Air Drilling	LIMESTONE, light to dark gray, dense		
211				
212				
213				
214				
215				
216				
217				
218				
219				
220		Boring terminated at 220 feet.		
221				

## MW-44C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	10/11/2012
Project No.:	1727-94239	End Date:	10/11/2012
Logged/Checked By:	Nick Fuller/	Total Depth:	40'
Location Code:	MW-44C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 30'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 30'-40', 0.01"

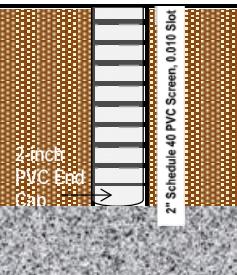
Drilling Method: Air (Driltech Model T25KW)



## MW-44C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	10/11/2012
Project No.:	1727-94239	End Date:	10/11/2012
Logged/Checked By:	Nick Fuller/	Total Depth:	40'
Location Code:	MW-44C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 30'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 30'-40', 0.01"

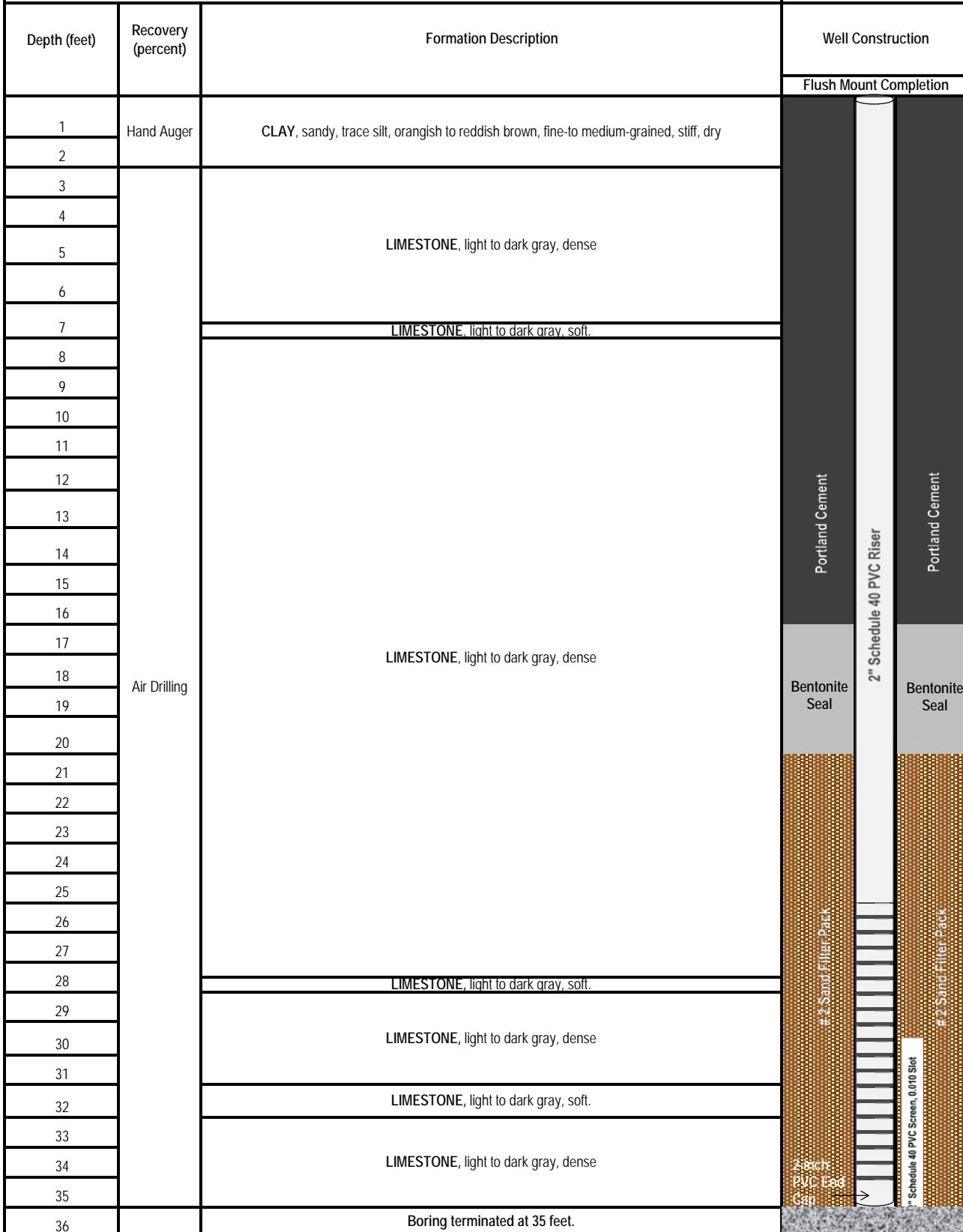
Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction
36			
37			
38		LIMESTONE, light to dark gray, dense	
39			
40			
41		Boring terminated at 40 feet.	
42			

## MW-45C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	10/11/2012
Project No.:	1727-94239	End Date:	10/11/2012
Logged/Checked By:	Nick Fuller/	Total Depth:	35'
Location Code:	MW-45C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 25'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 25'-35', 0.01"

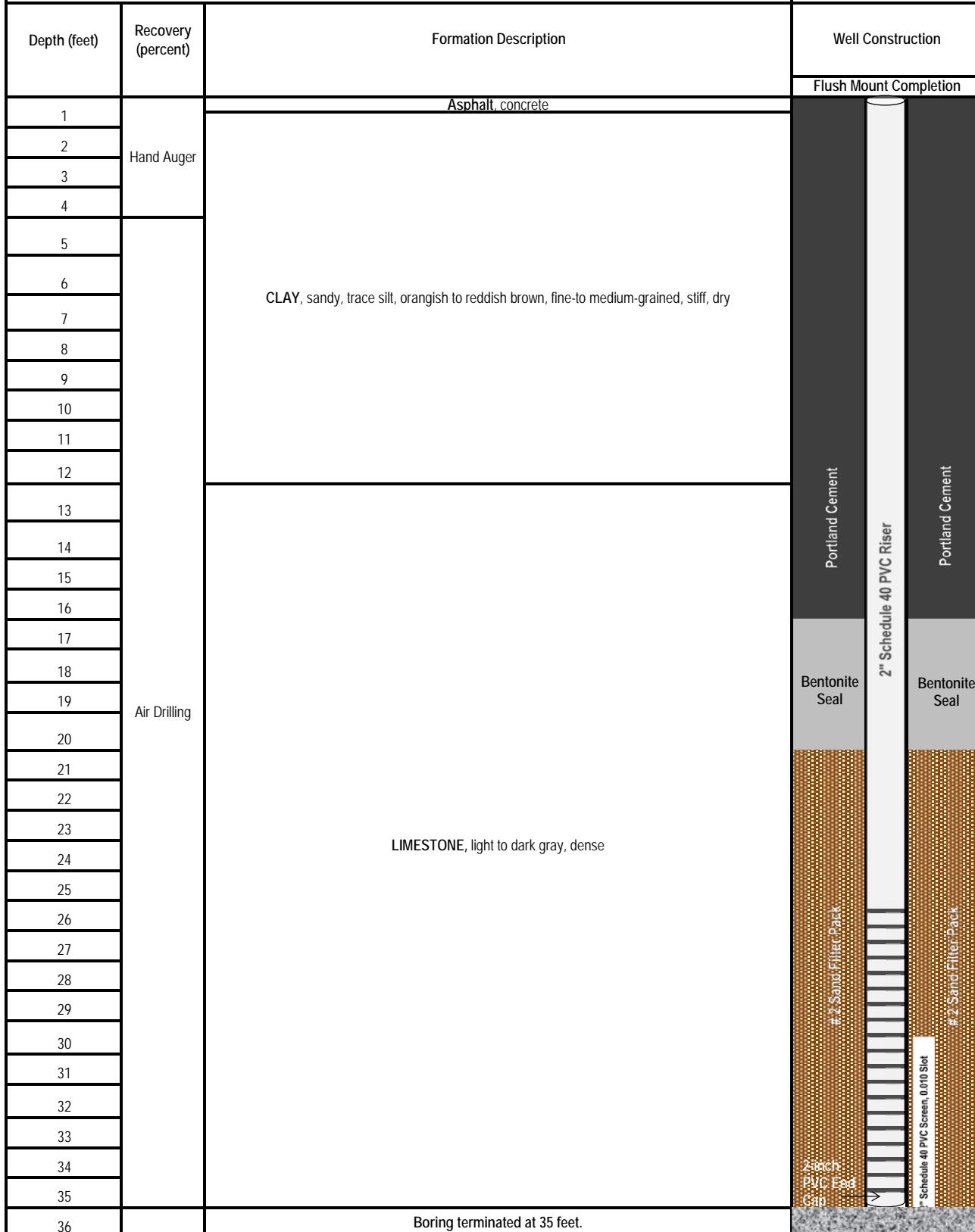
Drilling Method: Air (Driltech Model T25KW)



## MW-46C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	10/10/2012
Project No.:	1727-94239	End Date:	10/10/2012
Logged/Checked By:	Nick Fuller/	Total Depth:	35'
Location Code:	MW-46C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 25'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 25'-35', 0.01"

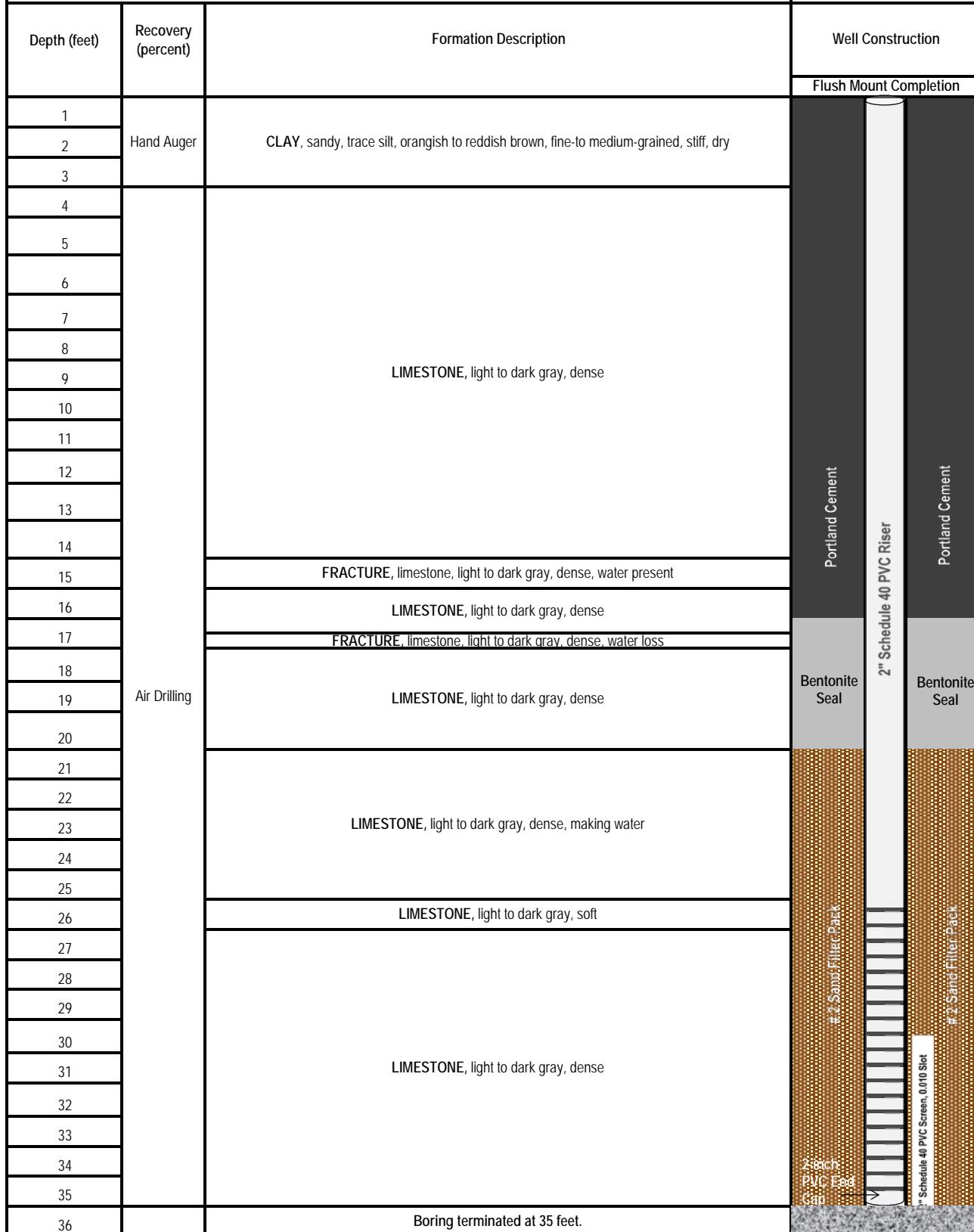
Drilling Method: Air (Driltech Model T25KW)



## MW-47C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	10/9/2012
Project No.:	1727-94239	End Date:	10/9/2012
Logged/Checked By:	Tom Duffey/	Total Depth:	35'
Location Code:	MW-47C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 25'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 25'-35', 0.01"

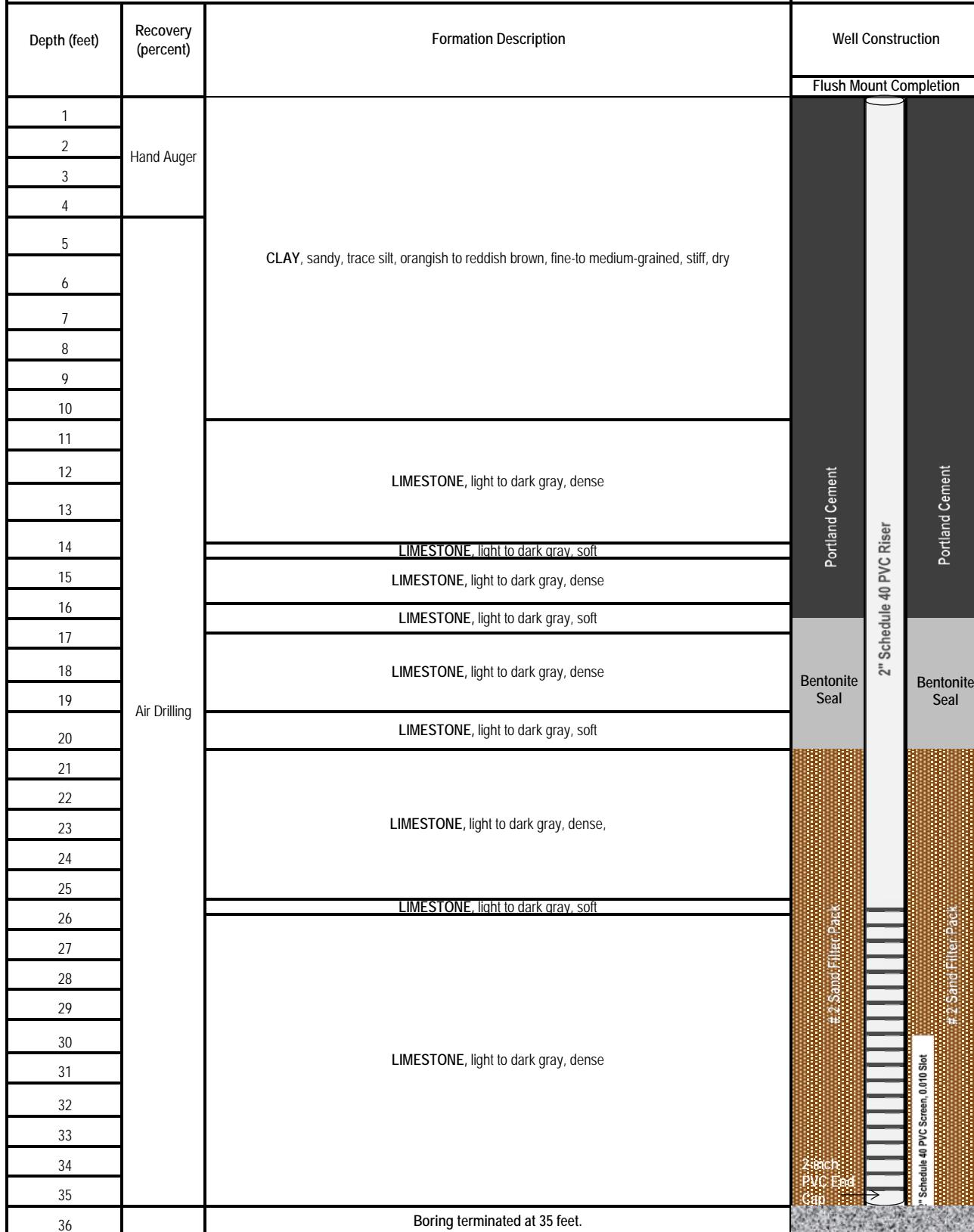
Drilling Method: Air (Driltech Model T25KW)



## MW-48C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	10/10/2012
Project No.:	1727-94239	End Date:	10/10/2012
Logged/Checked By:	Nick Fuller/	Total Depth:	35'
Location Code:	MW-48C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 25'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 25'-35', 0.01"

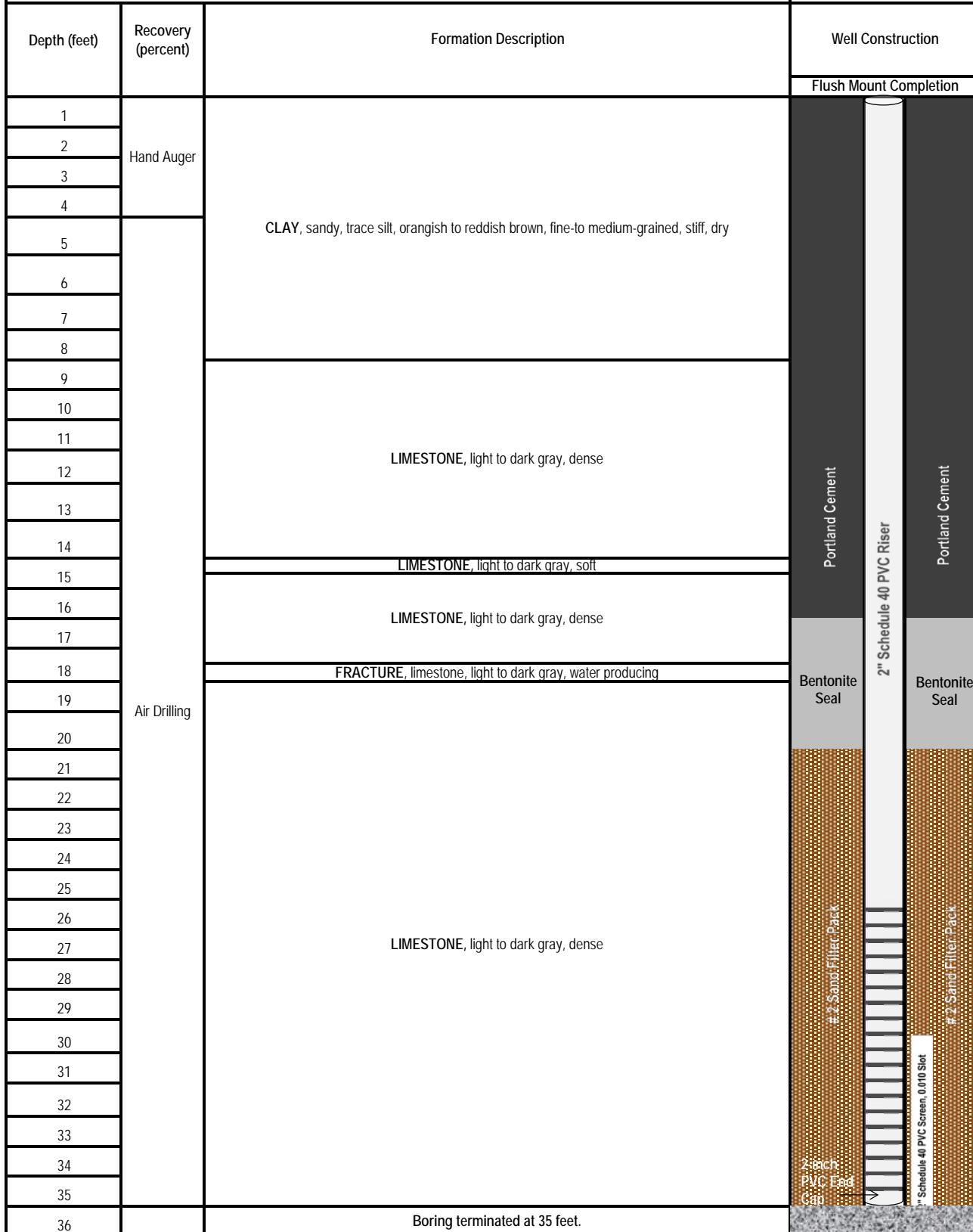
Drilling Method: Air (Driltech Model T25KW)



# MW-49C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	10/9/2012
Project No.:	1727-94239	End Date:	10/9/2012
Logged/Checked By:	Nick Fuller/	Total Depth:	35'
Location Code:	MW-49C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 25'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 25'-35', 0.01"

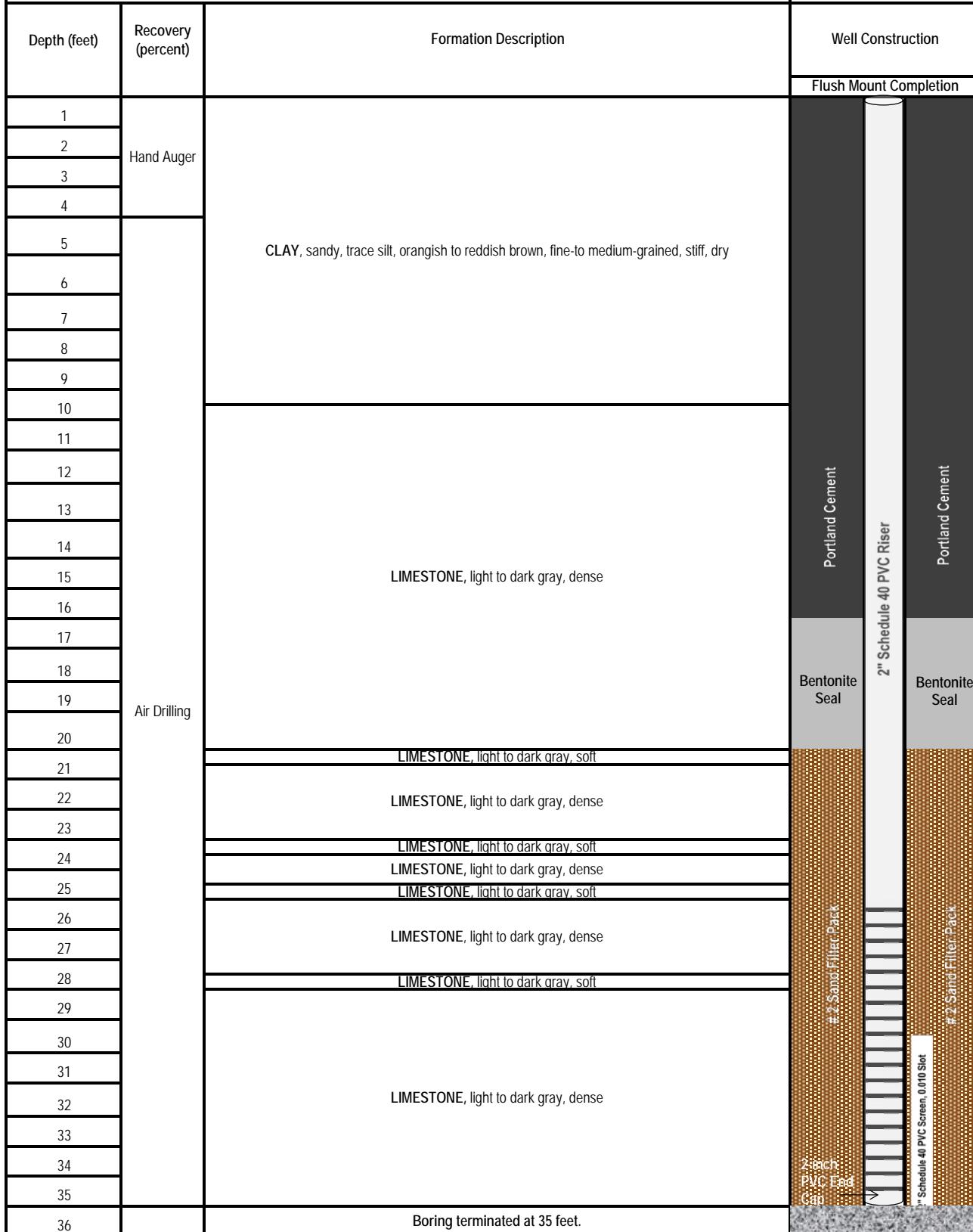
Drilling Method: Air (Driltech Model T25KW)



# MW-50C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	10/9/2012
Project No.:	1727-94239	End Date:	10/9/2012
Logged/Checked By:	Nick Fuller/	Total Depth:	35'
Location Code:	MW-50C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 25'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 25'-35', 0.01"

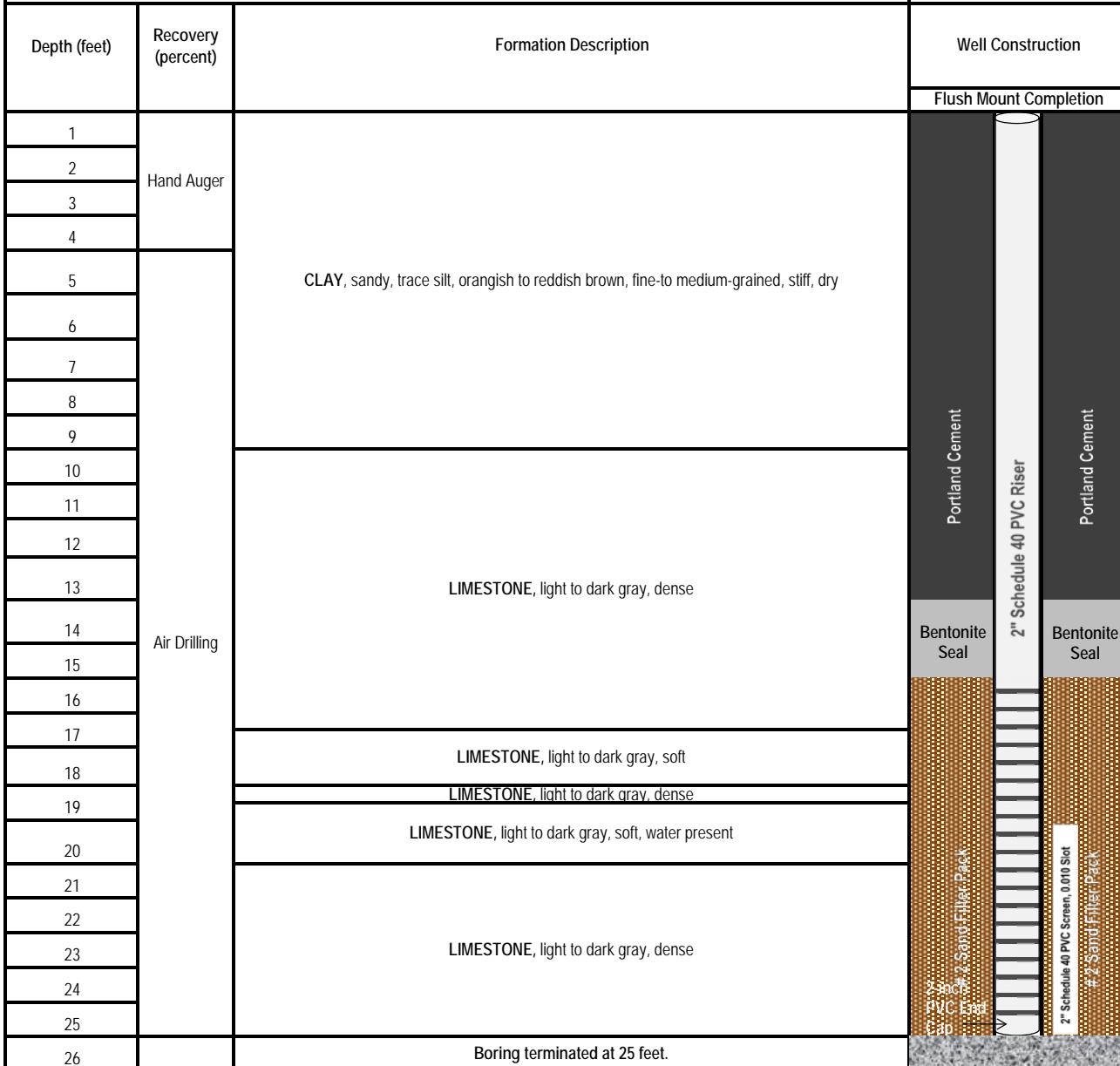
Drilling Method: Air (Driltech Model T25KW)



## MW-51C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	10/11/2012
Project No.:	1727-94239	End Date:	10/11/2012
Logged/Checked By:	Nick Fuller/	Total Depth:	25'
Location Code:	MW-51C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 15'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 15'-25', 0.01"

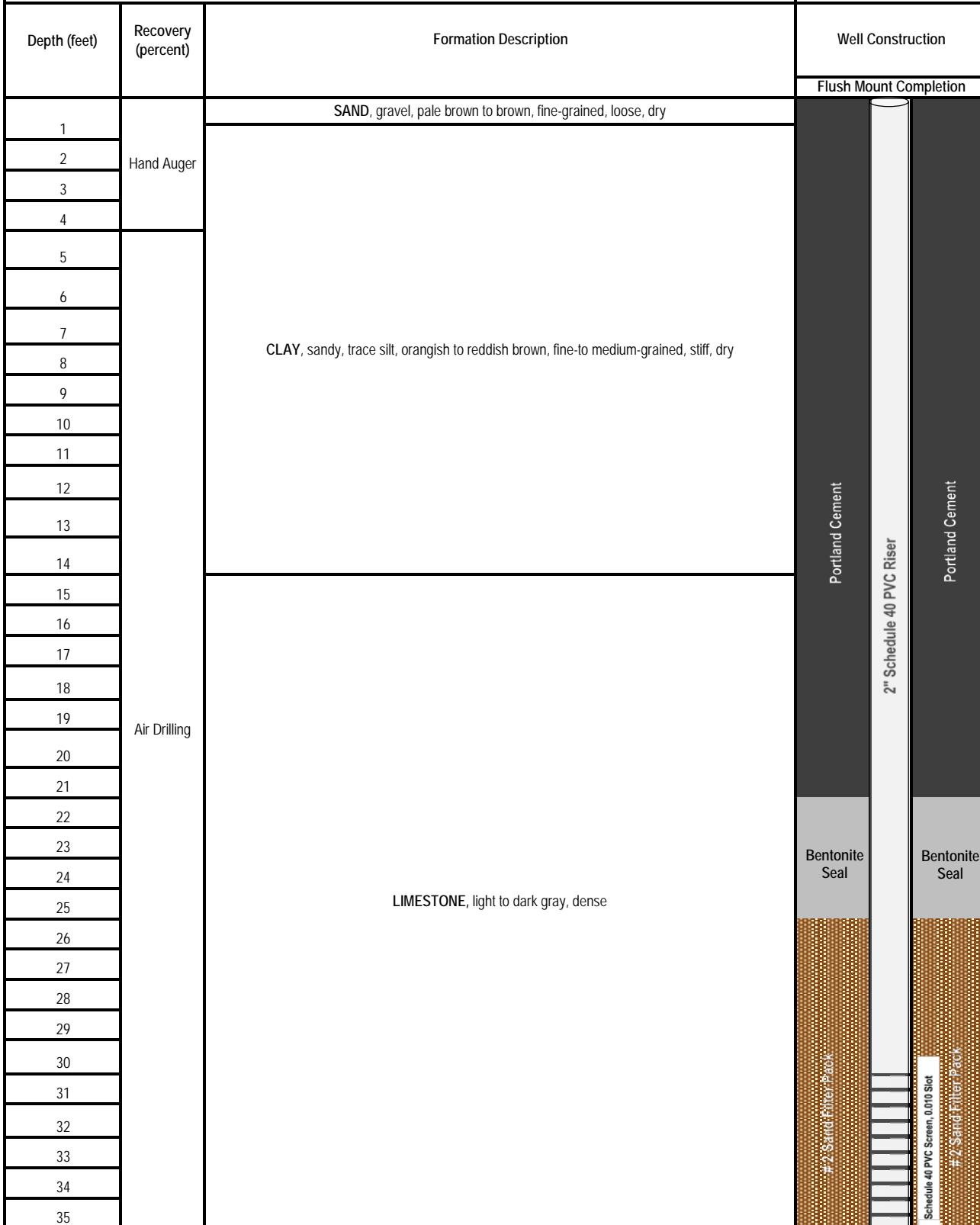
Drilling Method: Air (Driltech Model T25KW)



## MW-52C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	10/11/2012
Project No.:	1727-94239	End Date:	10/11/2012
Logged/Checked By:	Nick Fuller/	Total Depth:	40'
Location Code:	MW-52C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 30'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 30'-40', 0.01"

Drilling Method: Air (Driltech Model T25KW)



## MW-52C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	10/11/2012
Project No.:	1727-94239	End Date:	10/11/2012
Logged/Checked By:	Nick Fuller/	Total Depth:	40'
Location Code:	MW-52C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 30'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 30'-40', 0.01"

Drilling Method: Air (Driltech Model T25KW)

Depth (feet)	Recovery (percent)	Formation Description	Well Construction
36	Air Drilling	FRACTURE, limestone, light to dark gray, water producing	
37		LIMESTONE, light to dark gray, dense	
38			
39			
40			
41		Boring terminated at 40 feet.	
42			

## MW-53C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	3/4/2013
Project No.:	1727-92681	End Date:	3/6/2013
Logged/Checked By:	Jeff Weeber/Tom Duffey	Total Depth:	75'
Location Code:	MW-53C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 65'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 65'-75'; 0.01"

Drilling Method: Air Rotary (Drilltech Model T25KW)

Depth (feet)	Formation Description	Well Construction	
		Flush-Mount Completion	
1	ASPHALT, 4-inches, GRAVEL, 2-inches, sandy, brown and orangish brown, sand fine-to coarse-grained, dry to moist		
2			
3	CLAY, sandy, silty, orangish brown, sand fine-grained, medium stiff, plastic, moist		
4			
5			
6	SAND, clayey, silty, trace gravel, brown, fine-grained, medium stiff, slightly plastic, moist		
7			
8			
9			
10			
11	SAND, clayey, silty, brown, and reddish brown, fine-grained, medium stiff, slightly plastic, moist to wet		
12			
13			
14			
15	CLAY, silty, trace sand, brown, sand fine-grained, soft to medium stiff, plastic, moist		
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27	LIMESTONE, light gray, dense		
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			

## MW-53C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	3/4/2013
Project No.:	1727-92681	End Date:	3/6/2013
Logged/Checked By:	Jeff Weeber/Tom Duffey	Total Depth:	75'
Location Code:	MW-53C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 65'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 65'-75'; 0.01"

Drilling Method: Air Rotary (Drilltech Model T25KW)

Depth (feet)	Formation Description	Well Construction	
39		Portland Cement	
40			2" Schedule 40 PVC Riser
41		Portland Cement	
42			Portland Cement
43		Portland Cement	
44			Portland Cement
45		Portland Cement	
46			Portland Cement
47	LIMESTONE, light gray, dense		
48			
49			
50			
51			
52			
53			
54		Bentonite Seal	Bentonite Seal
55			
56			
57			
58			
59			
60			
61			
62			
63			
64			
65	LIMESTONE, light to dark gray, dense	#2 Sand Filter Pack	#2 Sand Filter Pack
66			
67			
68			
69			
70			
71			
72			
73			
74			
75		2-inch PVC End Cap	
76	Boring terminated at 75 feet.	2" Schedule 40 PVC Screen, 0.010 Slot →	#2 Sand Filter Pack

## MW-54C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	2/27/2013
Project No.:	1727-92681	End Date:	2/28/2013
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	60'
Location Code:	MW-54C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 43.5'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 43.5'-53.5'; 0.01"

Drilling Method: Air Rotary (Driltech Model T25KW)

Depth (feet)	Formation Description	Well Construction	
		Flush-Mount Completion	
1	ASPHALT, 4-inches		
2	GRAVEL, sandy, brown and orangish brown, sand fine-to coarse-grained, dry to moist		
3	CLAY, sandy, silty, trace gravel, orangish brown, sand fine-grained, medium stiff, plastic, wet		
4			
5			
6			
7			
8			
9			
10	CLAY, silty, trace sand, brown, light and orangish brown, sand fine-grained, medium stiff, plastic, wet		
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26	LIMESTONE, light to dark gray, dense		
27			
28			
29			
30			
31			
32			
33			
34			
35			

Portland Cement

2" Schedule 40 PVC Riser

Portland Cement

Bentonite Seal

Bentonite Seal

#2 Sand Filter Pack/  
Silty Clay Infilling

#2 Sand Filter Pack/  
Silty Clay Infilling

## MW-54C Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	2/27/2013
Project No.:	1727-92681	End Date:	2/28/2013
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	60'
Location Code:	MW-54C	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 43.5'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 43.5'-53.5'; 0.01"

Drilling Method: Air Rotary (Driltech Model T25KW)

Depth (feet)	Formation Description	Well Construction	
36		#2 Sand Filter Pack/Silty Clay Infilling	
37			
38			
39			
40			
41			
42	LIMESTONE, light to dark gray, dense		
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53	FRACTURE, silty clay infilling, trace sand, wet		
54			
55			
56			
57	LIMESTONE, light to dark gray, soft	2-inch PVC End Cap	
58			
59	FRACTURE, silty clay infilling, trace sand, wet	2" Schedule 40 PVC Pre-packed Screen, 0.010 Slot	
60			
61	Boring terminated at 60 feet.	Filled Annulus	Silty Clay Infilling

## MW-55D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	5/14/2013
Project No.:	1727-92681	End Date:	5/24/2013
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	450'
Location Code:	MW-55D	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 435'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 435'-445', 0.01"

Drilling Method: Air Rotary (Driltech Model T25KW)

Depth (feet)	Formation Description	Well Construction				
		Flush-Mount Completion				
1	GRAVEL, sandy, silty, clayey, light brown, and reddish brown, sand fine-to medium-grained, dry					
2						
3						
4						
5						
6	CLAY, silty, trace sand, reddish brown, and brown, sand fine-grained, medium stiff to stiff, plastic, dry to wet					
7						
8						
9						
10						
11						
12	LIMESTONE, light gray to gray, dense					
13	FRACTURE, water-producing					
14						
15						
16	LIMESTONE, light gray to gray, dense					
17						
18						
19						
20	FRACTURE					
21	LIMESTONE, light gray to gray, dense					
22	FRACTURE					
23						
24						
25						
26						
27						
28						
29						
30	LIMESTONE, light to dark gray, dense					
31						
32						
33						
34						
35						
36						
37						
38						

## MW-55D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	5/14/2013
Project No.:	1727-92681	End Date:	5/24/2013
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	450'
Location Code:	MW-55D	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 435'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 435'-445', 0.01"

Drilling Method: Air Rotary (Driltech Model T25KW)

Depth (feet)	Formation Description	Well Construction		
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57	LIMESTONE, light to dark gray, dense	6" Steel Casing	Portland Cement	2" Schedule 80 PVC Riser
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				
76				

## MW-55D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	5/14/2013
Project No.:	1727-92681	End Date:	5/24/2013
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	450'
Location Code:	MW-55D	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 435'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 435'-445', 0.01"

Drilling Method: Air Rotary (Driltech Model T25KW)

Depth (feet)	Formation Description	Well Construction		
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95	LIMESTONE, light to dark gray, dense	6" Steel Casing	Portland Cement	2" Schedule 80 PVC Riser
96				
97				
98				
99				
100				
101				
102				
103				
104				
105				
106				
107				
108				
109				
110				
111				
112				
113				
114				

## MW-55D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	5/14/2013
Project No.:	1727-92681	End Date:	5/24/2013
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	450'
Location Code:	MW-55D	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 435'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 435'-445', 0.01"

Drilling Method: Air Rotary (Driltech Model T25KW)

Depth (feet)	Formation Description	Well Construction		
115				
116				
117				
118				
119				
120				
121				
122				
123				
124				
125				
126				
127				
128				
129				
130				
131				
132				
133				
134	LIMESTONE, light to dark gray, dense	6" Steel Casing	Portland Cement	2" Schedule 80 PVC Riser
135				
136				
137				
138				
139				
140				
141				
142				
143				
144				
145				
146				
147				
148				
149				
150				
151				
152				

## MW-55D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	5/14/2013
Project No.:	1727-92681	End Date:	5/24/2013
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	450'
Location Code:	MW-55D	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 435'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 435'-445', 0.01"

Drilling Method: Air Rotary (Driltech Model T25KW)

Depth (feet)	Formation Description	Well Construction		
153				
154				
155				
156				
157				
158				
159				
160				
161				
162				
163				
164				
165				
166				
167				
168				
169				
170				
171	LIMESTONE, light to dark gray, dense			
172				
173				
174				
175				
176				
177				
178				
179				
180				
181				
182				
183				
184				
185				
186				
187				
188				
189				
190				

## MW-55D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	5/14/2013
Project No.:	1727-92681	End Date:	5/24/2013
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	450'
Location Code:	MW-55D	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 435'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 435'-445', 0.01"

Drilling Method: Air Rotary (Driltech Model T25KW)

Depth (feet)	Formation Description	Well Construction		
191				
192				
193				
194				
195				
196				
197				
198				
199				
200				
201				
202				
203				
204				
205				
206				
207				
208				
209	LIMESTONE, light to dark gray, dense			
210				
211				
212				
213				
214				
215				
216				
217				
218				
219				
220				
221				
222				
223				
224				
225				
226				
227				
228				

## MW-55D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	5/14/2013
Project No.:	1727-92681	End Date:	5/24/2013
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	450'
Location Code:	MW-55D	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 435'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 435'-445', 0.01"

Drilling Method: Air Rotary (Driltech Model T25KW)

Depth (feet)	Formation Description	Well Construction				
		6" Steel Casing	Portland Cement	2" Schedule 80 PVC Riser	Portland Cement	6" Steel Casing
229						
230						
231						
232						
233						
234						
235						
236						
237						
238						
239						
240						
241						
242						
243						
244						
245						
246						
247	LIMESTONE, light to dark gray, dense					
248						
249						
250						
251						
252						
253						
254						
255						
256						
257						
258						
259						
260						
261						
262						
263						
264						
265						
266						

## MW-55D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	5/14/2013
Project No.:	1727-92681	End Date:	5/24/2013
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	450'
Location Code:	MW-55D	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 435'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 435'-445', 0.01"

Drilling Method: Air Rotary (Driltech Model T25KW)

Depth (feet)	Formation Description	Well Construction		
267				
268				
269				
270				
271				
272				
273				
274				
275				
276				
277				
278				
279				
280				
281				
282	LIMESTONE, light to dark gray, dense			
283				
284				
285				
286				
287				
288				
289				
290				
291				
292				
293				
294				
295				
296				
297				
298				
299	LIMESTONE, light to dark gray, small fractures, dense			
300				
301				
302	LIMESTONE, light to dark gray, dense			
303				
304				

## MW-55D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	5/14/2013
Project No.:	1727-92681	End Date:	5/24/2013
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	450'
Location Code:	MW-55D	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 435'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 435'-445', 0.01"

Drilling Method: Air Rotary (Driltech Model T25KW)

Depth (feet)	Formation Description	Well Construction		
		Portland Cement	2" Schedule 80 PVC Riser	Portland Cement
305				
306				
307				
308	LIMESTONE, light to dark gray, dense			
309				
310				
311				
312				
313				
314				
315				
316				
317				
318				
319				
320				
321				
322				
323				
324				
325				
326				
327	LIMESTONE, dark gray, dense			
328				
329				
330				
331				
332				
333				
334				
335				
336				
337				
338				
339				
340				
341				
342				

## MW-55D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	5/14/2013
Project No.:	1727-92681	End Date:	5/24/2013
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	450'
Location Code:	MW-55D	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 435'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 435'-445', 0.01"

Drilling Method: Air Rotary (Driltech Model T25KW)

Depth (feet)	Formation Description	Well Construction		
343				
344				
345				
346				
347				
348				
349				
350				
351				
352	LIMESTONE, dark gray, dense		Portland Cement	
353				
354				
355				
356				
357				
358				
359				
360				
361				
362				
363				
364				
365				
366				
367	LIMESTONE, light to dark gray, dense			
368				
369				
370				
371				
372	LIMESTONE, dark gray, dense			
373				
374				
375				
376				
377	LIMESTONE, light to dark gray, dense			
378				
379				
380				

## MW-55D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	5/14/2013
Project No.:	1727-92681	End Date:	5/24/2013
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	450'
Location Code:	MW-55D	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 435'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 435'-445', 0.01"

Drilling Method: Air Rotary (Driltech Model T25KW)

Depth (feet)	Formation Description	Well Construction		
		Portland Cement	2" Schedule 80 PVC Riser	Portland Cement
381				
382				
383				
384				
385				
386				
387				
388				
389				
390				
391				
392				
393				
394				
395				
396				
397				
398				
399	LIMESTONE, light to dark gray, dense			
400				
401				
402				
403				
404				
405				
406				
407				
408				
409				
410				
411				
412				
413				
414				
415				
416				
417				
418				

## MW-55D Boring Log

Project:	Cedartown Phase 2 Investigation	Start Date:	5/14/2013
Project No.:	1727-92681	End Date:	5/24/2013
Logged/Checked By:	Daniel Forbes/Tom Duffey	Total Depth:	450'
Location Code:	MW-55D	Surface Casing Dia./Depth:	None
Location:	Cedartown, Georgia	Well Casing Dia./Depth:	2" PVC to 435'
Driller:	Tri-State Drilling, LLC	Screen Dia./Depth/Slot:	2" PVC: 435'-445', 0.01"

Drilling Method: Air Rotary (Driltech Model T25KW)

Depth (feet)	Formation Description	Well Construction		
419			Bentonite Seal	
420				2" Schedule 80 PVC Riser
421				
422				
423				
424				
425				
426				
427				
428				
429				
430				
431				
432				
433				
434	LIMESTONE, light to dark gray, dense		# 2 Sand Filter Pack	
435				
436				
437				
438				
439				
440				
441				
442				
443				
444				
445				
446				
447				
448				
449				
450				
451	Boring terminated at 450 feet.			

## Appendix B

### Groundwater Laboratory Reports



## ANALYTICAL ENVIRONMENTAL SERVICES, INC.

July 17, 2012

Tom Duffey  
CDM Smith Inc.  
3715 Northside Parkway  
Atlanta GA 30327

TEL: (404) 720-1400  
FAX: (404) 467-4130

RE: Former Manchester Tank (Cedartown)

Dear Tom Duffey:

Order No: 1207140

Analytical Environmental Services, Inc. received 10 samples on 7/3/2012 11:25:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/12-06/30/13.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in black ink that reads "Sharissa Hall".

Sharissa Hall  
Project Manager

## ANALYTICAL ENVIRONMENTAL SERVICES, INC

3785 Presidential Parkway, Atlanta GA 30340-3704

AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

## CHAIN OF CUSTODY

Work Order: 10740Date: 6/27/02 Page 1 of 1

COMPANY: <b>CDM Smith</b>		ANALYSIS REQUESTED										Visit our website <a href="http://www.aesatlanta.com">www.aesatlanta.com</a> to check on the status of your results, place bottle orders, etc.	
		No. # of Containers											
#	SAMPLE ID	SAMPLER			COMPOSITE			PRESERVATION (See codes)			REMARKS		
		DATE	TIME	GRAB	MATRIX (See codes)	DATE	TIME	GRAB	MATRIX (See codes)	DATE	TIME	GRAB	
1	MW - 33	6/27/02	0835	X	6/27/02	0835	X	6/27/02	0835	X	6/27/02	0835	
2	MW - 32	7/1/02	1125	X	7/1/02	1125	X	7/1/02	1125	X	7/1/02	1125	
3	MW - 39	7/1/02	1410	X	7/1/02	1410	X	7/1/02	1410	X	7/1/02	1410	
4	MW - 37	7/1/02	1515	X	7/1/02	1515	X	7/1/02	1515	X	7/1/02	1515	
5	MW - 31	7/1/02	1550	X	7/1/02	1550	X	7/1/02	1550	X	7/1/02	1550	
6	MW - 38	7/2/02	1005	X	7/2/02	1005	X	7/2/02	1005	X	7/2/02	1005	
7	MW - 35	7/2/02	1000	X	7/2/02	1000	X	7/2/02	1000	X	7/2/02	1000	
8	MW - 31	7/2/02	1930	X	7/2/02	1930	X	7/2/02	1930	X	7/2/02	1930	
9	MW - 30	7/3/02	0755	X	7/3/02	0755	X	7/3/02	0755	X	7/3/02	0755	
10	TRIP Blank			X			X			X			
11													
12													
13													
14													
RELINQUISHER BY:		DATE/TIME RECEIVED BY:			DATE/TIME			PROJECT INFORMATION			RECEIPT		
<u>Nick Fuller</u>		<u>7/3/02 1025</u>			<u>11:25</u>			<u>Former Manchester Tank (cedartown)</u>			Total # of Containers <u>20</u>		
											Turnaround Time Request Standard 5 Business Days		
											2 Business Day Rush Next Business Day Rush		
											Same Day Rush (auth req) Other <u>3 Day Rush</u>		
											STATE PROGRAM (if any): _____ E-mail? Y / N; Fax? Y / N;		
											DATA PACKAGE: I II III IV PO#:		

SAMPLES RECEIVED AFTER 5PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.  
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air    GW = Groundwater    SE = Sediment    SO = Soil    SW = Surface Water    W = Water (Blanks)    O = Other (specify)    WW = Waste Water  
PRESERVATIVE CODES: H+I = Hydrochloric acid + ice    I = Ice only    N = Nitric acid    S+I = Sulfuric acid + ice    NA = None    O = Other (specify)    OM+I = Sodium Bisulfate/Methanol + ice

**Client:** CDM Smith Inc.**Project:** Former Manchester Tank (Cedartown)**Lab ID:** 1207140**Case Narrative**

Volatile Organic Compounds Analysis by Method 8260B:

Methylene Chloride was detected in Method Blank 163538 at 13.75 ug/L, which was above the reporting limit of 5.0 ug/L resulting in "B" qualified data for all samples with final reporting limits less than the value detected in the Method Blank. Associated sample values were greater than approximately 10X the blank value and data was not affected.

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-33					
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	6/27/2012 8:35:00 AM					
<b>Lab ID:</b>	1207140-001	<b>Matrix:</b>	Groundwater					
<b>Analyses</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>Qual</b>	<b>Units</b>	<b>BatchID</b>	<b>Dilution Factor</b>	<b>Date Analyzed</b>	<b>Analyst</b>
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
1,1-Dichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
1,1-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
1,2-Dibromoethane	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
1,2-Dichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
1,2-Dichloropropane	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
2-Butanone	BRL	50		ug/L	163538	1	07/06/2012 06:12	NP
2-Hexanone	BRL	10		ug/L	163538	1	07/06/2012 06:12	NP
4-Methyl-2-pentanone	BRL	10		ug/L	163538	1	07/06/2012 06:12	NP
Acetone	BRL	50		ug/L	163538	1	07/06/2012 06:12	NP
Benzene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Bromodichloromethane	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Bromoform	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Bromomethane	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Carbon disulfide	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Carbon tetrachloride	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Chlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Chloroethane	BRL	10		ug/L	163538	1	07/06/2012 06:12	NP
Chloroform	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Chloromethane	BRL	10		ug/L	163538	1	07/06/2012 06:12	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Cyclohexane	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Dibromochloromethane	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Dichlorodifluoromethane	BRL	10		ug/L	163538	1	07/06/2012 06:12	NP
Ethylbenzene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Freon-113	BRL	10		ug/L	163538	1	07/06/2012 06:12	NP
Isopropylbenzene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
m,p-Xylene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Methyl acetate	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Methylcyclohexane	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Methylene chloride	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
o-Xylene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-33
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	6/27/2012 8:35:00 AM
<b>Lab ID:</b>	1207140-001	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Tetrachloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Toluene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Trichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Trichlorofluoromethane	BRL	5.0		ug/L	163538	1	07/06/2012 06:12	NP
Vinyl chloride	BRL	2.0		ug/L	163538	1	07/06/2012 06:12	NP
Surr: 4-Bromofluorobenzene	85.7	67.4-123		%REC	163538	1	07/06/2012 06:12	NP
Surr: Dibromofluoromethane	120	75.5-128		%REC	163538	1	07/06/2012 06:12	NP
Surr: Toluene-d8	97.7	70-120		%REC	163538	1	07/06/2012 06:12	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-32
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/1/2012 11:25:00 AM
<b>Lab ID:</b>	1207140-002	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								<b>(SW5030B)</b>
1,1,1-Trichloroethane	16	5.0		ug/L	163538	1	07/06/2012 02:23	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
1,1-Dichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
1,1-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
1,2-Dibromoethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
1,2-Dichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
1,2-Dichloropropane	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
2-Butanone	BRL	50		ug/L	163538	1	07/06/2012 02:23	NP
2-Hexanone	BRL	10		ug/L	163538	1	07/06/2012 02:23	NP
4-Methyl-2-pentanone	BRL	10		ug/L	163538	1	07/06/2012 02:23	NP
Acetone	BRL	50		ug/L	163538	1	07/06/2012 02:23	NP
Benzene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Bromodichloromethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Bromoform	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Bromomethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Carbon disulfide	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Carbon tetrachloride	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Chlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Chloroethane	BRL	10		ug/L	163538	1	07/06/2012 02:23	NP
Chloroform	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Chloromethane	BRL	10		ug/L	163538	1	07/06/2012 02:23	NP
cis-1,2-Dichloroethene	80	5.0		ug/L	163538	1	07/06/2012 02:23	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Cyclohexane	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Dibromochloromethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Dichlorodifluoromethane	BRL	10		ug/L	163538	1	07/06/2012 02:23	NP
Ethylbenzene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Freon-113	BRL	10		ug/L	163538	1	07/06/2012 02:23	NP
Isopropylbenzene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
m,p-Xylene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Methyl acetate	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Methylcyclohexane	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Methylene chloride	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
o-Xylene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-32					
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/1/2012 11:25:00 AM					
<b>Lab ID:</b>	1207140-002	<b>Matrix:</b>	Groundwater					
Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Tetrachloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Toluene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Trichloroethene	96	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Trichlorofluoromethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:23	NP
Vinyl chloride	2.6	2.0		ug/L	163538	1	07/06/2012 02:23	NP
Surr: 4-Bromofluorobenzene	83.5	67.4-123		%REC	163538	1	07/06/2012 02:23	NP
Surr: Dibromofluoromethane	115	75.5-128		%REC	163538	1	07/06/2012 02:23	NP
Surr: Toluene-d8	98.7	70-120		%REC	163538	1	07/06/2012 02:23	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-39
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/1/2012 2:10:00 PM
<b>Lab ID:</b>	1207140-003	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
1,1-Dichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
1,1-Dichloroethene	7.6	5.0		ug/L	163538	1	07/06/2012 02:52	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
1,2-Dibromoethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
1,2-Dichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
1,2-Dichloropropane	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
2-Butanone	BRL	50		ug/L	163538	1	07/06/2012 02:52	NP
2-Hexanone	BRL	10		ug/L	163538	1	07/06/2012 02:52	NP
4-Methyl-2-pentanone	BRL	10		ug/L	163538	1	07/06/2012 02:52	NP
Acetone	BRL	50		ug/L	163538	1	07/06/2012 02:52	NP
Benzene	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Bromodichloromethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Bromoform	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Bromomethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Carbon disulfide	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Carbon tetrachloride	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Chlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Chloroethane	BRL	10		ug/L	163538	1	07/06/2012 02:52	NP
Chloroform	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Chloromethane	BRL	10		ug/L	163538	1	07/06/2012 02:52	NP
cis-1,2-Dichloroethene	51	5.0		ug/L	163538	1	07/06/2012 02:52	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Cyclohexane	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Dibromochloromethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Dichlorodifluoromethane	BRL	10		ug/L	163538	1	07/06/2012 02:52	NP
Ethylbenzene	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Freon-113	BRL	10		ug/L	163538	1	07/06/2012 02:52	NP
Isopropylbenzene	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
m,p-Xylene	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Methyl acetate	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Methylcyclohexane	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Methylene chloride	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
o-Xylene	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-39
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/1/2012 2:10:00 PM
<b>Lab ID:</b>	1207140-003	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Tetrachloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Toluene	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Trichloroethene	180	50		ug/L	163538	10	07/07/2012 00:11	NP
Trichlorofluoromethane	BRL	5.0		ug/L	163538	1	07/06/2012 02:52	NP
Vinyl chloride	BRL	2.0		ug/L	163538	1	07/06/2012 02:52	NP
Surr: 4-Bromofluorobenzene	85	67.4-123		%REC	163538	1	07/06/2012 02:52	NP
Surr: 4-Bromofluorobenzene	85.7	67.4-123		%REC	163538	10	07/07/2012 00:11	NP
Surr: Dibromofluoromethane	110	75.5-128		%REC	163538	10	07/07/2012 00:11	NP
Surr: Dibromofluoromethane	116	75.5-128		%REC	163538	1	07/06/2012 02:52	NP
Surr: Toluene-d8	93.5	70-120		%REC	163538	10	07/07/2012 00:11	NP
Surr: Toluene-d8	98.2	70-120		%REC	163538	1	07/06/2012 02:52	NP

<b>Qualifiers:</b>	*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
	BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
	H	Holding times for preparation or analysis exceeded	Narr	See case narrative
	N	Analyte not NELAC certified	NC	Not confirmed
	B	Analyte detected in the associated method blank	<	Less than Result value
	>	Greater than Result value	J	Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-37
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/1/2012 3:15:00 PM
<b>Lab ID:</b>	1207140-004	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
1,1-Dichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
1,1-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
1,2-Dibromoethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
1,2-Dichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
1,2-Dichloropropane	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
2-Butanone	BRL	50		ug/L	163538	1	07/06/2012 03:21	NP
2-Hexanone	BRL	10		ug/L	163538	1	07/06/2012 03:21	NP
4-Methyl-2-pentanone	BRL	10		ug/L	163538	1	07/06/2012 03:21	NP
Acetone	BRL	50		ug/L	163538	1	07/06/2012 03:21	NP
Benzene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Bromodichloromethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Bromoform	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Bromomethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Carbon disulfide	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Carbon tetrachloride	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Chlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Chloroethane	BRL	10		ug/L	163538	1	07/06/2012 03:21	NP
Chloroform	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Chloromethane	BRL	10		ug/L	163538	1	07/06/2012 03:21	NP
cis-1,2-Dichloroethene	9.4	5.0		ug/L	163538	1	07/06/2012 03:21	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Cyclohexane	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Dibromochloromethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Dichlorodifluoromethane	BRL	10		ug/L	163538	1	07/06/2012 03:21	NP
Ethylbenzene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Freon-113	BRL	10		ug/L	163538	1	07/06/2012 03:21	NP
Isopropylbenzene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
m,p-Xylene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Methyl acetate	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Methylcyclohexane	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Methylene chloride	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
o-Xylene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-37
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/1/2012 3:15:00 PM
<b>Lab ID:</b>	1207140-004	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Tetrachloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Toluene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Trichloroethene	15	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Trichlorofluoromethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:21	NP
Vinyl chloride	BRL	2.0		ug/L	163538	1	07/06/2012 03:21	NP
Surr: 4-Bromofluorobenzene	83	67.4-123	%REC		163538	1	07/06/2012 03:21	NP
Surr: Dibromofluoromethane	108	75.5-128	%REC		163538	1	07/06/2012 03:21	NP
Surr: Toluene-d8	94.2	70-120	%REC		163538	1	07/06/2012 03:21	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-31
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/1/2012 3:50:00 PM
<b>Lab ID:</b>	1207140-005	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
1,1-Dichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
1,1-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
1,2-Dibromoethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
1,2-Dichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
1,2-Dichloropropane	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
2-Butanone	BRL	50		ug/L	163538	1	07/06/2012 03:49	NP
2-Hexanone	BRL	10		ug/L	163538	1	07/06/2012 03:49	NP
4-Methyl-2-pentanone	BRL	10		ug/L	163538	1	07/06/2012 03:49	NP
Acetone	BRL	50		ug/L	163538	1	07/06/2012 03:49	NP
Benzene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Bromodichloromethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Bromoform	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Bromomethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Carbon disulfide	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Carbon tetrachloride	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Chlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Chloroethane	BRL	10		ug/L	163538	1	07/06/2012 03:49	NP
Chloroform	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Chloromethane	BRL	10		ug/L	163538	1	07/06/2012 03:49	NP
cis-1,2-Dichloroethene	16	5.0		ug/L	163538	1	07/06/2012 03:49	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Cyclohexane	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Dibromochloromethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Dichlorodifluoromethane	BRL	10		ug/L	163538	1	07/06/2012 03:49	NP
Ethylbenzene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Freon-113	BRL	10		ug/L	163538	1	07/06/2012 03:49	NP
Isopropylbenzene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
m,p-Xylene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Methyl acetate	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Methylcyclohexane	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Methylene chloride	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
o-Xylene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-31
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/1/2012 3:50:00 PM
<b>Lab ID:</b>	1207140-005	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Tetrachloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Toluene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Trichloroethene	19	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Trichlorofluoromethane	BRL	5.0		ug/L	163538	1	07/06/2012 03:49	NP
Vinyl chloride	BRL	2.0		ug/L	163538	1	07/06/2012 03:49	NP
Surr: 4-Bromofluorobenzene	91.5	67.4-123		%REC	163538	1	07/06/2012 03:49	NP
Surr: Dibromofluoromethane	116	75.5-128		%REC	163538	1	07/06/2012 03:49	NP
Surr: Toluene-d8	92.3	70-120		%REC	163538	1	07/06/2012 03:49	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-38
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/2/2012 10:05:00 AM
<b>Lab ID:</b>	1207140-006	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	20	5.0		ug/L	163538	1	07/06/2012 04:18	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
1,1-Dichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
1,1-Dichloroethene	10	5.0		ug/L	163538	1	07/06/2012 04:18	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
1,2-Dibromoethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
1,2-Dichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
1,2-Dichloropropane	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
2-Butanone	BRL	50		ug/L	163538	1	07/06/2012 04:18	NP
2-Hexanone	BRL	10		ug/L	163538	1	07/06/2012 04:18	NP
4-Methyl-2-pentanone	BRL	10		ug/L	163538	1	07/06/2012 04:18	NP
Acetone	BRL	50		ug/L	163538	1	07/06/2012 04:18	NP
Benzene	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Bromodichloromethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Bromoform	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Bromomethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Carbon disulfide	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Carbon tetrachloride	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Chlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Chloroethane	BRL	10		ug/L	163538	1	07/06/2012 04:18	NP
Chloroform	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Chloromethane	BRL	10		ug/L	163538	1	07/06/2012 04:18	NP
cis-1,2-Dichloroethene	150	5.0		ug/L	163538	1	07/06/2012 04:18	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Cyclohexane	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Dibromochloromethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Dichlorodifluoromethane	BRL	10		ug/L	163538	1	07/06/2012 04:18	NP
Ethylbenzene	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Freon-113	BRL	10		ug/L	163538	1	07/06/2012 04:18	NP
Isopropylbenzene	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
m,p-Xylene	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Methyl acetate	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Methylcyclohexane	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Methylene chloride	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
o-Xylene	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-38
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/2/2012 10:05:00 AM
<b>Lab ID:</b>	1207140-006	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Tetrachloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Toluene	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Trichloroethene	290	50		ug/L	163538	10	07/07/2012 00:40	NP
Trichlorofluoromethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:18	NP
Vinyl chloride	BRL	2.0		ug/L	163538	1	07/06/2012 04:18	NP
Surr: 4-Bromofluorobenzene	79.2	67.4-123		%REC	163538	10	07/07/2012 00:40	NP
Surr: 4-Bromofluorobenzene	85.5	67.4-123		%REC	163538	1	07/06/2012 04:18	NP
Surr: Dibromofluoromethane	109	75.5-128		%REC	163538	10	07/07/2012 00:40	NP
Surr: Dibromofluoromethane	122	75.5-128		%REC	163538	1	07/06/2012 04:18	NP
Surr: Toluene-d8	87.8	70-120		%REC	163538	10	07/07/2012 00:40	NP
Surr: Toluene-d8	95.3	70-120		%REC	163538	1	07/06/2012 04:18	NP

<b>Qualifiers:</b>	*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
	BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
	H	Holding times for preparation or analysis exceeded	Narr	See case narrative
	N	Analyte not NELAC certified	NC	Not confirmed
	B	Analyte detected in the associated method blank	<	Less than Result value
	>	Greater than Result value	J	Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-35
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/2/2012 11:00:00 AM
<b>Lab ID:</b>	1207140-007	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
1,1-Dichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
1,1-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
1,2-Dibromoethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
1,2-Dichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
1,2-Dichloropropane	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
2-Butanone	BRL	50		ug/L	163538	1	07/06/2012 04:46	NP
2-Hexanone	BRL	10		ug/L	163538	1	07/06/2012 04:46	NP
4-Methyl-2-pentanone	BRL	10		ug/L	163538	1	07/06/2012 04:46	NP
Acetone	BRL	50		ug/L	163538	1	07/06/2012 04:46	NP
Benzene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Bromodichloromethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Bromoform	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Bromomethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Carbon disulfide	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Carbon tetrachloride	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Chlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Chloroethane	BRL	10		ug/L	163538	1	07/06/2012 04:46	NP
Chloroform	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Chloromethane	BRL	10		ug/L	163538	1	07/06/2012 04:46	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Cyclohexane	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Dibromochloromethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Dichlorodifluoromethane	BRL	10		ug/L	163538	1	07/06/2012 04:46	NP
Ethylbenzene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Freon-113	BRL	10		ug/L	163538	1	07/06/2012 04:46	NP
Isopropylbenzene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
m,p-Xylene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Methyl acetate	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Methylcyclohexane	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Methylene chloride	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
o-Xylene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-35
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/2/2012 11:00:00 AM
<b>Lab ID:</b>	1207140-007	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Tetrachloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Toluene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Trichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Trichlorofluoromethane	BRL	5.0		ug/L	163538	1	07/06/2012 04:46	NP
Vinyl chloride	BRL	2.0		ug/L	163538	1	07/06/2012 04:46	NP
Surr: 4-Bromofluorobenzene	87	67.4-123	%REC		163538	1	07/06/2012 04:46	NP
Surr: Dibromofluoromethane	125	75.5-128	%REC		163538	1	07/06/2012 04:46	NP
Surr: Toluene-d8	98.1	70-120	%REC		163538	1	07/06/2012 04:46	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-39
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/2/2012 7:30:00 PM
<b>Lab ID:</b>	1207140-008	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
1,1-Dichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
1,1-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
1,2-Dibromoethane	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
1,2-Dichloroethane	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
1,2-Dichloropropane	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
2-Butanone	BRL	50		ug/L	163538	1	07/06/2012 05:15	NP
2-Hexanone	BRL	10		ug/L	163538	1	07/06/2012 05:15	NP
4-Methyl-2-pentanone	BRL	10		ug/L	163538	1	07/06/2012 05:15	NP
Acetone	BRL	50		ug/L	163538	1	07/06/2012 05:15	NP
Benzene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Bromodichloromethane	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Bromoform	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Bromomethane	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Carbon disulfide	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Carbon tetrachloride	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Chlorobenzene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Chloroethane	BRL	10		ug/L	163538	1	07/06/2012 05:15	NP
Chloroform	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Chloromethane	BRL	10		ug/L	163538	1	07/06/2012 05:15	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Cyclohexane	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Dibromochloromethane	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Dichlorodifluoromethane	BRL	10		ug/L	163538	1	07/06/2012 05:15	NP
Ethylbenzene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Freon-113	BRL	10		ug/L	163538	1	07/06/2012 05:15	NP
Isopropylbenzene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
m,p-Xylene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Methyl acetate	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Methylcyclohexane	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Methylene chloride	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
o-Xylene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-39
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/2/2012 7:30:00 PM
<b>Lab ID:</b>	1207140-008	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Tetrachloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Toluene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Trichloroethene	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Trichlorofluoromethane	BRL	5.0		ug/L	163538	1	07/06/2012 05:15	NP
Vinyl chloride	BRL	2.0		ug/L	163538	1	07/06/2012 05:15	NP
Surr: 4-Bromofluorobenzene	84.9	67.4-123		%REC	163538	1	07/06/2012 05:15	NP
Surr: Dibromofluoromethane	116	75.5-128		%REC	163538	1	07/06/2012 05:15	NP
Surr: Toluene-d8	94.9	70-120		%REC	163538	1	07/06/2012 05:15	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-30
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/3/2012 7:55:00 AM
<b>Lab ID:</b>	1207140-009	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
1,1-Dichloroethane	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
1,1-Dichloroethene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
1,2-Dibromoethane	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
1,2-Dichloroethane	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
1,2-Dichloropropane	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
2-Butanone	BRL	50		ug/L	163538	1	07/09/2012 16:16	NP
2-Hexanone	BRL	10		ug/L	163538	1	07/09/2012 16:16	NP
4-Methyl-2-pentanone	BRL	10		ug/L	163538	1	07/09/2012 16:16	NP
Acetone	BRL	50		ug/L	163538	1	07/09/2012 16:16	NP
Benzene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Bromodichloromethane	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Bromoform	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Bromomethane	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Carbon disulfide	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Carbon tetrachloride	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Chlorobenzene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Chloroethane	BRL	10		ug/L	163538	1	07/09/2012 16:16	NP
Chloroform	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Chloromethane	BRL	10		ug/L	163538	1	07/09/2012 16:16	NP
cis-1,2-Dichloroethene	11	5.0		ug/L	163538	1	07/09/2012 16:16	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Cyclohexane	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Dibromochloromethane	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Dichlorodifluoromethane	BRL	10		ug/L	163538	1	07/09/2012 16:16	NP
Ethylbenzene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Freon-113	BRL	10		ug/L	163538	1	07/09/2012 16:16	NP
Isopropylbenzene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
m,p-Xylene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Methyl acetate	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Methylcyclohexane	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Methylene chloride	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
o-Xylene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-30
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/3/2012 7:55:00 AM
<b>Lab ID:</b>	1207140-009	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Tetrachloroethene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Toluene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Trichloroethene	21	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Trichlorofluoromethane	BRL	5.0		ug/L	163538	1	07/09/2012 16:16	NP
Vinyl chloride	BRL	2.0		ug/L	163538	1	07/09/2012 16:16	NP
Surr: 4-Bromofluorobenzene	87.7	67.4-123		%REC	163538	1	07/09/2012 16:16	NP
Surr: Dibromofluoromethane	86.4	75.5-128		%REC	163538	1	07/09/2012 16:16	NP
Surr: Toluene-d8	93	70-120		%REC	163538	1	07/09/2012 16:16	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	TRIP BLANK
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/3/2012
<b>Lab ID:</b>	1207140-010	<b>Matrix:</b>	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
1,1-Dichloroethane	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
1,1-Dichloroethene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
1,2-Dibromoethane	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
1,2-Dichloroethane	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
1,2-Dichloropropane	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
2-Butanone	BRL	50		ug/L	163538	1	07/05/2012 22:34	NP
2-Hexanone	BRL	10		ug/L	163538	1	07/05/2012 22:34	NP
4-Methyl-2-pentanone	BRL	10		ug/L	163538	1	07/05/2012 22:34	NP
Acetone	BRL	50		ug/L	163538	1	07/05/2012 22:34	NP
Benzene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Bromodichloromethane	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Bromoform	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Bromomethane	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Carbon disulfide	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Carbon tetrachloride	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Chlorobenzene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Chloroethane	BRL	10		ug/L	163538	1	07/05/2012 22:34	NP
Chloroform	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Chloromethane	BRL	10		ug/L	163538	1	07/05/2012 22:34	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Cyclohexane	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Dibromochloromethane	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Dichlorodifluoromethane	BRL	10		ug/L	163538	1	07/05/2012 22:34	NP
Ethylbenzene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Freon-113	BRL	10		ug/L	163538	1	07/05/2012 22:34	NP
Isopropylbenzene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
m,p-Xylene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Methyl acetate	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Methylcyclohexane	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Methylene chloride	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
o-Xylene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 17-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	TRIP BLANK
<b>Project Name:</b>	Former Manchester Tank (Cedartown)	<b>Collection Date:</b>	7/3/2012
<b>Lab ID:</b>	1207140-010	<b>Matrix:</b>	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Tetrachloroethene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Toluene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Trichloroethene	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Trichlorofluoromethane	BRL	5.0		ug/L	163538	1	07/05/2012 22:34	NP
Vinyl chloride	BRL	2.0		ug/L	163538	1	07/05/2012 22:34	NP
Surr: 4-Bromofluorobenzene	82.3	67.4-123	%REC		163538	1	07/05/2012 22:34	NP
Surr: Dibromofluoromethane	101	75.5-128	%REC		163538	1	07/05/2012 22:34	NP
Surr: Toluene-d8	95.1	70-120	%REC		163538	1	07/05/2012 22:34	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client CDM

Work Order Number 1207140

Checklist completed by MJ Signature  
Date 7/3/12

Carrier name: FedEx  UPS  Courier  Client  US Mail  Other

Shipping container/cooler in good condition? Yes  No  Not Present

Custody seals intact on shipping container/cooler? Yes  No  Not Present

Custody seals intact on sample bottles? Yes  No  Not Present

Container/Temp Blank temperature in compliance? (4°C±2)\* Yes  No

Cooler #1 3.7 Cooler #2  Cooler #3  Cooler #4  Cooler #5  Cooler #6

Chain of custody present? Yes  No

Chain of custody signed when relinquished and received? Yes  No

Chain of custody agrees with sample labels? Yes  No

Samples in proper container/bottle? Yes  No

Sample containers intact? Yes  No

Sufficient sample volume for indicated test? Yes  No

All samples received within holding time? Yes  No

Was TAT marked on the COC? Yes  No

Proceed with Standard TAT as per project history? Yes  No  Not Applicable

Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No

Water - pH acceptable upon receipt? Yes  No  Not Applicable

Adjusted?  Checked by

Sample Condition: Good  Other(Explain) \_\_\_\_\_

(For diffusive samples or AIHA lead) Is a known blank included? Yes  No

See Case Narrative for resolution of the Non-Conformance.

\* Samples do not have to comply with the given range for certain parameters.

<b>Client:</b>	CDM Smith Inc.	<b>Dates Report</b>
<b>Project:</b>	Former Manchester Tank (Cedartown)	
<b>Lab Order:</b>	1207140	

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1207140-001A	MW-33	6/27/2012 8:35:00AM	Groundwater	TCL VOLATILE ORGANICS		07/05/2012	07/06/2012
1207140-002A	MW-32	7/1/2012 11:25:00AM	Groundwater	TCL VOLATILE ORGANICS		07/05/2012	07/06/2012
1207140-003A	MW-39	7/1/2012 2:10:00PM	Groundwater	TCL VOLATILE ORGANICS		07/05/2012	07/06/2012
1207140-003A	MW-39	7/1/2012 2:10:00PM	Groundwater	TCL VOLATILE ORGANICS		07/05/2012	07/07/2012
1207140-004A	MW-37	7/1/2012 3:15:00PM	Groundwater	TCL VOLATILE ORGANICS		07/05/2012	07/06/2012
1207140-005A	MW-31	7/1/2012 3:50:00PM	Groundwater	TCL VOLATILE ORGANICS		07/05/2012	07/06/2012
1207140-006A	MW-38	7/2/2012 10:05:00AM	Groundwater	TCL VOLATILE ORGANICS		07/05/2012	07/06/2012
1207140-006A	MW-38	7/2/2012 10:05:00AM	Groundwater	TCL VOLATILE ORGANICS		07/05/2012	07/07/2012
1207140-007A	MW-35	7/2/2012 11:00:00AM	Groundwater	TCL VOLATILE ORGANICS		07/05/2012	07/06/2012
1207140-008A	MW-39	7/2/2012 7:30:00PM	Groundwater	TCL VOLATILE ORGANICS		07/05/2012	07/06/2012
1207140-009A	MW-30	7/3/2012 7:55:00AM	Groundwater	TCL VOLATILE ORGANICS		07/05/2012	07/09/2012
1207140-010A	TRIP BLANK	7/3/2012 12:00:00AM	Aqueous	TCL VOLATILE ORGANICS		07/05/2012	07/05/2012

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank (Cedartown)  
**Workorder:** 1207140

**ANALYTICAL QC SUMMARY REPORT****BatchID: 163538**

Sample ID: MB-163538 SampleType: MBLK	Client ID: TestCode: TCL VOLATILE ORGANICS SW8260B	Units: ug/L BatchID: 163538		Prep Date: 07/05/2012	Run No: 224536						
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	0
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	0
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	0
Acetone	BRL	50	0	0	0	0	0	0	0	0	0
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	0

Qualifiers: &gt; Greater than Result value

&lt; Less than Result value

B Analyte detected in the associated method blank

BRL Below reporting limit

E Estimated (value above quantitation range)

H Holding times for preparation or analysis exceeded

J Estimated value detected below Reporting Limit

N Analyte not NELAC certified

R RPD outside limits due to matrix

Rpt Lim Reporting Limit

S Spike Recovery outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank (Cedartown)  
**Workorder:** 1207140

**ANALYTICAL QC SUMMARY REPORT****BatchID: 163538**

Sample ID: <b>MB-163538</b>	Client ID:	Units: ug/L			Prep Date:	07/05/2012	Run No:	<b>224536</b>			
SampleType: <b>MLBK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>163538</b>			Analysis Date:	07/05/2012	Seq No:	<b>4698450</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Freon-113	BRL	10	0	0	0	0	0	0	0	0	
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Methylene chloride	13.75	5.0	0	0	0	0	0	0	0	0	B
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	42.62	0	50	0	85.2	67.4	123	0	0	0	
Surr: Dibromofluoromethane	49.17	0	50	0	98.3	75.5	128	0	0	0	
Surr: Toluene-d8	48.13	0	50	0	96.3	70	120	0	0	0	

**Qualifiers:** > Greater than Result value  
 BRL Below reporting limit  
 J Estimated value detected below Reporting Limit  
 Rpt Lim Reporting Limit

< Less than Result value  
 E Estimated (value above quantitation range)  
 N Analyte not NELAC certified  
 S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank  
 H Holding times for preparation or analysis exceeded  
 R RPD outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank (Cedartown)  
**Workorder:** 1207140

**ANALYTICAL QC SUMMARY REPORT****BatchID: 163538**

Sample ID: <b>LCS-163538</b>	Client ID: <b>TCL VOLATILE ORGANICS SW8260B</b>	Units: <b>ug/L</b>	Prep Date: <b>07/05/2012</b>	Run No: <b>224536</b>							
SampleType: <b>LCS</b>	TestCode: <b>163538</b>	BatchID: <b>163538</b>	Analysis Date: <b>07/05/2012</b>	Seq No: <b>4698447</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	61.27	5.0	50	0	123	60	140	0	0	0	
Benzene	61.61	5.0	50	0	123	70	130	0	0	0	
Chlorobenzene	50.19	5.0	50	0	100	70	130	0	0	0	
Toluene	55.49	5.0	50	0	111	70	130	0	0	0	
Trichloroethene	47.81	5.0	50	0	95.6	70	130	0	0	0	
Surr: 4-Bromofluorobenzene	53.65	0	50	0	107	67.4	123	0	0	0	
Surr: Dibromofluoromethane	51.23	0	50	0	102	75.5	128	0	0	0	
Surr: Toluene-d8	48.03	0	50	0	96.1	70	120	0	0	0	

Sample ID: <b>1207140-001AMS</b>	Client ID: <b>MW-33</b>	Units: <b>ug/L</b>	Prep Date: <b>07/05/2012</b>	Run No: <b>224536</b>							
SampleType: <b>MS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>163538</b>	Analysis Date: <b>07/05/2012</b>	Seq No: <b>4698448</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	671.6	50	500	0	134	50.1	179	0	0	0	
Benzene	623.8	50	500	0	125	61.2	150	0	0	0	
Chlorobenzene	500.5	50	500	0	100	72.1	140	0	0	0	
Toluene	563.3	50	500	0	113	58.7	154	0	0	0	
Trichloroethene	500.8	50	500	0	100	68.3	149	0	0	0	
Surr: 4-Bromofluorobenzene	513.0	0	500	0	103	67.4	123	0	0	0	
Surr: Dibromofluoromethane	484.5	0	500	0	96.9	75.5	128	0	0	0	
Surr: Toluene-d8	467.0	0	500	0	93.4	70	120	0	0	0	

Sample ID: <b>1207140-001AMSD</b>	Client ID: <b>MW-33</b>	Units: <b>ug/L</b>	Prep Date: <b>07/05/2012</b>	Run No: <b>224536</b>							
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>163538</b>	Analysis Date: <b>07/05/2012</b>	Seq No: <b>4698449</b>							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	606.9	50	500	0	121	50.1	179	671.6	10.1	23.3	
Benzene	592.1	50	500	0	118	61.2	150	623.8	5.21	19	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL		Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J		Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank (Cedartown)  
**Workorder:** 1207140

**ANALYTICAL QC SUMMARY REPORT****BatchID: 163538**

Sample ID: 1207140-001AMSD	Client ID: MW-33					Units: ug/L	Prep Date: 07/05/2012	Run No: 224536
SampleType: MSD	TestCode: TCL VOLATILE ORGANICS SW8260B					BatchID: 163538	Analysis Date: 07/05/2012	Seq No: 4698449
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val
Chlorobenzene	471.5	50	500	0	94.3	72.1	140	500.5
Toluene	570.3	50	500	0	114	58.7	154	563.3
Trichloroethene	461.1	50	500	0	92.2	68.3	149	500.8
Surr: 4-Bromofluorobenzene	510.4	0	500	0	102	67.4	123	513.0
Surr: Dibromofluoromethane	511.3	0	500	0	102	75.5	128	484.5
Surr: Toluene-d8	510.3	0	500	0	102	70	120	467.0
								Qual

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		



## ANALYTICAL ENVIRONMENTAL SERVICES, INC.

July 28, 2012

Andrew Romanek  
CDM Smith Inc.  
3715 Northside Parkway  
Atlanta GA 30327

TEL: (404) 720-1400  
FAX: (404) 467-4130

RE: Former Manchester Tank

Dear Andrew Romanek:

Order No: 1207E25

Analytical Environmental Services, Inc. received 56 samples on 7/19/2012 3:15:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/12-06/30/13.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in black ink that reads "Sharissa Hall".

Sharissa Hall  
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

ANALYTICAL ENVIRONMENTAL SERVICES,

ANALYTICAL ENVIRONMENTAL S

## CHAIN OF CUSTODY

Work Order: 1207E25

COMPANY <b>Cdn Smith</b>	ANALYSIS REQUESTED												Visit our website <a href="http://www.aesatlanta.com">www.aesatlanta.com</a> to check on the status of your results, place bottle orders, etc.																																																																																																																																																																																																															
													No. of Containers <b>2</b>																																																																																																																																																																																																															
ADDRESS: 3715 Northside Parkway NW B. 300 S. 400 Atlanta, GA 30327 PHONE: 404-720-1400 FAX: SAMPLED BY: <b>Nick Teller</b>	<table border="1"> <thead> <tr> <th rowspan="2">#</th> <th rowspan="2">SAMPLE ID</th> <th colspan="3">SAMPLED</th> <th colspan="3">COMPOSITE</th> <th colspan="3">PRESERVATION (See codes)</th> <th colspan="3">REMARKS</th> </tr> <tr> <th>DATE</th> <th>TIME</th> <th>GRATE</th> <th>Matrix (See code)</th> <th>Composite (See code)</th> <th>Matrix</th> <th>Code</th> <th>Preservation</th> <th>Code</th> <th>Preservation</th> <th>Code</th> <th>Preservation</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>DUP-1</td> <td>7/16/12</td> <td>0800</td> <td>X</td> <td>GW</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>MW-20B</td> <td></td> <td>1300</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>MW-18B</td> <td></td> <td>1345</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>MW-19C</td> <td></td> <td>1415</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td>MW-11B</td> <td></td> <td>1455</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6</td> <td>MW-10B</td> <td></td> <td>1540</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7</td> <td>MW-36C</td> <td></td> <td>1645</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>8</td> <td>MW-5B</td> <td></td> <td>1645</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>9</td> <td>DUP-2</td> <td>7/17/12</td> <td>0800</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>10</td> <td>MW-30A</td> <td></td> <td>0925</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>11</td> <td>MW-28C</td> <td></td> <td>1010</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>12</td> <td>MW-1B</td> <td></td> <td>1100</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>13</td> <td>MW-35D</td> <td></td> <td>1330</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>14</td> <td>MW-33A</td> <td></td> <td>1335</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>												#	SAMPLE ID	SAMPLED			COMPOSITE			PRESERVATION (See codes)			REMARKS			DATE	TIME	GRATE	Matrix (See code)	Composite (See code)	Matrix	Code	Preservation	Code	Preservation	Code	Preservation	1	DUP-1	7/16/12	0800	X	GW	X							2	MW-20B		1300	X									3	MW-18B		1345										4	MW-19C		1415										5	MW-11B		1455										6	MW-10B		1540										7	MW-36C		1645										8	MW-5B		1645										9	DUP-2	7/17/12	0800										10	MW-30A		0925										11	MW-28C		1010										12	MW-1B		1100										13	MW-35D		1330										14	MW-33A		1335									
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	<b>7/19/12 155</b>			<b>7/19/12 3:15</b>			<b>Former Manchester Tank</b>			<b>28</b>																																																																																																																																																																																																																		
SPECIAL INSTRUCTIONS/COMMENTS  <b>Nick Teller</b>	1:			2:			PROJECT NAME: <b>Former Manchester Tank</b>			Total # of Containers																																																																																																																																																																																																																		
							PROJECT #: <b></b>			Turnaround Time Request																																																																																																																																																																																																																		
							SITE ADDRESS: <b>Cedartown, GA</b>			<input checked="" type="radio"/> Standard 5 Business Days <input type="radio"/> 2 Business Day Rush <input type="radio"/> Next Business Day Rush <input type="radio"/> Same Day Rush (auth req.) <input type="radio"/> Other																																																																																																																																																																																																																		
							SEND REPORT TO: <b>A.Promek/T.Duffy</b>			STATE PROGRAM (if any): E-mail? Y / N Fax? Y / N																																																																																																																																																																																																																		
							INVOICE TO: (IF DIFFERENT FROM ABOVE)			PO#:																																																																																																																																																																																																																		
							QUOTE #:																																																																																																																																																																																																																					
SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.																																																																																																																																																																																																																												
MATRIX CODES: A = Air      GW = Surface Water      DM = Drinking Water (Blanks)      W = Major (Drinking)      SW = Sediment      SE = Groundwater      GW = Surface Water      O = Other (specify)      WM = Microbial																																																																																																																																																																																																																												



ANALYTICAL ENVIRONMENTAL SERVICES, INC.

33785 Presidential Parkway, Atlanta GA 30340-3704

TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

**CHAIN OF CUSTODY**

Work Order: 1207-E25

Date: 7/7/13 Page 2 of 4

COMPANY <b>CDM Smith</b>	ANALYSIS REQUESTED										Visit our website <a href="http://www.aesatlanta.com">www.aesatlanta.com</a> to check on the status of your results, place bottle orders, etc.	
											No. # of Containers	
ADDRESS: 3715 Northside Parkway, NW B-300 S. 400 Atlanta, GA 30327											28	
PHONE: 404-720-1400											Turnaround Time Request	
SAMPLED BY: <u>Nick Toller</u>											Standard 5 Business Days	
SIGNATURE: <u>Nick Toller</u>											2 Business Day Rush	
VOCs C8266											Next Business Day Rush	
											Same Day Rush (auth req.)	
											Other _____	
#	SAMPLE ID	DATE	TIME	GRADE	COMPOSITE	MATRIX (See codes)	PRESERVATION (See codes)	REMARKS				
1	MW-37C	7/17/2	1435	X	63	X	HFS	2				
2	MW-32B		1456									
3	MW-31C		1530									
4	MW-4B		1556									
5	MW-34B		1630									
6	MW-25A		1655									
7	MW-40C		1715									
8	MW-39C		7/18/2	0830								
9	DUP-3			0800								
10	DUP-4			0830								
11	MW-14C			0930								
12	MW-17C			1005								
13	MW-15B			1018								
14	MW-41C			1050								
RELINQUISHED BY		DATE/TIME RECEIVED BY	PROJECT INFORMATION									
<u>Nick Toller</u>		7/19/2 1515	PROJECT NAME: <u>Fox River Manchester Tank</u>									
1:			PROJECT #: _____									
2:			SITE ADDRESS: <u>Cedartown, GA</u>									
3:			SEND REPORT TO: <u>A. Banerjee/T. Daffey</u>									
SPECIAL INSTRUCTIONS/COMMENTS:		INVOICE TO: (IF DIFFERENT FROM ABOVE) <u>ROMA Tech APAC@comsmith.com</u> <u>claffeyJT@comsmith.com</u>										
OUT IN CLIENT GREYHOUND		SHIPMENT METHOD / VIA: FedEx UPS MAIL COURIER OTHER										
PO#:		QUOTE #: _____										
SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.												
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.												

## ANALYTICAL ENVIRONMENTAL SERVICES, INC

3785 Presidential Parkway, Atlanta GA 30340-3704

AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

## CHAIN OF CUSTODY

Work Order: 1207E25

Date: 7/18/2 Date: 7/18/2 Page: 3 of 4

COMPANY: <b>Cdn Smith</b>		ADDRESS: 3715 Northside Parkway NW B. 300 S 400 Atlanta, GA 30327		ANALYSIS REQUESTED		No # of Containers <b>www.aesatlanta.com</b> to check on the status of your results, place bottle orders, etc.	
PHONE: <b>404-720-1400</b>	FAX:	SAMPLED BY: <b>Nick Fuller</b>	SIGNATURE: <i>Nick</i>	PRESERVATION (See codes)		REMARKS	
#	SAMPLE ID	DATE	TIME	Grab	Composite	Matrix (See codes)	
1	MW-93	7/18/12	1605	X	63	X	2
2	MW-16A		135		1		2
3	MW-27A		1320		1		2
4	MW-26A		1323		1		2
5	MW-6A		1420		1		2
6	MW-13C		1510		1		2
7	MW-38A		1545		1		2
8	MW-12C		1625		1		2
9	MW-8B		1705		1		2
10	MW-29A		1750		1		2
11	MW-7C		1825		1		2
12	FDW #1	7/19/12	0830	X	SO	X	1
13	FDW #2		0835	X	SO	X	1
14	FDW #3		0840	X	SO	X	1
RELINQUISHED BY		DATE/TIME RECEIVED BY		DATE/TIME		PROJECT INFORMATION	
<i>Nick</i>		7/19/2012		7/19/12 3:15		PROJECT NAME: <b>Former Manchester Tank</b>	
						PROJECT #: <i>1</i>	Total # of Containers <b>25</b>
						Turnaround Time Request <input checked="" type="radio"/> Standard 5 Business Days <input type="radio"/> 2 Business Day Rush <input type="radio"/> Next Business Day Rush	
						STATE PROGRAM (if any): <b>○○○○</b>	Same Day Rush (auth req.) <input type="radio"/> Other <input type="radio"/> E-mail? Y / N; <input type="radio"/> Fax? Y / N
						INVOICE TO: (IF DIFFERENT FROM ABOVE) <b>A. Romanek AP@comsmith.com</b> <b>Clayton JT@comsmith.com</b>	PO#:
						QUOTE #:	
						SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD 1AT OF SAMPLES.	
						SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.	
						MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water PRESERVATIVE CODES: H1 = Hydrochloric acid + ice I = Ice only N = Nitric acid S1 = Sulfuric acid + ice S/Mt1 = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None White Copy - Original; Yellow Copy - Client	

## ANALYTICAL ENVIRONMENTAL SERVICES, INC

3785 Presidential Parkway, Atlanta GA 30340-3704

AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

## CHAIN OF CUSTODY

Work Order: 1207E25

Date: 7/19/12 Page 4 of 4

COMPANY: <b>Don Smith</b>		ADDRESS: <b>3715 Northside Parkway NW</b>		ANALYSIS REQUESTED										Visit our website <a href="http://www.aesatlanta.com">www.aesatlanta.com</a> to check on the status of your results, place bottle orders, etc.		
PHONE: <b>404-720-1400</b>		FAX: <b></b>		PRESERVATION (See codes)										REMARKS		
SAMPLED BY: <b>Charles Miller</b>		SIGNATURE: <b>Jim D</b>		SAMPLED		DATE		TIME		GRAN		COMPOSITE		MATRIX (See codes)		
#	SAMPLE ID															
1	TDW #4	7/19/12	0845	X	50	X									Doms #26-39	1
2	TDW #5		0850	X	50	X									Doms #40-54	1
3	TDW #6		0855	X	50	X									Doms #40-54	1
4	TDW #7		0900	X	50	X									Doms #1-13	1
5	TDW #8		0905	X	50	X									Doms #14-24	1
6	TDW #9		0910	X	50	X									MW-43 Soil	1
7	TDW #10		0915	X	50	X									MW-43 Soil	1
8	MW-21C		1105	X	60w	X										2
9	MW-24G		1115	X	60w	X										2
10	MW-22C		1140	X	60w	X									H2O Doms 1-3	2
11	TDW #11		1210	X	60w	X									H2O Doms 4-7	2
12	TDW #12		1215	X	60w	X									H2O Bulk Doms	2
13	TDW #13		1220	X	60w	X										2
14	TEP Blank			X												2
RELINQUISHED BY: <b>Jim D</b>		DATE/TIME RECEIVED BY: <b>7/19/12 1515</b>		DATE/TIME PROJECT INFORMATION										RECEIPT		
				PROJECT NAME: <b>Former Manchester Tank</b>										Total # of Containers <b>21</b>		
				PROJECT #:		SITE ADDRESS: <b>Colortech Co.</b>								Turnaround Time Request		
														<input checked="" type="radio"/> Standard 5 Business Days		
														<input type="radio"/> 2 Business Day Rush		
														<input type="radio"/> Next Business Day Rush		
														<input type="radio"/> Same Day Rush (auth req.)		
														<input type="radio"/> Other		
														<input type="radio"/> STATE PROGRAM (if any): _____		
														<input type="radio"/> E-mail? Y/N; _____		
														<input type="radio"/> DATA PACKAGE: I II III IV		
SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.														SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.		
SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.														SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.		
SPECIAL INSTRUCTIONS/COMMENTS:  <b>Jim D</b>		SHIPMENT METHOD: OUT / IN <b>CHEM</b> FedEx		VIA: UPS MAIL COURIER		VIA: UPS MAIL COURIER		VIA: UPS MAIL COURIER		VIA: UPS MAIL COURIER		VIA: UPS MAIL COURIER		QUOTE #: _____		
		GREYHOUND OTHER														
MATRIX CODES: A = Air G/W = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water		PRESERVATIVE CODES: H+1 = Hydrochloric acid + ice I = Ice only N = Nutric acid S+I = Sulfuric acid + ice SM+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None														

**Client:** CDM Smith Inc.  
**Project:** Former Manchester Tank  
**Lab ID:** 1207E25

**Case Narrative**

Volatile Organic Compounds Analysis by Method 8260B:

Sample 1207E25-022A as received did not meet method specified preservation requirements of pH <2. The laboratory proceeded with analysis.

Percent recovery for the internal standard compound 1,4-Dichlorobenzene-d4 on sample 1207E25-023A was outside control limits biased low due to suspected matrix interference.

Three 1-Liter amber glass jars were received for sample IDW #11 instead of two as indicated on the Chain of Custody (COC). One was labeled with the collection time 12:10pm which matched the COC, and two were labeled with a collection time 12:15pm. The IDW #11 bottle with the time of 12:10pm was used for analysis and the other two were placed on hold.

One 1-Liter amber glass jar was received for sample IDW #12 instead of two as indicated on the COC. The collection time was indicated as 12:15pm. The laboratory proceeded with analysis.

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	DUP-1					
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/16/2012 8:00:00 AM					
<b>Lab ID:</b>	1207E25-001	<b>Matrix:</b>	Groundwater					
<b>Analyses</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>Qual</b>	<b>Units</b>	<b>BatchID</b>	<b>Dilution Factor</b>	<b>Date Analyzed</b>	<b>Analyst</b>
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
2-Butanone	BRL	50		ug/L	164183	1	07/23/2012 22:08	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/23/2012 22:08	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/23/2012 22:08	NP
Acetone	BRL	50		ug/L	164183	1	07/23/2012 22:08	NP
Benzene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Chloroethane	BRL	10		ug/L	164183	1	07/23/2012 22:08	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Chloromethane	BRL	10		ug/L	164183	1	07/23/2012 22:08	NP
cis-1,2-Dichloroethene		6.6	5.0	ug/L	164183	1	07/23/2012 22:08	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/23/2012 22:08	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Freon-113	BRL	10		ug/L	164183	1	07/23/2012 22:08	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	DUP-1					
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/16/2012 8:00:00 AM					
<b>Lab ID:</b>	1207E25-001	<b>Matrix:</b>	Groundwater					
Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Toluene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Trichloroethene	24	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:08	NP
Vinyl chloride	BRL	2.0		ug/L	164183	1	07/23/2012 22:08	NP
Surr: 4-Bromofluorobenzene	86.3	67.4-123		%REC	164183	1	07/23/2012 22:08	NP
Surr: Dibromofluoromethane	128	75.5-128		%REC	164183	1	07/23/2012 22:08	NP
Surr: Toluene-d8	92.2	70-120		%REC	164183	1	07/23/2012 22:08	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-20B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/16/2012 1:00:00 PM
<b>Lab ID:</b>	1207E25-002	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
2-Butanone	BRL	50		ug/L	164183	1	07/23/2012 22:37	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/23/2012 22:37	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/23/2012 22:37	NP
Acetone	BRL	50		ug/L	164183	1	07/23/2012 22:37	NP
Benzene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Chloroethane	BRL	10		ug/L	164183	1	07/23/2012 22:37	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Chloromethane	BRL	10		ug/L	164183	1	07/23/2012 22:37	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/23/2012 22:37	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Freon-113	BRL	10		ug/L	164183	1	07/23/2012 22:37	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-20B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/16/2012 1:00:00 PM
<b>Lab ID:</b>	1207E25-002	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Toluene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Trichloroethene	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/23/2012 22:37	NP
Vinyl chloride	BRL	2.0		ug/L	164183	1	07/23/2012 22:37	NP
Surr: 4-Bromofluorobenzene	82	67.4-123	%REC		164183	1	07/23/2012 22:37	NP
Surr: Dibromofluoromethane	122	75.5-128	%REC		164183	1	07/23/2012 22:37	NP
Surr: Toluene-d8	87.5	70-120	%REC		164183	1	07/23/2012 22:37	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-18B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/16/2012 1:45:00 PM
<b>Lab ID:</b>	1207E25-003	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	5.8	5.0		ug/L	164183	1	07/23/2012 23:05	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
1,1-Dichloroethane	5.3	5.0		ug/L	164183	1	07/23/2012 23:05	NP
1,1-Dichloroethene	10	5.0		ug/L	164183	1	07/23/2012 23:05	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
2-Butanone	BRL	50		ug/L	164183	1	07/23/2012 23:05	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/23/2012 23:05	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/23/2012 23:05	NP
Acetone	BRL	50		ug/L	164183	1	07/23/2012 23:05	NP
Benzene	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Chloroethane	BRL	10		ug/L	164183	1	07/23/2012 23:05	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Chloromethane	BRL	10		ug/L	164183	1	07/23/2012 23:05	NP
cis-1,2-Dichloroethene	620	50		ug/L	164183	10	07/24/2012 11:08	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/23/2012 23:05	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Freon-113	BRL	10		ug/L	164183	1	07/23/2012 23:05	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-18B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/16/2012 1:45:00 PM
<b>Lab ID:</b>	1207E25-003	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Toluene	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
trans-1,2-Dichloroethene	6.0	5.0		ug/L	164183	1	07/23/2012 23:05	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Trichloroethene	180	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:05	NP
Vinyl chloride	BRL	2.0		ug/L	164183	1	07/23/2012 23:05	NP
Surr: 4-Bromofluorobenzene	79.9	67.4-123		%REC	164183	1	07/23/2012 23:05	NP
Surr: 4-Bromofluorobenzene	83	67.4-123		%REC	164183	10	07/24/2012 11:08	NP
Surr: Dibromofluoromethane	109	75.5-128		%REC	164183	10	07/24/2012 11:08	NP
Surr: Dibromofluoromethane	127	75.5-128		%REC	164183	1	07/23/2012 23:05	NP
Surr: Toluene-d8	88.3	70-120		%REC	164183	10	07/24/2012 11:08	NP
Surr: Toluene-d8	90.8	70-120		%REC	164183	1	07/23/2012 23:05	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-19C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/16/2012 2:15:00 PM
<b>Lab ID:</b>	1207E25-004	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
2-Butanone	BRL	50		ug/L	164183	1	07/23/2012 23:34	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/23/2012 23:34	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/23/2012 23:34	NP
Acetone	BRL	50		ug/L	164183	1	07/23/2012 23:34	NP
Benzene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Chloroethane	BRL	10		ug/L	164183	1	07/23/2012 23:34	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Chloromethane	BRL	10		ug/L	164183	1	07/23/2012 23:34	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/23/2012 23:34	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Freon-113	BRL	10		ug/L	164183	1	07/23/2012 23:34	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-19C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/16/2012 2:15:00 PM
<b>Lab ID:</b>	1207E25-004	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Toluene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Trichloroethene	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/23/2012 23:34	NP
Vinyl chloride	BRL	2.0		ug/L	164183	1	07/23/2012 23:34	NP
Surr: 4-Bromofluorobenzene	88.7	67.4-123	%REC		164183	1	07/23/2012 23:34	NP
Surr: Dibromofluoromethane	127	75.5-128	%REC		164183	1	07/23/2012 23:34	NP
Surr: Toluene-d8	90.1	70-120	%REC		164183	1	07/23/2012 23:34	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-11B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/16/2012 2:55:00 PM
<b>Lab ID:</b>	1207E25-005	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
2-Butanone	BRL	50		ug/L	164183	1	07/24/2012 00:03	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/24/2012 00:03	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/24/2012 00:03	NP
Acetone	BRL	50		ug/L	164183	1	07/24/2012 00:03	NP
Benzene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Chloroethane	BRL	10		ug/L	164183	1	07/24/2012 00:03	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Chloromethane	BRL	10		ug/L	164183	1	07/24/2012 00:03	NP
cis-1,2-Dichloroethene	130	5.0		ug/L	164183	1	07/24/2012 00:03	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/24/2012 00:03	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Freon-113	BRL	10		ug/L	164183	1	07/24/2012 00:03	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-11B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/16/2012 2:55:00 PM
<b>Lab ID:</b>	1207E25-005	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Toluene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Trichloroethene	38	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:03	NP
Vinyl chloride	BRL	2.0		ug/L	164183	1	07/24/2012 00:03	NP
Surr: 4-Bromofluorobenzene	80.9	67.4-123	%REC		164183	1	07/24/2012 00:03	NP
Surr: Dibromofluoromethane	119	75.5-128	%REC		164183	1	07/24/2012 00:03	NP
Surr: Toluene-d8	93.3	70-120	%REC		164183	1	07/24/2012 00:03	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-10B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/16/2012 3:40:00 PM
<b>Lab ID:</b>	1207E25-006	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
2-Butanone	BRL	50		ug/L	164183	1	07/24/2012 00:32	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/24/2012 00:32	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/24/2012 00:32	NP
Acetone	BRL	50		ug/L	164183	1	07/24/2012 00:32	NP
Benzene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Chloroethane	BRL	10		ug/L	164183	1	07/24/2012 00:32	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Chloromethane	BRL	10		ug/L	164183	1	07/24/2012 00:32	NP
cis-1,2-Dichloroethene	8.8	5.0		ug/L	164183	1	07/24/2012 00:32	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/24/2012 00:32	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Freon-113	BRL	10		ug/L	164183	1	07/24/2012 00:32	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-10B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/16/2012 3:40:00 PM
<b>Lab ID:</b>	1207E25-006	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Toluene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Trichloroethene	25	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/24/2012 00:32	NP
Vinyl chloride	BRL	2.0		ug/L	164183	1	07/24/2012 00:32	NP
Surr: 4-Bromofluorobenzene	77.3	67.4-123	%REC		164183	1	07/24/2012 00:32	NP
Surr: Dibromofluoromethane	103	75.5-128	%REC		164183	1	07/24/2012 00:32	NP
Surr: Toluene-d8	89.8	70-120	%REC		164183	1	07/24/2012 00:32	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-36C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/16/2012 4:45:00 PM
<b>Lab ID:</b>	1207E25-007	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
1,1-Dichloroethene		9.2	5.0	ug/L	164183	1	07/24/2012 01:00	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
2-Butanone	BRL	50		ug/L	164183	1	07/24/2012 01:00	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/24/2012 01:00	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/24/2012 01:00	NP
Acetone	BRL	50		ug/L	164183	1	07/24/2012 01:00	NP
Benzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Chloroethane	BRL	10		ug/L	164183	1	07/24/2012 01:00	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Chloromethane	BRL	10		ug/L	164183	1	07/24/2012 01:00	NP
cis-1,2-Dichloroethene		55	5.0	ug/L	164183	1	07/24/2012 01:00	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/24/2012 01:00	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Freon-113	BRL	10		ug/L	164183	1	07/24/2012 01:00	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-36C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/16/2012 4:45:00 PM
<b>Lab ID:</b>	1207E25-007	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Toluene	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Trichloroethene	180	50		ug/L	164183	10	07/24/2012 11:37	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:00	NP
Vinyl chloride	BRL	2.0		ug/L	164183	1	07/24/2012 01:00	NP
Surr: 4-Bromofluorobenzene	80.9	67.4-123		%REC	164183	10	07/24/2012 11:37	NP
Surr: 4-Bromofluorobenzene	82.4	67.4-123		%REC	164183	1	07/24/2012 01:00	NP
Surr: Dibromofluoromethane	119	75.5-128		%REC	164183	1	07/24/2012 01:00	NP
Surr: Dibromofluoromethane	111	75.5-128		%REC	164183	10	07/24/2012 11:37	NP
Surr: Toluene-d8	94.6	70-120		%REC	164183	10	07/24/2012 11:37	NP
Surr: Toluene-d8	96.2	70-120		%REC	164183	1	07/24/2012 01:00	NP

<b>Qualifiers:</b>	*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
	BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
	H	Holding times for preparation or analysis exceeded	Narr	See case narrative
	N	Analyte not NELAC certified	NC	Not confirmed
	B	Analyte detected in the associated method blank	<	Less than Result value
	>	Greater than Result value	J	Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-5B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/16/2012 4:45:00 PM
<b>Lab ID:</b>	1207E25-008	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	34	5.0		ug/L	164183	1	07/24/2012 01:29	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
1,1-Dichloroethene	13	5.0		ug/L	164183	1	07/24/2012 01:29	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
2-Butanone	BRL	50		ug/L	164183	1	07/24/2012 01:29	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/24/2012 01:29	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/24/2012 01:29	NP
Acetone	BRL	50		ug/L	164183	1	07/24/2012 01:29	NP
Benzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Chloroethane	BRL	10		ug/L	164183	1	07/24/2012 01:29	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Chloromethane	BRL	10		ug/L	164183	1	07/24/2012 01:29	NP
cis-1,2-Dichloroethene	180	5.0		ug/L	164183	1	07/24/2012 01:29	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/24/2012 01:29	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Freon-113	BRL	10		ug/L	164183	1	07/24/2012 01:29	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-5B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/16/2012 4:45:00 PM
<b>Lab ID:</b>	1207E25-008	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Toluene	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Trichloroethene	300	50		ug/L	164183	10	07/24/2012 12:06	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:29	NP
Vinyl chloride	BRL	2.0		ug/L	164183	1	07/24/2012 01:29	NP
Surr: 4-Bromofluorobenzene	80.9	67.4-123		%REC	164183	1	07/24/2012 01:29	NP
Surr: 4-Bromofluorobenzene	80.8	67.4-123		%REC	164183	10	07/24/2012 12:06	NP
Surr: Dibromofluoromethane	112	75.5-128		%REC	164183	10	07/24/2012 12:06	NP
Surr: Dibromofluoromethane	120	75.5-128		%REC	164183	1	07/24/2012 01:29	NP
Surr: Toluene-d8	91.6	70-120		%REC	164183	10	07/24/2012 12:06	NP
Surr: Toluene-d8	94.9	70-120		%REC	164183	1	07/24/2012 01:29	NP

<b>Qualifiers:</b>	*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
	BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
	H	Holding times for preparation or analysis exceeded	Narr	See case narrative
	N	Analyte not NELAC certified	NC	Not confirmed
	B	Analyte detected in the associated method blank	<	Less than Result value
	>	Greater than Result value	J	Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	DUP-2
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 8:00:00 AM
<b>Lab ID:</b>	1207E25-009	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								<b>(SW5030B)</b>
1,1,1-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
2-Butanone	BRL	50		ug/L	164183	1	07/24/2012 01:58	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/24/2012 01:58	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/24/2012 01:58	NP
Acetone	BRL	50		ug/L	164183	1	07/24/2012 01:58	NP
Benzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Chloroethane	BRL	10		ug/L	164183	1	07/24/2012 01:58	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Chloromethane	BRL	10		ug/L	164183	1	07/24/2012 01:58	NP
cis-1,2-Dichloroethene	23	5.0		ug/L	164183	1	07/24/2012 01:58	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/24/2012 01:58	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Freon-113	BRL	10		ug/L	164183	1	07/24/2012 01:58	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	DUP-2
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 8:00:00 AM
<b>Lab ID:</b>	1207E25-009	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Toluene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Trichloroethene	40	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/24/2012 01:58	NP
Vinyl chloride	BRL	2.0		ug/L	164183	1	07/24/2012 01:58	NP
Surr: 4-Bromofluorobenzene	81.8	67.4-123	%REC		164183	1	07/24/2012 01:58	NP
Surr: Dibromofluoromethane	114	75.5-128	%REC		164183	1	07/24/2012 01:58	NP
Surr: Toluene-d8	92.9	70-120	%REC		164183	1	07/24/2012 01:58	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-30A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 9:25:00 AM
<b>Lab ID:</b>	1207E25-010	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
2-Butanone	BRL	50		ug/L	164183	1	07/24/2012 02:26	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/24/2012 02:26	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/24/2012 02:26	NP
Acetone	BRL	50		ug/L	164183	1	07/24/2012 02:26	NP
Benzene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Chloroethane	BRL	10		ug/L	164183	1	07/24/2012 02:26	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Chloromethane	BRL	10		ug/L	164183	1	07/24/2012 02:26	NP
cis-1,2-Dichloroethene	12	5.0		ug/L	164183	1	07/24/2012 02:26	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/24/2012 02:26	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Freon-113	BRL	10		ug/L	164183	1	07/24/2012 02:26	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-30A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 9:25:00 AM
<b>Lab ID:</b>	1207E25-010	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Toluene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Trichloroethene	25	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:26	NP
Vinyl chloride	BRL	2.0		ug/L	164183	1	07/24/2012 02:26	NP
Surr: 4-Bromofluorobenzene	79.5	67.4-123	%REC		164183	1	07/24/2012 02:26	NP
Surr: Dibromofluoromethane	119	75.5-128	%REC		164183	1	07/24/2012 02:26	NP
Surr: Toluene-d8	97.2	70-120	%REC		164183	1	07/24/2012 02:26	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-38C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 10:10:00 AM
<b>Lab ID:</b>	1207E25-011	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
2-Butanone	BRL	50		ug/L	164183	1	07/24/2012 02:55	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/24/2012 02:55	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/24/2012 02:55	NP
Acetone	BRL	50		ug/L	164183	1	07/24/2012 02:55	NP
Benzene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Chloroethane	BRL	10		ug/L	164183	1	07/24/2012 02:55	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Chloromethane	BRL	10		ug/L	164183	1	07/24/2012 02:55	NP
cis-1,2-Dichloroethene		17		ug/L	164183	1	07/24/2012 02:55	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/24/2012 02:55	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Freon-113	BRL	10		ug/L	164183	1	07/24/2012 02:55	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-38C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 10:10:00 AM
<b>Lab ID:</b>	1207E25-011	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Toluene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Trichloroethene	30	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/24/2012 02:55	NP
Vinyl chloride	BRL	2.0		ug/L	164183	1	07/24/2012 02:55	NP
Surr: 4-Bromofluorobenzene	84.4	67.4-123	%REC		164183	1	07/24/2012 02:55	NP
Surr: Dibromofluoromethane	117	75.5-128	%REC		164183	1	07/24/2012 02:55	NP
Surr: Toluene-d8	96.8	70-120	%REC		164183	1	07/24/2012 02:55	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-1B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 11:00:00 AM
<b>Lab ID:</b>	1207E25-012	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
2-Butanone	BRL	50		ug/L	164183	1	07/24/2012 03:24	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/24/2012 03:24	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/24/2012 03:24	NP
Acetone	BRL	50		ug/L	164183	1	07/24/2012 03:24	NP
Benzene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Chloroethane	BRL	10		ug/L	164183	1	07/24/2012 03:24	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Chloromethane	BRL	10		ug/L	164183	1	07/24/2012 03:24	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/24/2012 03:24	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Freon-113	BRL	10		ug/L	164183	1	07/24/2012 03:24	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-1B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 11:00:00 AM
<b>Lab ID:</b>	1207E25-012	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Toluene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Trichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:24	NP
Vinyl chloride	BRL	2.0		ug/L	164183	1	07/24/2012 03:24	NP
Surr: 4-Bromofluorobenzene	80.8	67.4-123	%REC		164183	1	07/24/2012 03:24	NP
Surr: Dibromofluoromethane	108	75.5-128	%REC		164183	1	07/24/2012 03:24	NP
Surr: Toluene-d8	90.2	70-120	%REC		164183	1	07/24/2012 03:24	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-35D
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 1:30:00 PM
<b>Lab ID:</b>	1207E25-013	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
2-Butanone	BRL	50		ug/L	164183	1	07/24/2012 03:53	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/24/2012 03:53	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/24/2012 03:53	NP
Acetone	BRL	50		ug/L	164183	1	07/24/2012 03:53	NP
Benzene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Chloroethane	BRL	10		ug/L	164183	1	07/24/2012 03:53	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Chloromethane	BRL	10		ug/L	164183	1	07/24/2012 03:53	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/24/2012 03:53	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Freon-113	BRL	10		ug/L	164183	1	07/24/2012 03:53	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-35D
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 1:30:00 PM
<b>Lab ID:</b>	1207E25-013	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Toluene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Trichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/24/2012 03:53	NP
Vinyl chloride	BRL	2.0		ug/L	164183	1	07/24/2012 03:53	NP
Surr: 4-Bromofluorobenzene	82.5	67.4-123		%REC	164183	1	07/24/2012 03:53	NP
Surr: Dibromofluoromethane	123	75.5-128		%REC	164183	1	07/24/2012 03:53	NP
Surr: Toluene-d8	94.3	70-120		%REC	164183	1	07/24/2012 03:53	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-33A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 1:35:00 PM
<b>Lab ID:</b>	1207E25-014	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
2-Butanone	BRL	50		ug/L	164183	1	07/24/2012 13:03	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/24/2012 13:03	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/24/2012 13:03	NP
Acetone	BRL	50		ug/L	164183	1	07/24/2012 13:03	NP
Benzene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Chloroethane	BRL	10		ug/L	164183	1	07/24/2012 13:03	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Chloromethane	BRL	10		ug/L	164183	1	07/24/2012 13:03	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/24/2012 13:03	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Freon-113	BRL	10		ug/L	164183	1	07/24/2012 13:03	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-33A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 1:35:00 PM
<b>Lab ID:</b>	1207E25-014	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Toluene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Trichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/24/2012 13:03	NP
Vinyl chloride	BRL	2.0		ug/L	164183	1	07/24/2012 13:03	NP
Surr: 4-Bromofluorobenzene	83.8	67.4-123		%REC	164183	1	07/24/2012 13:03	NP
Surr: Dibromofluoromethane	111	75.5-128		%REC	164183	1	07/24/2012 13:03	NP
Surr: Toluene-d8	89.2	70-120		%REC	164183	1	07/24/2012 13:03	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-37C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 2:35:00 PM
<b>Lab ID:</b>	1207E25-015	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	21	5.0		ug/L	164183	1	07/24/2012 14:59	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
2-Butanone	BRL	50		ug/L	164183	1	07/24/2012 14:59	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/24/2012 14:59	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/24/2012 14:59	NP
Acetone	BRL	50		ug/L	164183	1	07/24/2012 14:59	NP
Benzene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Chloroethane	BRL	10		ug/L	164183	1	07/24/2012 14:59	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Chloromethane	BRL	10		ug/L	164183	1	07/24/2012 14:59	NP
cis-1,2-Dichloroethene	130	5.0		ug/L	164183	1	07/24/2012 14:59	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/24/2012 14:59	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Freon-113	BRL	10		ug/L	164183	1	07/24/2012 14:59	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-37C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 2:35:00 PM
<b>Lab ID:</b>	1207E25-015	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Toluene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Trichloroethene	280	50		ug/L	164183	10	07/24/2012 12:35	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/24/2012 14:59	NP
Vinyl chloride	BRL	2.0		ug/L	164183	1	07/24/2012 14:59	NP
Surr: 4-Bromofluorobenzene	75.7	67.4-123		%REC	164183	10	07/24/2012 12:35	NP
Surr: 4-Bromofluorobenzene	88	67.4-123		%REC	164183	1	07/24/2012 14:59	NP
Surr: Dibromofluoromethane	109	75.5-128		%REC	164183	1	07/24/2012 14:59	NP
Surr: Dibromofluoromethane	114	75.5-128		%REC	164183	10	07/24/2012 12:35	NP
Surr: Toluene-d8	88.6	70-120		%REC	164183	1	07/24/2012 14:59	NP
Surr: Toluene-d8	94.7	70-120		%REC	164183	10	07/24/2012 12:35	NP

<b>Qualifiers:</b>	*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
	BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
	H	Holding times for preparation or analysis exceeded	Narr	See case narrative
	N	Analyte not NELAC certified	NC	Not confirmed
	B	Analyte detected in the associated method blank	<	Less than Result value
	>	Greater than Result value	J	Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-32B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 2:56:00 PM
<b>Lab ID:</b>	1207E25-016	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								<b>(SW5030B)</b>
1,1,1-Trichloroethane	21	5.0		ug/L	164183	1	07/24/2012 05:20	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
1,1-Dichloroethane	5.0	5.0		ug/L	164183	1	07/24/2012 05:20	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
2-Butanone	BRL	50		ug/L	164183	1	07/24/2012 05:20	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/24/2012 05:20	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/24/2012 05:20	NP
Acetone	BRL	50		ug/L	164183	1	07/24/2012 05:20	NP
Benzene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Chloroethane	BRL	10		ug/L	164183	1	07/24/2012 05:20	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Chloromethane	BRL	10		ug/L	164183	1	07/24/2012 05:20	NP
cis-1,2-Dichloroethene	160	5.0		ug/L	164183	1	07/24/2012 05:20	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/24/2012 05:20	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Freon-113	BRL	10		ug/L	164183	1	07/24/2012 05:20	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-32B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 2:56:00 PM
<b>Lab ID:</b>	1207E25-016	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Toluene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Trichloroethene	76	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:20	NP
Vinyl chloride	3.4	2.0		ug/L	164183	1	07/24/2012 05:20	NP
Surr: 4-Bromofluorobenzene	76.7	67.4-123	%REC		164183	1	07/24/2012 05:20	NP
Surr: Dibromofluoromethane	114	75.5-128	%REC		164183	1	07/24/2012 05:20	NP
Surr: Toluene-d8	89.7	70-120	%REC		164183	1	07/24/2012 05:20	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-31C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 3:30:00 PM
<b>Lab ID:</b>	1207E25-017	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	5.7	5.0		ug/L	164183	1	07/24/2012 05:48	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
2-Butanone	BRL	50		ug/L	164183	1	07/24/2012 05:48	NP
2-Hexanone	BRL	10		ug/L	164183	1	07/24/2012 05:48	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164183	1	07/24/2012 05:48	NP
Acetone	BRL	50		ug/L	164183	1	07/24/2012 05:48	NP
Benzene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Bromodichloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Bromoform	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Bromomethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Carbon disulfide	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Carbon tetrachloride	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Chlorobenzene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Chloroethane	BRL	10		ug/L	164183	1	07/24/2012 05:48	NP
Chloroform	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Chloromethane	BRL	10		ug/L	164183	1	07/24/2012 05:48	NP
cis-1,2-Dichloroethene	25	5.0		ug/L	164183	1	07/24/2012 05:48	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Cyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Dibromochloromethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Dichlorodifluoromethane	BRL	10		ug/L	164183	1	07/24/2012 05:48	NP
Ethylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Freon-113	BRL	10		ug/L	164183	1	07/24/2012 05:48	NP
Isopropylbenzene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
m,p-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Methyl acetate	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Methylcyclohexane	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Methylene chloride	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
o-Xylene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-31C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 3:30:00 PM
<b>Lab ID:</b>	1207E25-017	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Tetrachloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Toluene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Trichloroethene	37	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164183	1	07/24/2012 05:48	NP
Vinyl chloride	BRL	2.0		ug/L	164183	1	07/24/2012 05:48	NP
Surr: 4-Bromofluorobenzene	76.4	67.4-123	%REC		164183	1	07/24/2012 05:48	NP
Surr: Dibromofluoromethane	111	75.5-128	%REC		164183	1	07/24/2012 05:48	NP
Surr: Toluene-d8	90	70-120	%REC		164183	1	07/24/2012 05:48	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-4B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 3:56:00 PM
<b>Lab ID:</b>	1207E25-018	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	43	5.0		ug/L	164240	1	07/25/2012 10:51	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
1,1-Dichloroethene	9.7	5.0		ug/L	164240	1	07/25/2012 10:51	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
2-Butanone	BRL	50		ug/L	164240	1	07/25/2012 10:51	NP
2-Hexanone	BRL	10		ug/L	164240	1	07/25/2012 10:51	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164240	1	07/25/2012 10:51	NP
Acetone	BRL	50		ug/L	164240	1	07/25/2012 10:51	NP
Benzene	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Bromodichloromethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Bromoform	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Bromomethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Carbon disulfide	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Carbon tetrachloride	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Chlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Chloroethane	BRL	10		ug/L	164240	1	07/25/2012 10:51	NP
Chloroform	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Chloromethane	BRL	10		ug/L	164240	1	07/25/2012 10:51	NP
cis-1,2-Dichloroethene	170	5.0		ug/L	164240	1	07/25/2012 10:51	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Cyclohexane	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Dibromochloromethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Dichlorodifluoromethane	BRL	10		ug/L	164240	1	07/25/2012 10:51	NP
Ethylbenzene	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Freon-113	BRL	10		ug/L	164240	1	07/25/2012 10:51	NP
Isopropylbenzene	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
m,p-Xylene	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Methyl acetate	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Methylcyclohexane	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Methylene chloride	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
o-Xylene	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-4B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 3:56:00 PM
<b>Lab ID:</b>	1207E25-018	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Tetrachloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Toluene	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Trichloroethene	320	50		ug/L	164240	10	07/24/2012 16:26	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:51	NP
Vinyl chloride	BRL	2.0		ug/L	164240	1	07/25/2012 10:51	NP
Surr: 4-Bromofluorobenzene	78.3	67.4-123		%REC	164240	10	07/24/2012 16:26	NP
Surr: 4-Bromofluorobenzene	82	67.4-123		%REC	164240	1	07/25/2012 10:51	NP
Surr: Dibromofluoromethane	107	75.5-128		%REC	164240	10	07/24/2012 16:26	NP
Surr: Dibromofluoromethane	116	75.5-128		%REC	164240	1	07/25/2012 10:51	NP
Surr: Toluene-d8	91.8	70-120		%REC	164240	1	07/25/2012 10:51	NP
Surr: Toluene-d8	91	70-120		%REC	164240	10	07/24/2012 16:26	NP

<b>Qualifiers:</b>	*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
	BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
	H	Holding times for preparation or analysis exceeded	Narr	See case narrative
	N	Analyte not NELAC certified	NC	Not confirmed
	B	Analyte detected in the associated method blank	<	Less than Result value
	>	Greater than Result value	J	Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-34B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 4:30:00 PM
<b>Lab ID:</b>	1207E25-019	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
2-Butanone	BRL	50		ug/L	164240	1	07/25/2012 10:22	NP
2-Hexanone	BRL	10		ug/L	164240	1	07/25/2012 10:22	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164240	1	07/25/2012 10:22	NP
Acetone	BRL	50		ug/L	164240	1	07/25/2012 10:22	NP
Benzene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Bromodichloromethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Bromoform	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Bromomethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Carbon disulfide	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Carbon tetrachloride	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Chlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Chloroethane	BRL	10		ug/L	164240	1	07/25/2012 10:22	NP
Chloroform	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Chloromethane	BRL	10		ug/L	164240	1	07/25/2012 10:22	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Cyclohexane	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Dibromochloromethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Dichlorodifluoromethane	BRL	10		ug/L	164240	1	07/25/2012 10:22	NP
Ethylbenzene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Freon-113	BRL	10		ug/L	164240	1	07/25/2012 10:22	NP
Isopropylbenzene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
m,p-Xylene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Methyl acetate	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Methylcyclohexane	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Methylene chloride	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
o-Xylene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-34B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 4:30:00 PM
<b>Lab ID:</b>	1207E25-019	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Tetrachloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Toluene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Trichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164240	1	07/25/2012 10:22	NP
Vinyl chloride	BRL	2.0		ug/L	164240	1	07/25/2012 10:22	NP
Surr: 4-Bromofluorobenzene	82.3	67.4-123		%REC	164240	1	07/25/2012 10:22	NP
Surr: Dibromofluoromethane	114	75.5-128		%REC	164240	1	07/25/2012 10:22	NP
Surr: Toluene-d8	94	70-120		%REC	164240	1	07/25/2012 10:22	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-25A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 4:55:00 PM
<b>Lab ID:</b>	1207E25-020	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
2-Butanone	BRL	50		ug/L	164240	1	07/25/2012 11:20	NP
2-Hexanone	BRL	10		ug/L	164240	1	07/25/2012 11:20	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164240	1	07/25/2012 11:20	NP
Acetone	BRL	50		ug/L	164240	1	07/25/2012 11:20	NP
Benzene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Bromodichloromethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Bromoform	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Bromomethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Carbon disulfide	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Carbon tetrachloride	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Chlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Chloroethane	BRL	10		ug/L	164240	1	07/25/2012 11:20	NP
Chloroform	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Chloromethane	BRL	10		ug/L	164240	1	07/25/2012 11:20	NP
cis-1,2-Dichloroethene	6.4	5.0		ug/L	164240	1	07/25/2012 11:20	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Cyclohexane	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Dibromochloromethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Dichlorodifluoromethane	BRL	10		ug/L	164240	1	07/25/2012 11:20	NP
Ethylbenzene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Freon-113	BRL	10		ug/L	164240	1	07/25/2012 11:20	NP
Isopropylbenzene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
m,p-Xylene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Methyl acetate	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Methylcyclohexane	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Methylene chloride	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
o-Xylene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-25A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 4:55:00 PM
<b>Lab ID:</b>	1207E25-020	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Tetrachloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Toluene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Trichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:20	NP
Vinyl chloride	BRL	2.0		ug/L	164240	1	07/25/2012 11:20	NP
Surr: 4-Bromofluorobenzene	83.7	67.4-123	%REC		164240	1	07/25/2012 11:20	NP
Surr: Dibromofluoromethane	119	75.5-128	%REC		164240	1	07/25/2012 11:20	NP
Surr: Toluene-d8	99.5	70-120	%REC		164240	1	07/25/2012 11:20	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-40C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 5:15:00 PM
<b>Lab ID:</b>	1207E25-021	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
2-Butanone	BRL	50		ug/L	164240	1	07/25/2012 11:49	NP
2-Hexanone	BRL	10		ug/L	164240	1	07/25/2012 11:49	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164240	1	07/25/2012 11:49	NP
Acetone	BRL	50		ug/L	164240	1	07/25/2012 11:49	NP
Benzene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Bromodichloromethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Bromoform	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Bromomethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Carbon disulfide	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Carbon tetrachloride	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Chlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Chloroethane	BRL	10		ug/L	164240	1	07/25/2012 11:49	NP
Chloroform	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Chloromethane	BRL	10		ug/L	164240	1	07/25/2012 11:49	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Cyclohexane	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Dibromochloromethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Dichlorodifluoromethane	BRL	10		ug/L	164240	1	07/25/2012 11:49	NP
Ethylbenzene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Freon-113	BRL	10		ug/L	164240	1	07/25/2012 11:49	NP
Isopropylbenzene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
m,p-Xylene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Methyl acetate	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Methylcyclohexane	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Methylene chloride	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
o-Xylene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-40C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/17/2012 5:15:00 PM
<b>Lab ID:</b>	1207E25-021	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Tetrachloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Toluene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Trichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164240	1	07/25/2012 11:49	NP
Vinyl chloride	BRL	2.0		ug/L	164240	1	07/25/2012 11:49	NP
Surr: 4-Bromofluorobenzene	83.5	67.4-123	%REC		164240	1	07/25/2012 11:49	NP
Surr: Dibromofluoromethane	111	75.5-128	%REC		164240	1	07/25/2012 11:49	NP
Surr: Toluene-d8	89.9	70-120	%REC		164240	1	07/25/2012 11:49	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-39C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 8:50:00 AM
<b>Lab ID:</b>	1207E25-022	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
2-Butanone	BRL	50		ug/L	164240	1	07/25/2012 12:18	NP
2-Hexanone	BRL	10		ug/L	164240	1	07/25/2012 12:18	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164240	1	07/25/2012 12:18	NP
Acetone	BRL	50		ug/L	164240	1	07/25/2012 12:18	NP
Benzene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Bromodichloromethane	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Bromoform	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Bromomethane	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Carbon disulfide	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Carbon tetrachloride	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Chlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Chloroethane	BRL	10		ug/L	164240	1	07/25/2012 12:18	NP
Chloroform	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Chloromethane	BRL	10		ug/L	164240	1	07/25/2012 12:18	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Cyclohexane	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Dibromochloromethane	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Dichlorodifluoromethane	BRL	10		ug/L	164240	1	07/25/2012 12:18	NP
Ethylbenzene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Freon-113	BRL	10		ug/L	164240	1	07/25/2012 12:18	NP
Isopropylbenzene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
m,p-Xylene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Methyl acetate	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Methylcyclohexane	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Methylene chloride	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
o-Xylene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-39C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 8:50:00 AM
<b>Lab ID:</b>	1207E25-022	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Tetrachloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Toluene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Trichloroethene	13	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164240	1	07/25/2012 12:18	NP
Vinyl chloride	BRL	2.0		ug/L	164240	1	07/25/2012 12:18	NP
Surr: 4-Bromofluorobenzene	75.8	67.4-123		%REC	164240	1	07/25/2012 12:18	NP
Surr: Dibromofluoromethane	113	75.5-128		%REC	164240	1	07/25/2012 12:18	NP
Surr: Toluene-d8	92.1	70-120		%REC	164240	1	07/25/2012 12:18	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	DUP-3
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 8:00:00 AM
<b>Lab ID:</b>	1207E25-023	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								<b>(SW5030B)</b>
1,1,1-Trichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
1,1-Dichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
1,1-Dichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
2-Butanone	BRL	50		ug/L	164240	1	07/25/2012 16:33	NP
2-Hexanone	BRL	10		ug/L	164240	1	07/25/2012 16:33	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164240	1	07/25/2012 16:33	NP
Acetone	BRL	50		ug/L	164240	1	07/25/2012 16:33	NP
Benzene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Bromodichloromethane	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Bromoform	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Bromomethane	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Carbon disulfide	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Carbon tetrachloride	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Chlorobenzene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Chloroethane	BRL	10		ug/L	164240	1	07/25/2012 16:33	NP
Chloroform	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Chloromethane	BRL	10		ug/L	164240	1	07/25/2012 16:33	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Cyclohexane	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Dibromochloromethane	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Dichlorodifluoromethane	BRL	10		ug/L	164240	1	07/25/2012 16:33	NP
Ethylbenzene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Freon-113	BRL	10		ug/L	164240	1	07/25/2012 16:33	NP
Isopropylbenzene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
m,p-Xylene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Methyl acetate	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Methylcyclohexane	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Methylene chloride	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
o-Xylene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	DUP-3
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 8:00:00 AM
<b>Lab ID:</b>	1207E25-023	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Tetrachloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Toluene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Trichloroethene	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Trichlorofluoromethane	BRL	5.0		ug/L	164240	1	07/25/2012 16:33	NP
Vinyl chloride	BRL	2.0		ug/L	164240	1	07/25/2012 16:33	NP
Surr: 4-Bromofluorobenzene	74.9	67.4-123	%REC		164240	1	07/25/2012 16:33	NP
Surr: Dibromofluoromethane	112	75.5-128	%REC		164240	1	07/25/2012 16:33	NP
Surr: Toluene-d8	87.5	70-120	%REC		164240	1	07/25/2012 16:33	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	DUP-4
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 8:30:00 AM
<b>Lab ID:</b>	1207E25-024	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	340	200		ug/L	164230	100	07/25/2012 15:36	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
1,1,2-Trichloroethane		7.5		ug/L	164230	1	07/25/2012 13:30	NP
1,1-Dichloroethane	100	5.0		ug/L	164230	1	07/25/2012 13:30	NP
1,1-Dichloroethene	330	200		ug/L	164230	100	07/25/2012 15:36	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
1,2-Dichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
2-Butanone	BRL	50		ug/L	164230	1	07/25/2012 13:30	NP
2-Hexanone	BRL	10		ug/L	164230	1	07/25/2012 13:30	NP
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/25/2012 13:30	NP
Acetone	BRL	50		ug/L	164230	1	07/25/2012 13:30	NP
Benzene	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Bromoform	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Bromomethane	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Chloroethane	BRL	10		ug/L	164230	1	07/25/2012 13:30	NP
Chloroform	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Chloromethane	BRL	10		ug/L	164230	1	07/25/2012 13:30	NP
cis-1,2-Dichloroethene	15000	500		ug/L	164230	100	07/25/2012 15:36	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Cyclohexane	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/25/2012 13:30	NP
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Freon-113	BRL	10		ug/L	164230	1	07/25/2012 13:30	NP
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Methyl acetate	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Methylene chloride	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
o-Xylene	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	DUP-4
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 8:30:00 AM
<b>Lab ID:</b>	1207E25-024	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Toluene	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
trans-1,2-Dichloroethene	240	200		ug/L	164230	100	07/25/2012 15:36	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Trichloroethene	8100	500		ug/L	164230	100	07/25/2012 15:36	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/25/2012 13:30	NP
Vinyl chloride	3.0	2.0		ug/L	164230	1	07/25/2012 13:30	NP
Surr: 4-Bromofluorobenzene	76.5	67.4-123		%REC	164230	1	07/25/2012 13:30	NP
Surr: 4-Bromofluorobenzene	92.1	67.4-123		%REC	164230	100	07/25/2012 15:36	NH
Surr: Dibromofluoromethane	112	75.5-128		%REC	164230	100	07/25/2012 15:36	NH
Surr: Dibromofluoromethane	117	75.5-128		%REC	164230	1	07/25/2012 13:30	NP
Surr: Toluene-d8	91.7	70-120		%REC	164230	1	07/25/2012 13:30	NP
Surr: Toluene-d8	92.8	70-120		%REC	164230	100	07/25/2012 15:36	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-14C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 9:30:00 AM
<b>Lab ID:</b>	1207E25-025	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
1,1-Dichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
1,1-Dichloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
1,2-Dichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
2-Butanone	BRL	50		ug/L	164230	1	07/25/2012 09:35	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/25/2012 09:35	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/25/2012 09:35	NH
Acetone	BRL	50		ug/L	164230	1	07/25/2012 09:35	NH
Benzene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Chloroethane	BRL	10		ug/L	164230	1	07/25/2012 09:35	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Chloromethane	BRL	10		ug/L	164230	1	07/25/2012 09:35	NH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/25/2012 09:35	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Freon-113	BRL	10		ug/L	164230	1	07/25/2012 09:35	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-14C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 9:30:00 AM
<b>Lab ID:</b>	1207E25-025	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Toluene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Trichloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/25/2012 09:35	NH
Vinyl chloride	BRL	2.0		ug/L	164230	1	07/25/2012 09:35	NH
Surr: 4-Bromofluorobenzene	92.9	67.4-123	%REC		164230	1	07/25/2012 09:35	NH
Surr: Dibromofluoromethane	111	75.5-128	%REC		164230	1	07/25/2012 09:35	NH
Surr: Toluene-d8	94.3	70-120	%REC		164230	1	07/25/2012 09:35	NH

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-17C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 10:05:00 AM
<b>Lab ID:</b>	1207E25-026	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
1,1-Dichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
1,1-Dichloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
1,2-Dichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
2-Butanone	BRL	50		ug/L	164230	1	07/25/2012 10:32	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/25/2012 10:32	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/25/2012 10:32	NH
Acetone	BRL	50		ug/L	164230	1	07/25/2012 10:32	NH
Benzene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Chloroethane	BRL	10		ug/L	164230	1	07/25/2012 10:32	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Chloromethane	BRL	10		ug/L	164230	1	07/25/2012 10:32	NH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/25/2012 10:32	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Freon-113	BRL	10		ug/L	164230	1	07/25/2012 10:32	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-17C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 10:05:00 AM
<b>Lab ID:</b>	1207E25-026	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Toluene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Trichloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/25/2012 10:32	NH
Vinyl chloride	BRL	2.0		ug/L	164230	1	07/25/2012 10:32	NH
Surr: 4-Bromofluorobenzene	98.2	67.4-123	%REC		164230	1	07/25/2012 10:32	NH
Surr: Dibromofluoromethane	110	75.5-128	%REC		164230	1	07/25/2012 10:32	NH
Surr: Toluene-d8	91.3	70-120	%REC		164230	1	07/25/2012 10:32	NH

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-15B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 10:18:00 AM
<b>Lab ID:</b>	1207E25-027	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
1,1-Dichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
1,1-Dichloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
1,2-Dichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
2-Butanone	BRL	50		ug/L	164230	1	07/25/2012 11:01	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/25/2012 11:01	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/25/2012 11:01	NH
Acetone	BRL	50		ug/L	164230	1	07/25/2012 11:01	NH
Benzene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Chloroethane	BRL	10		ug/L	164230	1	07/25/2012 11:01	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Chloromethane	BRL	10		ug/L	164230	1	07/25/2012 11:01	NH
cis-1,2-Dichloroethene	52	5.0		ug/L	164230	1	07/25/2012 11:01	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/25/2012 11:01	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Freon-113	BRL	10		ug/L	164230	1	07/25/2012 11:01	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-15B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 10:18:00 AM
<b>Lab ID:</b>	1207E25-027	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Toluene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Trichloroethene	9.9	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:01	NH
Vinyl chloride	BRL	2.0		ug/L	164230	1	07/25/2012 11:01	NH
Surr: 4-Bromofluorobenzene	93.5	67.4-123		%REC	164230	1	07/25/2012 11:01	NH
Surr: Dibromofluoromethane	109	75.5-128		%REC	164230	1	07/25/2012 11:01	NH
Surr: Toluene-d8	91.7	70-120		%REC	164230	1	07/25/2012 11:01	NH

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-41C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 10:50:00 AM
<b>Lab ID:</b>	1207E25-028	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	5.6	5.0		ug/L	164230	1	07/25/2012 11:30	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
1,1-Dichloroethane	86	5.0		ug/L	164230	1	07/25/2012 11:30	NH
1,1-Dichloroethene	320	200		ug/L	164230	100	07/25/2012 16:04	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
1,2-Dichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
2-Butanone	BRL	50		ug/L	164230	1	07/25/2012 11:30	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/25/2012 11:30	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/25/2012 11:30	NH
Acetone	BRL	50		ug/L	164230	1	07/25/2012 11:30	NH
Benzene	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Chloroethane	BRL	10		ug/L	164230	1	07/25/2012 11:30	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Chloromethane	BRL	10		ug/L	164230	1	07/25/2012 11:30	NH
cis-1,2-Dichloroethene	7900	500		ug/L	164230	100	07/25/2012 16:04	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/25/2012 11:30	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Freon-113	BRL	10		ug/L	164230	1	07/25/2012 11:30	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-41C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 10:50:00 AM
<b>Lab ID:</b>	1207E25-028	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Toluene	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
trans-1,2-Dichloroethene	88	5.0		ug/L	164230	1	07/25/2012 11:30	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Trichloroethene	9200	500		ug/L	164230	100	07/25/2012 16:04	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/25/2012 11:30	NH
Vinyl chloride	310	200		ug/L	164230	100	07/25/2012 16:04	NH
Surr: 4-Bromofluorobenzene	92.2	67.4-123		%REC	164230	1	07/25/2012 11:30	NH
Surr: 4-Bromofluorobenzene	94.9	67.4-123		%REC	164230	100	07/25/2012 16:04	NH
Surr: Dibromofluoromethane	111	75.5-128		%REC	164230	1	07/25/2012 11:30	NH
Surr: Dibromofluoromethane	113	75.5-128		%REC	164230	100	07/25/2012 16:04	NH
Surr: Toluene-d8	93.2	70-120		%REC	164230	100	07/25/2012 16:04	NH
Surr: Toluene-d8	97.1	70-120		%REC	164230	1	07/25/2012 11:30	NH

<b>Qualifiers:</b>	*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
	BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
	H	Holding times for preparation or analysis exceeded	Narr	See case narrative
	N	Analyte not NELAC certified	NC	Not confirmed
	B	Analyte detected in the associated method blank	<	Less than Result value
	>	Greater than Result value	J	Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-9B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 11:05:00 AM
<b>Lab ID:</b>	1207E25-029	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
1,1-Dichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
1,1-Dichloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
1,2-Dichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
2-Butanone	BRL	50		ug/L	164230	1	07/25/2012 17:39	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/25/2012 17:39	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/25/2012 17:39	NH
Acetone	BRL	50		ug/L	164230	1	07/25/2012 17:39	NH
Benzene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Chloroethane	BRL	10		ug/L	164230	1	07/25/2012 17:39	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Chloromethane	BRL	10		ug/L	164230	1	07/25/2012 17:39	NH
cis-1,2-Dichloroethene	190	5.0		ug/L	164230	1	07/25/2012 17:39	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/25/2012 17:39	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Freon-113	BRL	10		ug/L	164230	1	07/25/2012 17:39	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-9B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 11:05:00 AM
<b>Lab ID:</b>	1207E25-029	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Toluene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Trichloroethene	11	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:39	NH
Vinyl chloride	BRL	2.0		ug/L	164230	1	07/25/2012 17:39	NH
Surr: 4-Bromofluorobenzene	92.4	67.4-123	%REC		164230	1	07/25/2012 17:39	NH
Surr: Dibromofluoromethane	120	75.5-128	%REC		164230	1	07/25/2012 17:39	NH
Surr: Toluene-d8	91.9	70-120	%REC		164230	1	07/25/2012 17:39	NH

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-16A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 11:35:00 AM
<b>Lab ID:</b>	1207E25-030	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	37	5.0		ug/L	164230	1	07/25/2012 12:28	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
1,1-Dichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
1,1-Dichloroethene	25	5.0		ug/L	164230	1	07/25/2012 12:28	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
1,2-Dichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
2-Butanone	BRL	50		ug/L	164230	1	07/25/2012 12:28	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/25/2012 12:28	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/25/2012 12:28	NH
Acetone	BRL	50		ug/L	164230	1	07/25/2012 12:28	NH
Benzene	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Chloroethane	BRL	10		ug/L	164230	1	07/25/2012 12:28	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Chloromethane	BRL	10		ug/L	164230	1	07/25/2012 12:28	NH
cis-1,2-Dichloroethene	830	50		ug/L	164230	10	07/25/2012 16:33	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/25/2012 12:28	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Freon-113	BRL	10		ug/L	164230	1	07/25/2012 12:28	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-16A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 11:35:00 AM
<b>Lab ID:</b>	1207E25-030	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Toluene	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
trans-1,2-Dichloroethene	11	5.0		ug/L	164230	1	07/25/2012 12:28	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Trichloroethene	480	50		ug/L	164230	10	07/25/2012 16:33	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/25/2012 12:28	NH
Vinyl chloride	BRL	2.0		ug/L	164230	1	07/25/2012 12:28	NH
Surr: 4-Bromofluorobenzene	87.6	67.4-123		%REC	164230	10	07/25/2012 16:33	NH
Surr: 4-Bromofluorobenzene	93.2	67.4-123		%REC	164230	1	07/25/2012 12:28	NH
Surr: Dibromofluoromethane	111	75.5-128		%REC	164230	1	07/25/2012 12:28	NH
Surr: Dibromofluoromethane	111	75.5-128		%REC	164230	10	07/25/2012 16:33	NH
Surr: Toluene-d8	89.7	70-120		%REC	164230	10	07/25/2012 16:33	NH
Surr: Toluene-d8	91.1	70-120		%REC	164230	1	07/25/2012 12:28	NH

<b>Qualifiers:</b>	*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
	BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
	H	Holding times for preparation or analysis exceeded	Narr	See case narrative
	N	Analyte not NELAC certified	NC	Not confirmed
	B	Analyte detected in the associated method blank	<	Less than Result value
	>	Greater than Result value	J	Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-27A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 1:20:00 PM
<b>Lab ID:</b>	1207E25-031	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
1,1-Dichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
1,1-Dichloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
1,2-Dichloroethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
2-Butanone	BRL	50		ug/L	164230	1	07/25/2012 17:10	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/25/2012 17:10	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/25/2012 17:10	NH
Acetone	BRL	50		ug/L	164230	1	07/25/2012 17:10	NH
Benzene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Chloroethane	BRL	10		ug/L	164230	1	07/25/2012 17:10	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Chloromethane	BRL	10		ug/L	164230	1	07/25/2012 17:10	NH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/25/2012 17:10	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Freon-113	BRL	10		ug/L	164230	1	07/25/2012 17:10	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-27A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 1:20:00 PM
<b>Lab ID:</b>	1207E25-031	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Toluene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Trichloroethene	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/25/2012 17:10	NH
Vinyl chloride	BRL	2.0		ug/L	164230	1	07/25/2012 17:10	NH
Surr: 4-Bromofluorobenzene	91.9	67.4-123	%REC		164230	1	07/25/2012 17:10	NH
Surr: Dibromofluoromethane	110	75.5-128	%REC		164230	1	07/25/2012 17:10	NH
Surr: Toluene-d8	92.4	70-120	%REC		164230	1	07/25/2012 17:10	NH

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-26A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 1:23:00 PM
<b>Lab ID:</b>	1207E25-032	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
1,1-Dichloroethane	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
1,1-Dichloroethene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
1,2-Dichloroethane	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
2-Butanone	BRL	50		ug/L	164230	1	07/24/2012 20:38	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/24/2012 20:38	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/24/2012 20:38	NH
Acetone	BRL	50		ug/L	164230	1	07/24/2012 20:38	NH
Benzene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Chloroethane	BRL	10		ug/L	164230	1	07/24/2012 20:38	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Chloromethane	BRL	10		ug/L	164230	1	07/24/2012 20:38	NH
cis-1,2-Dichloroethene	73	5.0		ug/L	164230	1	07/24/2012 20:38	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/24/2012 20:38	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Freon-113	BRL	10		ug/L	164230	1	07/24/2012 20:38	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-26A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 1:23:00 PM
<b>Lab ID:</b>	1207E25-032	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Toluene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Trichloroethene	18	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/24/2012 20:38	NH
Vinyl chloride	BRL	2.0		ug/L	164230	1	07/24/2012 20:38	NH
Surr: 4-Bromofluorobenzene	92.2	67.4-123	%REC		164230	1	07/24/2012 20:38	NH
Surr: Dibromofluoromethane	108	75.5-128	%REC		164230	1	07/24/2012 20:38	NH
Surr: Toluene-d8	92	70-120	%REC		164230	1	07/24/2012 20:38	NH

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-6A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 2:20:00 PM
<b>Lab ID:</b>	1207E25-033	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	49	5.0		ug/L	164230	1	07/24/2012 21:07	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
1,1,2-Trichloroethane		11	5.0	ug/L	164230	1	07/24/2012 21:07	NH
1,1-Dichloroethane		110	5.0	ug/L	164230	1	07/24/2012 21:07	NH
1,1-Dichloroethene		440	200	ug/L	164230	100	07/25/2012 10:03	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
1,2-Dichloroethane		5.2	5.0	ug/L	164230	1	07/24/2012 21:07	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
2-Butanone	BRL	50		ug/L	164230	1	07/24/2012 21:07	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/24/2012 21:07	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/24/2012 21:07	NH
Acetone	BRL	50		ug/L	164230	1	07/24/2012 21:07	NH
Benzene	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Chloroethane	BRL	10		ug/L	164230	1	07/24/2012 21:07	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Chloromethane	BRL	10		ug/L	164230	1	07/24/2012 21:07	NH
cis-1,2-Dichloroethene	11000	500		ug/L	164230	100	07/25/2012 10:03	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/24/2012 21:07	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Freon-113	BRL	10		ug/L	164230	1	07/24/2012 21:07	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-6A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 2:20:00 PM
<b>Lab ID:</b>	1207E25-033	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Tetrachloroethene	7.3	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Toluene	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
trans-1,2-Dichloroethene	160	5.0		ug/L	164230	1	07/24/2012 21:07	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Trichloroethene	9100	500		ug/L	164230	100	07/25/2012 10:03	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/24/2012 21:07	NH
Vinyl chloride	93	2.0		ug/L	164230	1	07/24/2012 21:07	NH
Surr: 4-Bromofluorobenzene	90.2	67.4-123	%REC		164230	1	07/24/2012 21:07	NH
Surr: 4-Bromofluorobenzene	93	67.4-123	%REC		164230	100	07/25/2012 10:03	NH
Surr: Dibromofluoromethane	110	75.5-128	%REC		164230	100	07/25/2012 10:03	NH
Surr: Dibromofluoromethane	111	75.5-128	%REC		164230	1	07/24/2012 21:07	NH
Surr: Toluene-d8	92.7	70-120	%REC		164230	100	07/25/2012 10:03	NH
Surr: Toluene-d8	95.3	70-120	%REC		164230	1	07/24/2012 21:07	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-13C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 3:10:00 PM
<b>Lab ID:</b>	1207E25-034	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
1,1-Dichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
1,1-Dichloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
1,2-Dichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
2-Butanone	BRL	50		ug/L	164230	1	07/23/2012 19:37	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/23/2012 19:37	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/23/2012 19:37	NH
Acetone	BRL	50		ug/L	164230	1	07/23/2012 19:37	NH
Benzene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Chloroethane	BRL	10		ug/L	164230	1	07/23/2012 19:37	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Chloromethane	BRL	10		ug/L	164230	1	07/23/2012 19:37	NH
cis-1,2-Dichloroethene	21	5.0		ug/L	164230	1	07/23/2012 19:37	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/23/2012 19:37	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Freon-113	BRL	10		ug/L	164230	1	07/23/2012 19:37	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-13C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 3:10:00 PM
<b>Lab ID:</b>	1207E25-034	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Toluene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Trichloroethene	18	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:37	NH
Vinyl chloride	BRL	2.0		ug/L	164230	1	07/23/2012 19:37	NH
Surr: 4-Bromofluorobenzene	95.5	67.4-123	%REC		164230	1	07/23/2012 19:37	NH
Surr: Dibromofluoromethane	109	75.5-128	%REC		164230	1	07/23/2012 19:37	NH
Surr: Toluene-d8	90	70-120	%REC		164230	1	07/23/2012 19:37	NH

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-28A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 3:45:00 PM
<b>Lab ID:</b>	1207E25-035	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								<b>(SW5030B)</b>
1,1,1-Trichloroethane	23	5.0		ug/L	164230	1	07/23/2012 20:06	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
1,1-Dichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
1,1-Dichloroethene	17	5.0		ug/L	164230	1	07/23/2012 20:06	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
1,2-Dichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
2-Butanone	BRL	50		ug/L	164230	1	07/23/2012 20:06	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/23/2012 20:06	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/23/2012 20:06	NH
Acetone	BRL	50		ug/L	164230	1	07/23/2012 20:06	NH
Benzene	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Chloroethane	BRL	10		ug/L	164230	1	07/23/2012 20:06	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Chloromethane	BRL	10		ug/L	164230	1	07/23/2012 20:06	NH
cis-1,2-Dichloroethene	210	50		ug/L	164230	10	07/24/2012 13:54	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/23/2012 20:06	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Freon-113	BRL	10		ug/L	164230	1	07/23/2012 20:06	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-28A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 3:45:00 PM
<b>Lab ID:</b>	1207E25-035	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Toluene	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Trichloroethene	420	50		ug/L	164230	10	07/24/2012 13:54	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:06	NH
Vinyl chloride	BRL	2.0		ug/L	164230	1	07/23/2012 20:06	NH
Surr: 4-Bromofluorobenzene	89	67.4-123		%REC	164230	10	07/24/2012 13:54	NH
Surr: 4-Bromofluorobenzene	92.3	67.4-123		%REC	164230	1	07/23/2012 20:06	NH
Surr: Dibromofluoromethane	112	75.5-128		%REC	164230	10	07/24/2012 13:54	NH
Surr: Dibromofluoromethane	112	75.5-128		%REC	164230	1	07/23/2012 20:06	NH
Surr: Toluene-d8	90.2	70-120		%REC	164230	1	07/23/2012 20:06	NH
Surr: Toluene-d8	93.6	70-120		%REC	164230	10	07/24/2012 13:54	NH

<b>Qualifiers:</b>	*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
	BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
	H	Holding times for preparation or analysis exceeded	Narr	See case narrative
	N	Analyte not NELAC certified	NC	Not confirmed
	B	Analyte detected in the associated method blank	<	Less than Result value
	>	Greater than Result value	J	Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-12C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 4:25:00 PM
<b>Lab ID:</b>	1207E25-036	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
1,1-Dichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
1,1-Dichloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
1,2-Dichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
2-Butanone	BRL	50		ug/L	164230	1	07/23/2012 20:35	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/23/2012 20:35	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/23/2012 20:35	NH
Acetone	BRL	50		ug/L	164230	1	07/23/2012 20:35	NH
Benzene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Chloroethane	BRL	10		ug/L	164230	1	07/23/2012 20:35	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Chloromethane	BRL	10		ug/L	164230	1	07/23/2012 20:35	NH
cis-1,2-Dichloroethene	80	5.0		ug/L	164230	1	07/23/2012 20:35	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/23/2012 20:35	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Freon-113	BRL	10		ug/L	164230	1	07/23/2012 20:35	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-12C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 4:25:00 PM
<b>Lab ID:</b>	1207E25-036	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Toluene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Trichloroethene	95	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/23/2012 20:35	NH
Vinyl chloride	BRL	2.0		ug/L	164230	1	07/23/2012 20:35	NH
Surr: 4-Bromofluorobenzene	91.9	67.4-123	%REC		164230	1	07/23/2012 20:35	NH
Surr: Dibromofluoromethane	113	75.5-128	%REC		164230	1	07/23/2012 20:35	NH
Surr: Toluene-d8	93.5	70-120	%REC		164230	1	07/23/2012 20:35	NH

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-8B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 5:05:00 PM
<b>Lab ID:</b>	1207E25-037	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	33	5.0		ug/L	164230	1	07/23/2012 21:04	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
1,1-Dichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
1,1-Dichloroethene	18	5.0		ug/L	164230	1	07/23/2012 21:04	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
1,2-Dichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
2-Butanone	BRL	50		ug/L	164230	1	07/23/2012 21:04	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/23/2012 21:04	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/23/2012 21:04	NH
Acetone	BRL	50		ug/L	164230	1	07/23/2012 21:04	NH
Benzene	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Chloroethane	BRL	10		ug/L	164230	1	07/23/2012 21:04	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Chloromethane	BRL	10		ug/L	164230	1	07/23/2012 21:04	NH
cis-1,2-Dichloroethene	480	50		ug/L	164230	10	07/24/2012 14:52	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/23/2012 21:04	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Freon-113	BRL	10		ug/L	164230	1	07/23/2012 21:04	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-8B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 5:05:00 PM
<b>Lab ID:</b>	1207E25-037	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Toluene	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
trans-1,2-Dichloroethene	7.0	5.0		ug/L	164230	1	07/23/2012 21:04	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Trichloroethene	360	50		ug/L	164230	10	07/24/2012 14:52	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/23/2012 21:04	NH
Vinyl chloride	BRL	2.0		ug/L	164230	1	07/23/2012 21:04	NH
Surr: 4-Bromofluorobenzene	95.1	67.4-123		%REC	164230	1	07/23/2012 21:04	NH
Surr: 4-Bromofluorobenzene	96.8	67.4-123		%REC	164230	10	07/24/2012 14:52	NH
Surr: Dibromofluoromethane	112	75.5-128		%REC	164230	10	07/24/2012 14:52	NH
Surr: Dibromofluoromethane	113	75.5-128		%REC	164230	1	07/23/2012 21:04	NH
Surr: Toluene-d8	93.6	70-120		%REC	164230	1	07/23/2012 21:04	NH
Surr: Toluene-d8	92.4	70-120		%REC	164230	10	07/24/2012 14:52	NH

<b>Qualifiers:</b>	*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
	BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
	H	Holding times for preparation or analysis exceeded	Narr	See case narrative
	N	Analyte not NELAC certified	NC	Not confirmed
	B	Analyte detected in the associated method blank	<	Less than Result value
	>	Greater than Result value	J	Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-29A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 5:50:00 PM
<b>Lab ID:</b>	1207E25-038	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	300	50		ug/L	164230	10	07/24/2012 17:45	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
1,1,2-Trichloroethane	6.0	5.0		ug/L	164230	1	07/23/2012 21:33	NH
1,1-Dichloroethane	74	5.0		ug/L	164230	1	07/23/2012 21:33	NH
1,1-Dichloroethene	270	50		ug/L	164230	10	07/24/2012 17:45	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
1,2-Dichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
2-Butanone	BRL	50		ug/L	164230	1	07/23/2012 21:33	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/23/2012 21:33	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/23/2012 21:33	NH
Acetone	BRL	50		ug/L	164230	1	07/23/2012 21:33	NH
Benzene	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Chloroethane	BRL	10		ug/L	164230	1	07/23/2012 21:33	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Chloromethane	BRL	10		ug/L	164230	1	07/23/2012 21:33	NH
cis-1,2-Dichloroethene	13000	2500		ug/L	164230	500	07/24/2012 15:20	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/23/2012 21:33	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Freon-113	BRL	10		ug/L	164230	1	07/23/2012 21:33	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-29A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 5:50:00 PM
<b>Lab ID:</b>	1207E25-038	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Toluene	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
trans-1,2-Dichloroethene	210	50		ug/L	164230	10	07/24/2012 17:45	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Trichloroethene	8000	2500		ug/L	164230	500	07/24/2012 15:20	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/23/2012 21:33	NH
Vinyl chloride	2.7	2.0		ug/L	164230	1	07/23/2012 21:33	NH
Surr: 4-Bromofluorobenzene	93	67.4-123		%REC	164230	500	07/24/2012 15:20	NH
Surr: 4-Bromofluorobenzene	91.1	67.4-123		%REC	164230	1	07/23/2012 21:33	NH
Surr: 4-Bromofluorobenzene	95.7	67.4-123		%REC	164230	10	07/24/2012 17:45	NH
Surr: Dibromofluoromethane	108	75.5-128		%REC	164230	500	07/24/2012 15:20	NH
Surr: Dibromofluoromethane	110	75.5-128		%REC	164230	1	07/23/2012 21:33	NH
Surr: Dibromofluoromethane	112	75.5-128		%REC	164230	10	07/24/2012 17:45	NH
Surr: Toluene-d8	91.1	70-120		%REC	164230	500	07/24/2012 15:20	NH
Surr: Toluene-d8	89.5	70-120		%REC	164230	10	07/24/2012 17:45	NH
Surr: Toluene-d8	93.6	70-120		%REC	164230	1	07/23/2012 21:33	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-7C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 6:25:00 PM
<b>Lab ID:</b>	1207E25-039	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	200	50		ug/L	164230	10	07/24/2012 18:14	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
1,1,2-Trichloroethane		24		ug/L	164230	1	07/23/2012 22:02	NH
1,1-Dichloroethane		510		ug/L	164230	10	07/24/2012 18:14	NH
1,1-Dichloroethene		1400		ug/L	164230	10	07/24/2012 18:14	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
1,2-Dichloroethane		17		ug/L	164230	1	07/23/2012 22:02	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
2-Butanone	BRL	50		ug/L	164230	1	07/23/2012 22:02	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/23/2012 22:02	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/23/2012 22:02	NH
Acetone	BRL	50		ug/L	164230	1	07/23/2012 22:02	NH
Benzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Chloroethane	BRL	10		ug/L	164230	1	07/23/2012 22:02	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Chloromethane	BRL	10		ug/L	164230	1	07/23/2012 22:02	NH
cis-1,2-Dichloroethene	63000	2500		ug/L	164230	500	07/24/2012 15:50	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/23/2012 22:02	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Freon-113	BRL	10		ug/L	164230	1	07/23/2012 22:02	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-7C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/18/2012 6:25:00 PM
<b>Lab ID:</b>	1207E25-039	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Tetrachloroethene	6.8	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Toluene	7.7	5.0		ug/L	164230	1	07/23/2012 22:02	NH
trans-1,2-Dichloroethene	600	50		ug/L	164230	10	07/24/2012 18:14	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Trichloroethene	70000	2500		ug/L	164230	500	07/24/2012 15:50	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:02	NH
Vinyl chloride	50	2.0		ug/L	164230	1	07/23/2012 22:02	NH
Surr: 4-Bromofluorobenzene	94.1	67.4-123		%REC	164230	500	07/24/2012 15:50	NH
Surr: 4-Bromofluorobenzene	89.5	67.4-123		%REC	164230	10	07/24/2012 18:14	NH
Surr: 4-Bromofluorobenzene	93.1	67.4-123		%REC	164230	1	07/23/2012 22:02	NH
Surr: Dibromofluoromethane	109	75.5-128		%REC	164230	500	07/24/2012 15:50	NH
Surr: Dibromofluoromethane	101	75.5-128		%REC	164230	1	07/23/2012 22:02	NH
Surr: Dibromofluoromethane	113	75.5-128		%REC	164230	10	07/24/2012 18:14	NH
Surr: Toluene-d8	89.7	70-120		%REC	164230	500	07/24/2012 15:50	NH
Surr: Toluene-d8	95.1	70-120		%REC	164230	10	07/24/2012 18:14	NH
Surr: Toluene-d8	97.3	70-120		%REC	164230	1	07/23/2012 22:02	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	IDW #1
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 8:30:00 AM
<b>Lab ID:</b>	1207E25-040	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>VOLATILES, TCLP SW1311/8260B</b>		<b>(SW1311)</b>						
1,1-Dichloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 12:31	DB
1,2-Dichloroethane	BRL	0.10		mg/L	164250	20	07/25/2012 12:31	DB
2-Butanone	BRL	0.20		mg/L	164250	20	07/25/2012 12:31	DB
Benzene	BRL	0.10		mg/L	164250	20	07/25/2012 12:31	DB
Carbon tetrachloride	BRL	0.10		mg/L	164250	20	07/25/2012 12:31	DB
Chlorobenzene	BRL	0.10		mg/L	164250	20	07/25/2012 12:31	DB
Chloroform	BRL	0.10		mg/L	164250	20	07/25/2012 12:31	DB
Tetrachloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 12:31	DB
Trichloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 12:31	DB
Vinyl chloride	BRL	0.040		mg/L	164250	20	07/25/2012 12:31	DB
Surr: 4-Bromofluorobenzene	94.5	64.6-131	%REC		164250	20	07/25/2012 12:31	DB
Surr: Dibromofluoromethane	94.8	70.6-128	%REC		164250	20	07/25/2012 12:31	DB
Surr: Toluene-d8	98.4	70.5-116	%REC		164250	20	07/25/2012 12:31	DB

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	IDW #2
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 8:35:00 AM
<b>Lab ID:</b>	1207E25-041	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>VOLATILES, TCLP SW1311/8260B</b>		<b>(SW1311)</b>						
1,1-Dichloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 13:00	DB
1,2-Dichloroethane	BRL	0.10		mg/L	164250	20	07/25/2012 13:00	DB
2-Butanone	BRL	0.20		mg/L	164250	20	07/25/2012 13:00	DB
Benzene	BRL	0.10		mg/L	164250	20	07/25/2012 13:00	DB
Carbon tetrachloride	BRL	0.10		mg/L	164250	20	07/25/2012 13:00	DB
Chlorobenzene	BRL	0.10		mg/L	164250	20	07/25/2012 13:00	DB
Chloroform	BRL	0.10		mg/L	164250	20	07/25/2012 13:00	DB
Tetrachloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 13:00	DB
Trichloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 13:00	DB
Vinyl chloride	BRL	0.040		mg/L	164250	20	07/25/2012 13:00	DB
Surr: 4-Bromofluorobenzene	96.3	64.6-131	%REC		164250	20	07/25/2012 13:00	DB
Surr: Dibromofluoromethane	93.7	70.6-128	%REC		164250	20	07/25/2012 13:00	DB
Surr: Toluene-d8	97.1	70.5-116	%REC		164250	20	07/25/2012 13:00	DB

<b>Qualifiers:</b>	*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
	BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
	H	Holding times for preparation or analysis exceeded	Narr	See case narrative
	N	Analyte not NELAC certified	NC	Not confirmed
	B	Analyte detected in the associated method blank	<	Less than Result value
	>	Greater than Result value	J	Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	IDW #3
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 8:40:00 AM
<b>Lab ID:</b>	1207E25-042	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>VOLATILES, TCLP SW1311/8260B</b>								<b>(SW1311)</b>
1,1-Dichloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 15:07	NP
1,2-Dichloroethane	BRL	0.10		mg/L	164250	20	07/25/2012 15:07	NP
2-Butanone	BRL	0.20		mg/L	164250	20	07/25/2012 15:07	NP
Benzene	BRL	0.10		mg/L	164250	20	07/25/2012 15:07	NP
Carbon tetrachloride	BRL	0.10		mg/L	164250	20	07/25/2012 15:07	NP
Chlorobenzene	BRL	0.10		mg/L	164250	20	07/25/2012 15:07	NP
Chloroform	BRL	0.10		mg/L	164250	20	07/25/2012 15:07	NP
Tetrachloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 15:07	NP
Trichloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 15:07	NP
Vinyl chloride	BRL	0.040		mg/L	164250	20	07/25/2012 15:07	NP
Surr: 4-Bromofluorobenzene	82.2	64.6-131	%REC		164250	20	07/25/2012 15:07	NP
Surr: Dibromofluoromethane	109	70.6-128	%REC		164250	20	07/25/2012 15:07	NP
Surr: Toluene-d8	93	70.5-116	%REC		164250	20	07/25/2012 15:07	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	IDW #4
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 8:45:00 AM
<b>Lab ID:</b>	1207E25-043	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>MERCURY, TCLP SW1311/7470A</b>								
Mercury	BRL	0.00400		mg/L	164210	1	07/24/2012 16:45	LD
<b>ICP METALS, TCLP SW1311/6010C</b>								
Arsenic	BRL	0.250		mg/L	164236	1	07/25/2012 12:52	MR
Barium	0.856	0.500		mg/L	164236	1	07/25/2012 12:52	MR
Cadmium	BRL	0.0250		mg/L	164236	1	07/25/2012 12:52	MR
Chromium	BRL	0.0500		mg/L	164236	1	07/25/2012 12:52	MR
Lead	BRL	0.0500		mg/L	164236	1	07/25/2012 12:52	MR
Selenium	BRL	0.100		mg/L	164236	1	07/25/2012 12:52	MR
Silver	BRL	0.0250		mg/L	164236	1	07/25/2012 12:52	MR

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	IDW #5
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 8:50:00 AM
<b>Lab ID:</b>	1207E25-044	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>VOLATILES, TCLP SW1311/8260B</b>								<b>(SW1311)</b>
1,1-Dichloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 17:02	NP
1,2-Dichloroethane	BRL	0.10		mg/L	164250	20	07/25/2012 17:02	NP
2-Butanone	BRL	0.20		mg/L	164250	20	07/25/2012 17:02	NP
Benzene	BRL	0.10		mg/L	164250	20	07/25/2012 17:02	NP
Carbon tetrachloride	BRL	0.10		mg/L	164250	20	07/25/2012 17:02	NP
Chlorobenzene	BRL	0.10		mg/L	164250	20	07/25/2012 17:02	NP
Chloroform	BRL	0.10		mg/L	164250	20	07/25/2012 17:02	NP
Tetrachloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 17:02	NP
Trichloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 17:02	NP
Vinyl chloride	BRL	0.040		mg/L	164250	20	07/25/2012 17:02	NP
Surr: 4-Bromofluorobenzene	79.2	64.6-131	%REC		164250	20	07/25/2012 17:02	NP
Surr: Dibromofluoromethane	112	70.6-128	%REC		164250	20	07/25/2012 17:02	NP
Surr: Toluene-d8	82.8	70.5-116	%REC		164250	20	07/25/2012 17:02	NP

<b>Qualifiers:</b>	*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
	BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
	H	Holding times for preparation or analysis exceeded	Narr	See case narrative
	N	Analyte not NELAC certified	NC	Not confirmed
	B	Analyte detected in the associated method blank	<	Less than Result value
	>	Greater than Result value	J	Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	IDW #6
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 8:55:00 AM
<b>Lab ID:</b>	1207E25-045	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>MERCURY, TCLP SW1311/7470A</b>								
Mercury	BRL	0.00400		mg/L	164210	1	07/24/2012 16:47	LD
<b>ICP METALS, TCLP SW1311/6010C</b>								
Arsenic	BRL	0.250		mg/L	164236	1	07/25/2012 12:56	MR
Barium	0.636	0.500		mg/L	164236	1	07/25/2012 12:56	MR
Cadmium	BRL	0.0250		mg/L	164236	1	07/25/2012 12:56	MR
Chromium	BRL	0.0500		mg/L	164236	1	07/25/2012 12:56	MR
Lead	BRL	0.0500		mg/L	164236	1	07/25/2012 12:56	MR
Selenium	BRL	0.100		mg/L	164236	1	07/25/2012 12:56	MR
Silver	BRL	0.0250		mg/L	164236	1	07/25/2012 12:56	MR

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	IDW- #7
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 9:00:00 AM
<b>Lab ID:</b>	1207E25-046	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>MERCURY, TCLP SW1311/7470A</b>								
Mercury	BRL	0.00400		mg/L	164210	1	07/24/2012 16:49	LD
<b>ICP METALS, TCLP SW1311/6010C</b>								
Arsenic	BRL	0.250		mg/L	164236	1	07/25/2012 13:06	MR
Barium	0.615	0.500		mg/L	164236	1	07/25/2012 13:06	MR
Cadmium	BRL	0.0250		mg/L	164236	1	07/25/2012 13:06	MR
Chromium	BRL	0.0500		mg/L	164236	1	07/25/2012 13:06	MR
Lead	BRL	0.0500		mg/L	164236	1	07/25/2012 13:06	MR
Selenium	BRL	0.100		mg/L	164236	1	07/25/2012 13:06	MR
Silver	BRL	0.0250		mg/L	164236	1	07/25/2012 13:06	MR

<b>Qualifiers:</b>	*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
	BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
	H	Holding times for preparation or analysis exceeded	Narr	See case narrative
	N	Analyte not NELAC certified	NC	Not confirmed
	B	Analyte detected in the associated method blank	<	Less than Result value
	>	Greater than Result value	J	Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	IDW- #8
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 9:05:00 AM
<b>Lab ID:</b>	1207E25-047	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>MERCURY, TCLP SW1311/7470A</b>								
Mercury	BRL	0.00400		mg/L	164210	1	07/24/2012 16:51	LD
<b>ICP METALS, TCLP SW1311/6010C</b>								
Arsenic	BRL	0.250		mg/L	164236	1	07/25/2012 13:09	MR
Barium	0.919	0.500		mg/L	164236	1	07/25/2012 13:09	MR
Cadmium	BRL	0.0250		mg/L	164236	1	07/25/2012 13:09	MR
Chromium	BRL	0.0500		mg/L	164236	1	07/25/2012 13:09	MR
Lead	BRL	0.0500		mg/L	164236	1	07/25/2012 13:09	MR
Selenium	BRL	0.100		mg/L	164236	1	07/25/2012 13:09	MR
Silver	BRL	0.0250		mg/L	164236	1	07/25/2012 13:09	MR

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	IDW- #9
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 9:10:00 AM
<b>Lab ID:</b>	1207E25-048	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>MERCURY, TCLP SW1311/7470A</b>								
Mercury	BRL	0.00400		mg/L	164210	1	07/24/2012 16:53	LD
<b>ICP METALS, TCLP SW1311/6010C</b>								
Arsenic	BRL	0.250		mg/L	164236	1	07/25/2012 13:13	MR
Barium	BRL	0.500		mg/L	164236	1	07/25/2012 13:13	MR
Cadmium	BRL	0.0250		mg/L	164236	1	07/25/2012 13:13	MR
Chromium	BRL	0.0500		mg/L	164236	1	07/25/2012 13:13	MR
Lead	BRL	0.0500		mg/L	164236	1	07/25/2012 13:13	MR
Selenium	BRL	0.100		mg/L	164236	1	07/25/2012 13:13	MR
Silver	BRL	0.0250		mg/L	164236	1	07/25/2012 13:13	MR

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	IDW- #10
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 9:15:00 AM
<b>Lab ID:</b>	1207E25-049	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>VOLATILES, TCLP SW1311/8260B</b>								<b>(SW1311)</b>
1,1-Dichloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 17:31	NP
1,2-Dichloroethane	BRL	0.10		mg/L	164250	20	07/25/2012 17:31	NP
2-Butanone	BRL	0.20		mg/L	164250	20	07/25/2012 17:31	NP
Benzene	BRL	0.10		mg/L	164250	20	07/25/2012 17:31	NP
Carbon tetrachloride	BRL	0.10		mg/L	164250	20	07/25/2012 17:31	NP
Chlorobenzene	BRL	0.10		mg/L	164250	20	07/25/2012 17:31	NP
Chloroform	BRL	0.10		mg/L	164250	20	07/25/2012 17:31	NP
Tetrachloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 17:31	NP
Trichloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 17:31	NP
Vinyl chloride	BRL	0.040		mg/L	164250	20	07/25/2012 17:31	NP
Surr: 4-Bromofluorobenzene	76.5	64.6-131	%REC		164250	20	07/25/2012 17:31	NP
Surr: Dibromofluoromethane	117	70.6-128	%REC		164250	20	07/25/2012 17:31	NP
Surr: Toluene-d8	90.5	70.5-116	%REC		164250	20	07/25/2012 17:31	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-21C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 11:05:00 AM
<b>Lab ID:</b>	1207E25-050	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	98	5.0		ug/L	164230	1	07/23/2012 22:59	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
1,1,2-Trichloroethane		12	5.0	ug/L	164230	1	07/23/2012 22:59	NH
1,1-Dichloroethane		340	50	ug/L	164230	10	07/24/2012 18:43	NH
1,1-Dichloroethene		1000	50	ug/L	164230	10	07/24/2012 18:43	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
1,2-Dichloroethane		9.3	5.0	ug/L	164230	1	07/23/2012 22:59	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
2-Butanone	BRL	50		ug/L	164230	1	07/23/2012 22:59	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/23/2012 22:59	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/23/2012 22:59	NH
Acetone	BRL	50		ug/L	164230	1	07/23/2012 22:59	NH
Benzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Chloroethane	BRL	10		ug/L	164230	1	07/23/2012 22:59	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Chloromethane	BRL	10		ug/L	164230	1	07/23/2012 22:59	NH
cis-1,2-Dichloroethene	29000	5000		ug/L	164230	1000	07/24/2012 16:19	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/23/2012 22:59	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Freon-113	BRL	10		ug/L	164230	1	07/23/2012 22:59	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-21C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 11:05:00 AM
<b>Lab ID:</b>	1207E25-050	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Toluene	22	5.0		ug/L	164230	1	07/23/2012 22:59	NH
trans-1,2-Dichloroethene	270	50		ug/L	164230	10	07/24/2012 18:43	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Trichloroethene	88000	5000		ug/L	164230	1000	07/24/2012 16:19	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:59	NH
Vinyl chloride	62	2.0		ug/L	164230	1	07/23/2012 22:59	NH
Surr: 4-Bromofluorobenzene	91.4	67.4-123		%REC	164230	1000	07/24/2012 16:19	NH
Surr: 4-Bromofluorobenzene	93	67.4-123		%REC	164230	1	07/23/2012 22:59	NH
Surr: 4-Bromofluorobenzene	95.2	67.4-123		%REC	164230	10	07/24/2012 18:43	NH
Surr: Dibromofluoromethane	99.9	75.5-128		%REC	164230	1	07/23/2012 22:59	NH
Surr: Dibromofluoromethane	109	75.5-128		%REC	164230	10	07/24/2012 18:43	NH
Surr: Dibromofluoromethane	110	75.5-128		%REC	164230	1000	07/24/2012 16:19	NH
Surr: Toluene-d8	90.5	70-120		%REC	164230	1000	07/24/2012 16:19	NH
Surr: Toluene-d8	94.3	70-120		%REC	164230	10	07/24/2012 18:43	NH
Surr: Toluene-d8	97.7	70-120		%REC	164230	1	07/23/2012 22:59	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-24B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 11:15:00 AM
<b>Lab ID:</b>	1207E25-051	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	1200	100		ug/L	164230	20	07/24/2012 17:16	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
1,1,2-Trichloroethane		81	5.0	ug/L	164230	1	07/23/2012 22:31	NH
1,1-Dichloroethane		520	100	ug/L	164230	20	07/24/2012 17:16	NH
1,1-Dichloroethene		2300	100	ug/L	164230	20	07/24/2012 17:16	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
1,2-Dichloroethane		35	5.0	ug/L	164230	1	07/23/2012 22:31	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
2-Butanone	BRL	50		ug/L	164230	1	07/23/2012 22:31	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/23/2012 22:31	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/23/2012 22:31	NH
Acetone	BRL	50		ug/L	164230	1	07/23/2012 22:31	NH
Benzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Chloroethane	BRL	10		ug/L	164230	1	07/23/2012 22:31	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Chloromethane	BRL	10		ug/L	164230	1	07/23/2012 22:31	NH
cis-1,2-Dichloroethene	140000	5000		ug/L	164230	1000	07/24/2012 16:47	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/23/2012 22:31	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Freon-113	BRL	10		ug/L	164230	1	07/23/2012 22:31	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
m,p-Xylene		6.3	5.0	ug/L	164230	1	07/23/2012 22:31	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
o-Xylene		27	5.0	ug/L	164230	1	07/23/2012 22:31	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-24B
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 11:15:00 AM
<b>Lab ID:</b>	1207E25-051	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Tetrachloroethene	19	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Toluene	57	5.0		ug/L	164230	1	07/23/2012 22:31	NH
trans-1,2-Dichloroethene	2100	100		ug/L	164230	20	07/24/2012 17:16	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Trichloroethene	91000	5000		ug/L	164230	1000	07/24/2012 16:47	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/23/2012 22:31	NH
Vinyl chloride	330	40		ug/L	164230	20	07/24/2012 17:16	NH
Surr: 4-Bromofluorobenzene	90.1	67.4-123		%REC	164230	1000	07/24/2012 16:47	NH
Surr: 4-Bromofluorobenzene	97.3	67.4-123		%REC	164230	1	07/23/2012 22:31	NH
Surr: 4-Bromofluorobenzene	95.8	67.4-123		%REC	164230	20	07/24/2012 17:16	NH
Surr: Dibromofluoromethane	109	75.5-128		%REC	164230	20	07/24/2012 17:16	NH
Surr: Dibromofluoromethane	92.1	75.5-128		%REC	164230	1	07/23/2012 22:31	NH
Surr: Dibromofluoromethane	112	75.5-128		%REC	164230	1000	07/24/2012 16:47	NH
Surr: Toluene-d8	89.4	70-120		%REC	164230	1000	07/24/2012 16:47	NH
Surr: Toluene-d8	95	70-120		%REC	164230	1	07/23/2012 22:31	NH
Surr: Toluene-d8	94.2	70-120		%REC	164230	20	07/24/2012 17:16	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-22C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 11:40:00 AM
<b>Lab ID:</b>	1207E25-052	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	20	5.0		ug/L	164230	1	07/23/2012 23:28	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
1,1-Dichloroethane	16	5.0		ug/L	164230	1	07/23/2012 23:28	NH
1,1-Dichloroethene	14	5.0		ug/L	164230	1	07/23/2012 23:28	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
1,2-Dichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
2-Butanone	260	50		ug/L	164230	1	07/23/2012 23:28	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/23/2012 23:28	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/23/2012 23:28	NH
Acetone	680	500		ug/L	164230	10	07/24/2012 14:23	NH
Benzene	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Chloroethane	BRL	10		ug/L	164230	1	07/23/2012 23:28	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Chloromethane	BRL	10		ug/L	164230	1	07/23/2012 23:28	NH
cis-1,2-Dichloroethene	960	50		ug/L	164230	10	07/24/2012 14:23	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/23/2012 23:28	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Freon-113	BRL	10		ug/L	164230	1	07/23/2012 23:28	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-22C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 11:40:00 AM
<b>Lab ID:</b>	1207E25-052	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Toluene	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
trans-1,2-Dichloroethene	5.7	5.0		ug/L	164230	1	07/23/2012 23:28	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Trichloroethene	1200	50		ug/L	164230	10	07/24/2012 14:23	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/23/2012 23:28	NH
Vinyl chloride	BRL	2.0		ug/L	164230	1	07/23/2012 23:28	NH
Surr: 4-Bromofluorobenzene	94.2	67.4-123		%REC	164230	10	07/24/2012 14:23	NH
Surr: 4-Bromofluorobenzene	98.9	67.4-123		%REC	164230	1	07/23/2012 23:28	NH
Surr: Dibromofluoromethane	109	75.5-128		%REC	164230	1	07/23/2012 23:28	NH
Surr: Dibromofluoromethane	109	75.5-128		%REC	164230	10	07/24/2012 14:23	NH
Surr: Toluene-d8	92.3	70-120		%REC	164230	1	07/23/2012 23:28	NH
Surr: Toluene-d8	92.1	70-120		%REC	164230	10	07/24/2012 14:23	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	IDW- #11					
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 12:10:00 PM					
<b>Lab ID:</b>	1207E25-053	<b>Matrix:</b>	Groundwater					
Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>VOLATILES, TCLP SW1311/8260B</b>								<b>(SW1311)</b>
1,1-Dichloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 15:07	NH
1,2-Dichloroethane	BRL	0.10		mg/L	164250	20	07/25/2012 15:07	NH
2-Butanone	BRL	0.20		mg/L	164250	20	07/25/2012 15:07	NH
Benzene	BRL	0.10		mg/L	164250	20	07/25/2012 15:07	NH
Carbon tetrachloride	BRL	0.10		mg/L	164250	20	07/25/2012 15:07	NH
Chlorobenzene	BRL	0.10		mg/L	164250	20	07/25/2012 15:07	NH
Chloroform	BRL	0.10		mg/L	164250	20	07/25/2012 15:07	NH
Tetrachloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 15:07	NH
Trichloroethene	1.3	0.10	*	mg/L	164250	20	07/25/2012 15:07	NH
Vinyl chloride	BRL	0.040		mg/L	164250	20	07/25/2012 15:07	NH
Surr: 4-Bromofluorobenzene	93.6	64.6-131		%REC	164250	20	07/25/2012 15:07	NH
Surr: Dibromofluoromethane	108	70.6-128		%REC	164250	20	07/25/2012 15:07	NH
Surr: Toluene-d8	92.6	70.5-116		%REC	164250	20	07/25/2012 15:07	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	IDW #12					
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 12:15:00 PM					
<b>Lab ID:</b>	1207E25-054	<b>Matrix:</b>	Groundwater					
Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>VOLATILES, TCLP SW1311/8260B</b>								<b>(SW1311)</b>
1,1-Dichloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 14:09	NH
1,2-Dichloroethane	BRL	0.10		mg/L	164250	20	07/25/2012 14:09	NH
2-Butanone	BRL	0.20		mg/L	164250	20	07/25/2012 14:09	NH
Benzene	BRL	0.10		mg/L	164250	20	07/25/2012 14:09	NH
Carbon tetrachloride	BRL	0.10		mg/L	164250	20	07/25/2012 14:09	NH
Chlorobenzene	BRL	0.10		mg/L	164250	20	07/25/2012 14:09	NH
Chloroform	BRL	0.10		mg/L	164250	20	07/25/2012 14:09	NH
Tetrachloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 14:09	NH
Trichloroethene	0.76	0.10	*	mg/L	164250	20	07/25/2012 14:09	NH
Vinyl chloride	BRL	0.040		mg/L	164250	20	07/25/2012 14:09	NH
Surr: 4-Bromofluorobenzene	94.8	64.6-131		%REC	164250	20	07/25/2012 14:09	NH
Surr: Dibromofluoromethane	109	70.6-128		%REC	164250	20	07/25/2012 14:09	NH
Surr: Toluene-d8	89.9	70.5-116		%REC	164250	20	07/25/2012 14:09	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	IDW #13
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012 12:20:00 PM
<b>Lab ID:</b>	1207E25-055	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>VOLATILES, TCLP SW1311/8260B</b>								<b>(SW1311)</b>
1,1-Dichloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 13:41	NH
1,2-Dichloroethane	BRL	0.10		mg/L	164250	20	07/25/2012 13:41	NH
2-Butanone	BRL	0.20		mg/L	164250	20	07/25/2012 13:41	NH
Benzene	BRL	0.10		mg/L	164250	20	07/25/2012 13:41	NH
Carbon tetrachloride	BRL	0.10		mg/L	164250	20	07/25/2012 13:41	NH
Chlorobenzene	BRL	0.10		mg/L	164250	20	07/25/2012 13:41	NH
Chloroform	BRL	0.10		mg/L	164250	20	07/25/2012 13:41	NH
Tetrachloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 13:41	NH
Trichloroethene	BRL	0.10		mg/L	164250	20	07/25/2012 13:41	NH
Vinyl chloride	BRL	0.040		mg/L	164250	20	07/25/2012 13:41	NH
Surr: 4-Bromofluorobenzene	89.9	64.6-131	%REC		164250	20	07/25/2012 13:41	NH
Surr: Dibromofluoromethane	113	70.6-128	%REC		164250	20	07/25/2012 13:41	NH
Surr: Toluene-d8	90.3	70.5-116	%REC		164250	20	07/25/2012 13:41	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	TRIP BLANK
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012
<b>Lab ID:</b>	1207E25-056	<b>Matrix:</b>	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
1,1-Dichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
1,1-Dichloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
1,2-Dibromoethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
1,2-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
1,2-Dichloroethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
1,2-Dichloropropane	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
1,3-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
1,4-Dichlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
2-Butanone	BRL	50		ug/L	164230	1	07/23/2012 19:08	NH
2-Hexanone	BRL	10		ug/L	164230	1	07/23/2012 19:08	NH
4-Methyl-2-pentanone	BRL	10		ug/L	164230	1	07/23/2012 19:08	NH
Acetone	BRL	50		ug/L	164230	1	07/23/2012 19:08	NH
Benzene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Bromodichloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Bromoform	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Bromomethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Carbon disulfide	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Carbon tetrachloride	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Chlorobenzene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Chloroethane	BRL	10		ug/L	164230	1	07/23/2012 19:08	NH
Chloroform	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Chloromethane	BRL	10		ug/L	164230	1	07/23/2012 19:08	NH
cis-1,2-Dichloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
cis-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Cyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Dibromochloromethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Dichlorodifluoromethane	BRL	10		ug/L	164230	1	07/23/2012 19:08	NH
Ethylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Freon-113	BRL	10		ug/L	164230	1	07/23/2012 19:08	NH
Isopropylbenzene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
m,p-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Methyl acetate	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Methyl tert-butyl ether	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Methylcyclohexane	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Methylene chloride	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
o-Xylene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 28-Jul-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	TRIP BLANK
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	7/19/2012
<b>Lab ID:</b>	1207E25-056	<b>Matrix:</b>	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Tetrachloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Toluene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
trans-1,2-Dichloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
trans-1,3-Dichloropropene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Trichloroethene	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Trichlorofluoromethane	BRL	5.0		ug/L	164230	1	07/23/2012 19:08	NH
Vinyl chloride	BRL	2.0		ug/L	164230	1	07/23/2012 19:08	NH
Surr: 4-Bromofluorobenzene	93.9	67.4-123	%REC		164230	1	07/23/2012 19:08	NH
Surr: Dibromofluoromethane	107	75.5-128	%REC		164230	1	07/23/2012 19:08	NH
Surr: Toluene-d8	91.4	70-120	%REC		164230	1	07/23/2012 19:08	NH

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

# Analytical Environmental Services, Inc.

## Sample/Cooler Receipt Checklist

Client CDM SMITH

Work Order Number 1207E25

Checklist completed by Jamie B Date 7/20/12  
 Signature \_\_\_\_\_ Date \_\_\_\_\_

Carrier name: FedEx  UPS  Courier  Client  US Mail  Other \_\_\_\_\_

Shipping container/coolers in good condition? Yes  No  Not Present

Custody seals intact on shipping container/coolers? Yes  No  Not Present

Custody seals intact on sample bottles? Yes  No  Not Present

Container/Temp Blank temperature in compliance? (4°C±2)\* Yes  No

Cooler #1 33° Cooler #2 31° Cooler #3 \_\_\_\_\_ Cooler #4 \_\_\_\_\_ Cooler #5 \_\_\_\_\_ Cooler #6 \_\_\_\_\_

Chain of custody present? Yes  No

Chain of custody signed when relinquished and received? Yes  No

Chain of custody agrees with sample labels? Yes XMS 7/20/12 No

Samples in proper container/bottle? Yes  No

Sample containers intact? Yes  No

Sufficient sample volume for indicated test? Yes  No

All samples received within holding time? Yes  No

Was TAT marked on the COC? Yes  No

Proceed with Standard TAT as per project history? Yes  No  Not Applicable

Water - VOA vials have zero headspace? No VOA vials submitted Yes  No

Water - pH acceptable upon receipt? Yes  No  Not Applicable

Adjusted? \_\_\_\_\_ Checked by JB \_\_\_\_\_

Sample Condition: Good  Other(Explain) \_\_\_\_\_

(For diffusive samples or AIHA lead) Is a known blank included? Yes  No

See Case Narrative for resolution of the Non-Conformance.

\* Samples do not have to comply with the given range for certain parameters.

<b>Client:</b>	CDM Smith Inc.	<b>Dates Report</b>					
<b>Project:</b>	Former Manchester Tank						
<b>Lab Order:</b>	1207E25						

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1207E25-001A	DUP-1	7/16/2012 8:00:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/23/2012
1207E25-002A	MW-20B	7/16/2012 1:00:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/23/2012
1207E25-003A	MW-18B	7/16/2012 1:45:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/23/2012
1207E25-003A	MW-18B	7/16/2012 1:45:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-004A	MW-19C	7/16/2012 2:15:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/23/2012
1207E25-005A	MW-11B	7/16/2012 2:55:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-006A	MW-10B	7/16/2012 3:40:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-007A	MW-36C	7/16/2012 4:45:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-008A	MW-5B	7/16/2012 4:45:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-009A	DUP-2	7/17/2012 8:00:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-010A	MW-30A	7/17/2012 9:25:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-011A	MW-38C	7/17/2012 10:10:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-012A	MW-1B	7/17/2012 11:00:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-013A	MW-35D	7/17/2012 1:30:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-014A	MW-33A	7/17/2012 1:35:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-015A	MW-37C	7/17/2012 2:35:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-016A	MW-32B	7/17/2012 2:56:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-017A	MW-31C	7/17/2012 3:30:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-018A	MW-4B	7/17/2012 3:56:00PM	Groundwater	TCL VOLATILE ORGANICS		07/24/2012	07/24/2012
1207E25-018A	MW-4B	7/17/2012 3:56:00PM	Groundwater	TCL VOLATILE ORGANICS		07/24/2012	07/25/2012
1207E25-019A	MW-34B	7/17/2012 4:30:00PM	Groundwater	TCL VOLATILE ORGANICS		07/24/2012	07/25/2012
1207E25-020A	MW-25A	7/17/2012 4:55:00PM	Groundwater	TCL VOLATILE ORGANICS		07/24/2012	07/25/2012
1207E25-021A	MW-40C	7/17/2012 5:15:00PM	Groundwater	TCL VOLATILE ORGANICS		07/24/2012	07/25/2012
1207E25-022A	MW-39C	7/18/2012 8:50:00AM	Groundwater	TCL VOLATILE ORGANICS		07/24/2012	07/25/2012
1207E25-023A	DUP-3	7/18/2012 8:00:00AM	Groundwater	TCL VOLATILE ORGANICS		07/24/2012	07/25/2012
1207E25-024A	DUP-4	7/18/2012 8:30:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/25/2012
1207E25-025A	MW-14C	7/18/2012 9:30:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/25/2012
1207E25-026A	MW-17C	7/18/2012 10:05:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/25/2012
1207E25-027A	MW-15B	7/18/2012 10:18:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/25/2012

Client:	CDM Smith Inc.	Project:	Former Manchester Tank	Lab Order:	1207E25	Dates Report		
Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date	
1207E25-028A	MW-41C	7/18/2012 10:50:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/25/2012	
1207E25-029A	MW-9B	7/18/2012 11:05:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/25/2012	
1207E25-030A	MW-16A	7/18/2012 11:35:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/25/2012	
1207E25-031A	MW-27A	7/18/2012 1:20:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/25/2012	
1207E25-032A	MW-26A	7/18/2012 1:23:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012	
1207E25-033A	MW-6A	7/18/2012 2:20:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012	
1207E25-033A	MW-6A	7/18/2012 2:20:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/25/2012	
1207E25-034A	MW-13C	7/18/2012 3:10:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/23/2012	
1207E25-035A	MW-28A	7/18/2012 3:45:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/23/2012	
1207E25-035A	MW-28A	7/18/2012 3:45:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012	
1207E25-036A	MW-12C	7/18/2012 4:25:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/23/2012	
1207E25-037A	MW-8B	7/18/2012 5:05:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/23/2012	
1207E25-037A	MW-8B	7/18/2012 5:05:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012	
1207E25-038A	MW-29A	7/18/2012 5:50:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/23/2012	
1207E25-038A	MW-29A	7/18/2012 5:50:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012	
1207E25-039A	MW-7C	7/18/2012 6:25:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/23/2012	
1207E25-039A	MW-7C	7/18/2012 6:25:00PM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012	
1207E25-040A	IDW #1	7/19/2012 8:30:00AM	Soil	VOLATILES, TCLP Leached		07/24/2012	07/24/2012	07/25/2012
1207E25-041A	IDW #2	7/19/2012 8:35:00AM	Soil	VOLATILES, TCLP Leached		07/24/2012	07/24/2012	07/25/2012
1207E25-042A	IDW #3	7/19/2012 8:40:00AM	Soil	VOLATILES, TCLP Leached		07/24/2012	07/24/2012	07/25/2012
1207E25-043A	IDW #4	7/19/2012 8:45:00AM	Soil	MERCURY, TCLP Leached		07/23/2012	07/24/2012	07/24/2012
1207E25-043A	IDW #4	7/19/2012 8:45:00AM	Soil	ICP METALS, TCLP Leached		07/23/2012	07/24/2012	07/25/2012
1207E25-044A	IDW #5	7/19/2012 8:50:00AM	Soil	VOLATILES, TCLP Leached		07/24/2012	07/24/2012	07/25/2012
1207E25-045A	IDW #6	7/19/2012 8:55:00AM	Soil	MERCURY, TCLP Leached		07/23/2012	07/24/2012	07/24/2012
1207E25-045A	IDW #6	7/19/2012 8:55:00AM	Soil	ICP METALS, TCLP Leached		07/23/2012	07/24/2012	07/25/2012
1207E25-046A	IDW- #7	7/19/2012 9:00:00AM	Soil	MERCURY, TCLP Leached		07/23/2012	07/24/2012	07/24/2012
1207E25-046A	IDW- #7	7/19/2012 9:00:00AM	Soil	ICP METALS, TCLP Leached		07/23/2012	07/24/2012	07/25/2012
1207E25-047A	IDW- #8	7/19/2012 9:05:00AM	Soil	MERCURY, TCLP Leached		07/23/2012	07/24/2012	07/24/2012
1207E25-047A	IDW- #8	7/19/2012 9:05:00AM	Soil	ICP METALS, TCLP Leached		07/23/2012	07/24/2012	07/25/2012

<b>Client:</b>	CDM Smith Inc.	<b>Dates Report</b>					
<b>Project:</b>	Former Manchester Tank						
<b>Lab Order:</b>	1207E25						

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1207E25-048A	IDW- #9	7/19/2012 9:10:00AM	Soil	MERCURY, TCLP Leached	07/23/2012	07/24/2012	07/24/2012
1207E25-048A	IDW- #9	7/19/2012 9:10:00AM	Soil	ICP METALS, TCLP Leached	07/23/2012	07/24/2012	07/25/2012
1207E25-049A	IDW- #10	7/19/2012 9:15:00AM	Soil	VOLATILES, TCLP Leached	07/24/2012	07/24/2012	07/25/2012
1207E25-050A	MW-21C	7/19/2012 11:05:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/23/2012
1207E25-050A	MW-21C	7/19/2012 11:05:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-051A	MW-24B	7/19/2012 11:15:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/23/2012
1207E25-051A	MW-24B	7/19/2012 11:15:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-052A	MW-22C	7/19/2012 11:40:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/23/2012
1207E25-052A	MW-22C	7/19/2012 11:40:00AM	Groundwater	TCL VOLATILE ORGANICS		07/23/2012	07/24/2012
1207E25-053A	IDW- #11	7/19/2012 12:10:00PM	Groundwater	VOLATILES, TCLP Leached	07/24/2012	07/24/2012	07/25/2012
1207E25-054A	IDW #12	7/19/2012 12:15:00PM	Groundwater	VOLATILES, TCLP Leached	07/24/2012	07/24/2012	07/25/2012
1207E25-055A	IDW #13	7/19/2012 12:20:00PM	Groundwater	VOLATILES, TCLP Leached	07/24/2012	07/24/2012	07/25/2012
1207E25-056A	TRIP BLANK	7/19/2012 12:00:00AM	Aqueous	TCL VOLATILE ORGANICS		07/23/2012	07/23/2012

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164183**

Sample ID: MB-164183	Client ID:	Units: ug/L			Prep Date:	07/23/2012	Run No: 225534				
SampleType: MBLK	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 164183			Analysis Date:	07/23/2012	Seq No: 4720880				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	0
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	0
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	0
Acetone	BRL	50	0	0	0	0	0	0	0	0	0
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	0

Qualifiers: &gt; Greater than Result value

&lt; Less than Result value

B Analyte detected in the associated method blank

BRL Below reporting limit

E Estimated (value above quantitation range)

H Holding times for preparation or analysis exceeded

J Estimated value detected below Reporting Limit

N Analyte not NELAC certified

R RPD outside limits due to matrix

Rpt Lim Reporting Limit

S Spike Recovery outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164183**

Sample ID: <b>MB-164183</b>	Client ID:	Units: <b>ug/L</b>			Prep Date:	<b>07/23/2012</b>	Run No: <b>225534</b>				
SampleType: <b>MLBK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>164183</b>			Analysis Date:	<b>07/23/2012</b>	Seq No: <b>4720880</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	0
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	0
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	0
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Freon-113	BRL	10	0	0	0	0	0	0	0	0	0
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	0
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	0
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	0
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	0
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	0
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	0
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	0
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	0
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	42.49	0	50	0	85	67.4	123	0	0	0	0
Surr: Dibromofluoromethane	49.49	0	50	0	99	75.5	128	0	0	0	0
Surr: Toluene-d8	45.67	0	50	0	91.3	70	120	0	0	0	0

**Qualifiers:** > Greater than Result value  
 BRL Below reporting limit  
 J Estimated value detected below Reporting Limit  
 Rpt Lim Reporting Limit

< Less than Result value  
 E Estimated (value above quantitation range)  
 N Analyte not NELAC certified  
 S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank  
 H Holding times for preparation or analysis exceeded  
 R RPD outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164183**

Sample ID: <b>LCS-164183</b>	Client ID:				Units: <b>ug/L</b>	Prep Date: <b>07/23/2012</b>	Run No: <b>225534</b>				
SampleType: <b>LCS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>164183</b>	Analysis Date: <b>07/23/2012</b>	Seq No: <b>4720678</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	61.85	5.0	50	0	124	60	140	0	0	0
Benzene	55.00	5.0	50	0	110	70	130	0	0	0
Chlorobenzene	48.18	5.0	50	0	96.4	70	130	0	0	0
Toluene	56.13	5.0	50	0	112	70	130	0	0	0
Trichloroethene	44.47	5.0	50	0	88.9	70	130	0	0	0
Surr: 4-Bromofluorobenzene	55.25	0	50	0	110	67.4	123	0	0	0
Surr: Dibromofluoromethane	51.73	0	50	0	103	75.5	128	0	0	0
Surr: Toluene-d8	49.47	0	50	0	98.9	70	120	0	0	0

Sample ID: <b>1207E45-001AMS</b>	Client ID:				Units: <b>ug/L</b>	Prep Date: <b>07/23/2012</b>	Run No: <b>225534</b>				
SampleType: <b>MS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>164183</b>	Analysis Date: <b>07/23/2012</b>	Seq No: <b>4720702</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	31220	2500	25000	0	125	50.1	179	0	0	0
Benzene	28290	2500	25000	0	113	61.2	150	0	0	0
Chlorobenzene	23760	2500	25000	0	95	72.1	140	0	0	0
Toluene	27320	2500	25000	0	109	58.7	154	0	0	0
Trichloroethene	22140	2500	25000	0	88.5	68.3	149	0	0	0
Surr: 4-Bromofluorobenzene	25840	0	25000	0	103	67.4	123	0	0	0
Surr: Dibromofluoromethane	25240	0	25000	0	101	75.5	128	0	0	0
Surr: Toluene-d8	24330	0	25000	0	97.3	70	120	0	0	0

Sample ID: <b>1207E45-001AMSD</b>	Client ID:				Units: <b>ug/L</b>	Prep Date: <b>07/23/2012</b>	Run No: <b>225534</b>				
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>164183</b>	Analysis Date: <b>07/23/2012</b>	Seq No: <b>4720703</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	26400	2500	25000	0	106	50.1	179	31220	16.7	23.3
Benzene	24790	2500	25000	0	99.1	61.2	150	28290	13.2	19

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164183**

Sample ID: <b>1207E45-001AMSD</b>	Client ID:				Units: <b>ug/L</b>	Prep Date: <b>07/23/2012</b>	Run No: <b>225534</b>				
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>164183</b>	Analysis Date: <b>07/23/2012</b>	Seq No: <b>4720703</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	21910	2500	25000	0	87.6	72.1	140	23760	8.1	21.5	
Toluene	23900	2500	25000	0	95.6	58.7	154	27320	13.3	20	
Trichloroethene	19820	2500	25000	0	79.3	68.3	149	22140	11.1	17.7	
Surr: 4-Bromofluorobenzene	26920	0	25000	0	108	67.4	123	25840	0	0	
Surr: Dibromofluoromethane	24590	0	25000	0	98.4	75.5	128	25240	0	0	
Surr: Toluene-d8	24260	0	25000	0	97	70	120	24330	0	0	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164210**

Sample ID: <b>MB-164210</b>	Client ID:				Units: <b>mg/L</b>	Prep Date: <b>07/24/2012</b>	Run No: <b>225680</b>				
SampleType: <b>MLBK</b>	TestCode: <b>MERCURY, TCLP SW1311/7470A</b>				BatchID: <b>164210</b>	Analysis Date: <b>07/24/2012</b>	Seq No: <b>4723721</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	BRL	0.00400	0	0	0	0	0	0	0	0	0
Sample ID: <b>LCS-164210</b>	Client ID:				Units: <b>mg/L</b>	Prep Date: <b>07/24/2012</b>	Run No: <b>225680</b>				
SampleType: <b>LCS</b>	TestCode: <b>MERCURY, TCLP SW1311/7470A</b>				BatchID: <b>164210</b>	Analysis Date: <b>07/24/2012</b>	Seq No: <b>4723728</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.03748	0.00400	0.04	0	93.7	80	120	0	0	0	0
Sample ID: <b>1207D51-001AMS</b>	Client ID:				Units: <b>mg/L</b>	Prep Date: <b>07/24/2012</b>	Run No: <b>225680</b>				
SampleType: <b>MS</b>	TestCode: <b>MERCURY, TCLP SW1311/7470A</b>				BatchID: <b>164210</b>	Analysis Date: <b>07/24/2012</b>	Seq No: <b>4723750</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.03887	0.00400	0.04	0	97.2	80	120	0	0	0	0
Sample ID: <b>1207D51-001AMSD</b>	Client ID:				Units: <b>mg/L</b>	Prep Date: <b>07/24/2012</b>	Run No: <b>225680</b>				
SampleType: <b>MSD</b>	TestCode: <b>MERCURY, TCLP SW1311/7470A</b>				BatchID: <b>164210</b>	Analysis Date: <b>07/24/2012</b>	Seq No: <b>4723772</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Mercury	0.03872	0.00400	0.04	0	96.8	80	120	0.03887	0.374	20	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164230**

Sample ID: <b>MB-164230</b>	Client ID:	Units: ug/L			Prep Date:	07/23/2012	Run No: <b>225626</b>				
SampleType: <b>MLBK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>164230</b>			Analysis Date:	07/23/2012	Seq No: <b>4722412</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	0
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	0
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	0
Acetone	BRL	50	0	0	0	0	0	0	0	0	0
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	0

Qualifiers: &gt; Greater than Result value

&lt; Less than Result value

B Analyte detected in the associated method blank

BRL Below reporting limit

E Estimated (value above quantitation range)

H Holding times for preparation or analysis exceeded

J Estimated value detected below Reporting Limit

N Analyte not NELAC certified

R RPD outside limits due to matrix

Rpt Lim Reporting Limit

S Spike Recovery outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164230**

Sample ID: <b>MB-164230</b>	Client ID:	Units: ug/L			Prep Date:	07/23/2012	Run No: <b>225626</b>				
SampleType: <b>MLBK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>164230</b>			Analysis Date:	07/23/2012	Seq No: <b>4722412</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	0
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	0
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	0
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Freon-113	BRL	10	0	0	0	0	0	0	0	0	0
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	0
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	0
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	0
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	0
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	0
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	0
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	0
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	0
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	47.15	0	50	0	94.3	67.4	123	0	0	0	0
Surr: Dibromofluoromethane	50.80	0	50	0	102	75.5	128	0	0	0	0
Surr: Toluene-d8	45.46	0	50	0	90.9	70	120	0	0	0	0

**Qualifiers:** > Greater than Result value  
 BRL Below reporting limit  
 J Estimated value detected below Reporting Limit  
 Rpt Lim Reporting Limit

< Less than Result value  
 E Estimated (value above quantitation range)  
 N Analyte not NELAC certified  
 S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank  
 H Holding times for preparation or analysis exceeded  
 R RPD outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164230**

Sample ID: <b>LCS-164230</b>	Client ID:				Units: <b>ug/L</b>	Prep Date:	<b>07/23/2012</b>	Run No: <b>225704</b>			
SampleType: <b>LCS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>164230</b>	Analysis Date:	<b>07/24/2012</b>	Seq No: <b>4724456</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	47.27	5.0	50	0	94.5	60	140	0	0	0
Benzene	42.47	5.0	50	0	84.9	70	130	0	0	0
Chlorobenzene	44.05	5.0	50	0	88.1	70	130	0	0	0
Toluene	42.67	5.0	50	0	85.3	70	130	0	0	0
Trichloroethene	54.53	5.0	50	0	109	70	130	0	0	0
Surr: 4-Bromofluorobenzene	58.07	0	50	0	116	67.4	123	0	0	0
Surr: Dibromofluoromethane	54.75	0	50	0	110	75.5	128	0	0	0
Surr: Toluene-d8	49.29	0	50	0	98.6	70	120	0	0	0

Sample ID: <b>1207E25-034AMS</b>	Client ID: <b>MW-13C</b>				Units: <b>ug/L</b>	Prep Date:	<b>07/23/2012</b>	Run No: <b>225626</b>			
SampleType: <b>MS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>164230</b>	Analysis Date:	<b>07/24/2012</b>	Seq No: <b>4722459</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	60.99	5.0	50	0	122	50.1	179	0	0	0
Benzene	49.32	5.0	50	0	98.6	61.2	150	0	0	0
Chlorobenzene	48.54	5.0	50	0	97.1	72.1	140	0	0	0
Toluene	50.08	5.0	50	0	100	58.7	154	0	0	0
Trichloroethene	97.10	5.0	50	18.19	158	68.3	149	0	0	0
Surr: 4-Bromofluorobenzene	55.91	0	50	0	112	67.4	123	0	0	0
Surr: Dibromofluoromethane	54.12	0	50	0	108	75.5	128	0	0	0
Surr: Toluene-d8	48.49	0	50	0	97	70	120	0	0	0

Sample ID: <b>1207E25-034AMSD</b>	Client ID: <b>MW-13C</b>				Units: <b>ug/L</b>	Prep Date:	<b>07/23/2012</b>	Run No: <b>225626</b>			
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>164230</b>	Analysis Date:	<b>07/24/2012</b>	Seq No: <b>4722461</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	57.07	5.0	50	0	114	50.1	179	60.99	6.64	23.3
Benzene	47.74	5.0	50	0	95.5	61.2	150	49.32	3.26	19

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164230**

Sample ID: 1207E25-034AMSD	Client ID: MW-13C				Units: ug/L	Prep Date: 07/23/2012	Run No: 225626				
SampleType: MSD	TestCode: TCL VOLATILE ORGANICS SW8260B				BatchID: 164230	Analysis Date: 07/24/2012	Seq No: 4722461				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	46.79	5.0	50	0	93.6	72.1	140	48.54	3.67	21.5	
Toluene	48.27	5.0	50	0	96.5	58.7	154	50.08	3.68	20	
Trichloroethene	84.16	5.0	50	18.19	132	68.3	149	97.10	14.3	17.7	
Surr: 4-Bromofluorobenzene	55.68	0	50	0	111	67.4	123	55.91	0	0	
Surr: Dibromofluoromethane	52.84	0	50	0	106	75.5	128	54.12	0	0	
Surr: Toluene-d8	47.79	0	50	0	95.6	70	120	48.49	0	0	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164236**

Sample ID: <b>MB-164236</b>	Client ID:				Units: <b>mg/L</b>	Prep Date: <b>07/25/2012</b>	Run No: <b>225712</b>				
SampleType: <b>MLBK</b>	TestCode: <b>ICP METALS, TCLP</b>	<b>SW1311/6010C</b>			BatchID: <b>164236</b>	Analysis Date: <b>07/25/2012</b>	Seq No: <b>4724554</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	0.250	0	0	0	0	0	0	0	0	0
Barium	BRL	0.500	0	0	0	0	0	0	0	0	0
Cadmium	BRL	0.0250	0	0	0	0	0	0	0	0	0
Chromium	BRL	0.0500	0	0	0	0	0	0	0	0	0
Lead	BRL	0.0500	0	0	0	0	0	0	0	0	0
Selenium	BRL	0.100	0	0	0	0	0	0	0	0	0
Silver	BRL	0.0250	0	0	0	0	0	0	0	0	0

Sample ID: <b>MB-164236-2</b>	Client ID:				Units: <b>mg/L</b>	Prep Date: <b>07/24/2012</b>	Run No: <b>225712</b>				
SampleType: <b>MLBK</b>	TestCode: <b>ICP METALS, TCLP</b>	<b>SW1311/6010C</b>			BatchID: <b>164236</b>	Analysis Date: <b>07/25/2012</b>	Seq No: <b>4724555</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	0.250	0	0	0	0	0	0	0	0	0
Barium	BRL	0.500	0	0	0	0	0	0	0	0	0
Cadmium	BRL	0.0250	0	0	0	0	0	0	0	0	0
Chromium	BRL	0.0500	0	0	0	0	0	0	0	0	0
Lead	BRL	0.0500	0	0	0	0	0	0	0	0	0
Selenium	BRL	0.100	0	0	0	0	0	0	0	0	0
Silver	BRL	0.0250	0	0	0	0	0	0	0	0	0

Sample ID: <b>LCS-164236</b>	Client ID:				Units: <b>mg/L</b>	Prep Date: <b>07/24/2012</b>	Run No: <b>225712</b>				
SampleType: <b>LCS</b>	TestCode: <b>ICP METALS, TCLP</b>	<b>SW1311/6010C</b>			BatchID: <b>164236</b>	Analysis Date: <b>07/25/2012</b>	Seq No: <b>4724553</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	5.518	0.250	5	0	110	85	115	0	0	0	0
Barium	5.207	0.500	5	0	104	80	120	0	0	0	0
Cadmium	5.344	0.0250	5	0	107	85	115	0	0	0	0
Chromium	5.709	0.0500	5	0	114	85	115	0	0	0	0

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164236**

Sample ID: <b>LCS-164236</b>	Client ID:				Units: <b>mg/L</b>	Prep Date: <b>07/24/2012</b>	Run No: <b>225712</b>				
SampleType: <b>LCS</b>	TestCode: <b>ICP METALS, TCLP</b>	<b>SW1311/6010C</b>			BatchID: <b>164236</b>	Analysis Date: <b>07/25/2012</b>	Seq No: <b>4724553</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Lead	5.353	0.0500	5	0	107	85	115	0	0	0
Selenium	5.731	0.100	5	0	115	85	115	0	0	0
Silver	0.5247	0.0250	0.5	0	105	85	115	0	0	0

Sample ID: <b>1207F48-001AMS</b>	Client ID:				Units: <b>mg/L</b>	Prep Date: <b>07/25/2012</b>	Run No: <b>225712</b>				
SampleType: <b>MS</b>	TestCode: <b>ICP METALS, TCLP</b>	<b>SW1311/6010C</b>			BatchID: <b>164236</b>	Analysis Date: <b>07/25/2012</b>	Seq No: <b>4724558</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Arsenic	5.531	0.250	5	0	111	50	150	0	0	0
Barium	5.079	0.500	5	0.06315	100	50	150	0	0	0
Cadmium	5.311	0.0250	5	0	106	50	150	0	0	0
Chromium	5.496	0.0500	5	0	110	50	150	0	0	0
Lead	5.121	0.0500	5	0	102	50	150	0	0	0
Selenium	5.751	0.100	5	0	115	50	150	0	0	0
Silver	0.5159	0.0250	0.5	0	103	50	150	0	0	0

Sample ID: <b>1207F48-001AMSD</b>	Client ID:				Units: <b>mg/L</b>	Prep Date: <b>07/25/2012</b>	Run No: <b>225712</b>				
SampleType: <b>MSD</b>	TestCode: <b>ICP METALS, TCLP</b>	<b>SW1311/6010C</b>			BatchID: <b>164236</b>	Analysis Date: <b>07/25/2012</b>	Seq No: <b>4724560</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Arsenic	5.484	0.250	5	0	110	50	150	5.531	0.851	30
Barium	5.006	0.500	5	0.06315	98.8	50	150	5.079	1.46	30
Cadmium	5.247	0.0250	5	0	105	50	150	5.311	1.22	30
Chromium	5.442	0.0500	5	0	109	50	150	5.496	0.986	30
Lead	5.060	0.0500	5	0	101	50	150	5.121	1.19	30
Selenium	5.690	0.100	5	0	114	50	150	5.751	1.07	30
Silver	0.5091	0.0250	0.5	0	102	50	150	0.5159	1.33	30

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164236**

Sample ID: 1207E25-048ADUP	Client ID: IDW- #9	Units: mg/L	Prep Date: 07/24/2012	Run No: 225712							
SampleType: DUP	TestCode: ICP METALS, TCLP SW1311/6010C	BatchID: 164236	Analysis Date: 07/25/2012	Seq No: 4724813							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Arsenic	BRL	0.250	0	0	0	0	0	0	0	30
Barium	BRL	0.500	0	0	0	0	0	0.3071	0	30
Cadmium	BRL	0.0250	0	0	0	0	0	0	0	30
Chromium	BRL	0.0500	0	0	0	0	0	0	0	30
Lead	BRL	0.0500	0	0	0	0	0	0	0	30
Selenium	BRL	0.100	0	0	0	0	0	0	0	30
Silver	BRL	0.0250	0	0	0	0	0	0	0	30

Sample ID: 1207F48-001ADUP	Client ID: IDW- #9	Units: mg/L	Prep Date: 07/25/2012	Run No: 225712							
SampleType: DUP	TestCode: ICP METALS, TCLP SW1311/6010C	BatchID: 164236	Analysis Date: 07/25/2012	Seq No: 4724569							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Arsenic	BRL	0.250	0	0	0	0	0	0	0	30	
Barium	BRL	0.500	0	0	0	0	0	0.06315	0	30	
Cadmium	BRL	0.0250	0	0	0	0	0	0	0	30	
Chromium	BRL	0.0500	0	0	0	0	0	0	0	30	
Lead	BRL	0.0500	0	0	0	0	0	0	0	30	
Selenium	BRL	0.100	0	0	0	0	0	0	0	30	
Silver	BRL	0.0250	0	0	0	0	0	0	0	30	

Qualifiers:	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164240**

Sample ID: <b>MB-164240</b>	Client ID:	Units: <b>ug/L</b>			Prep Date:	<b>07/24/2012</b>	Run No: <b>225686</b>				
SampleType: <b>MLBK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>164240</b>			Analysis Date:	<b>07/24/2012</b>	Seq No: <b>4724000</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	0
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	0
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	0
Acetone	BRL	50	0	0	0	0	0	0	0	0	0
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	0

Qualifiers: &gt; Greater than Result value

&lt; Less than Result value

B Analyte detected in the associated method blank

BRL Below reporting limit

E Estimated (value above quantitation range)

H Holding times for preparation or analysis exceeded

J Estimated value detected below Reporting Limit

N Analyte not NELAC certified

R RPD outside limits due to matrix

Rpt Lim Reporting Limit

S Spike Recovery outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164240**

Sample ID: <b>MB-164240</b>	Client ID:	Units: ug/L			Prep Date:	07/24/2012	Run No: <b>225686</b>				
SampleType: <b>MLBK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>164240</b>			Analysis Date:	07/24/2012	Seq No: <b>4724000</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	0
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	0
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	0
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Freon-113	BRL	10	0	0	0	0	0	0	0	0	0
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	0
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	0
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	0
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	0
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	0
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	0
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	0
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	0
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	43.07	0	50	0	86.1	67.4	123	0	0	0	0
Surr: Dibromofluoromethane	51.77	0	50	0	104	75.5	128	0	0	0	0
Surr: Toluene-d8	44.54	0	50	0	89.1	70	120	0	0	0	0

**Qualifiers:** > Greater than Result value  
 BRL Below reporting limit  
 J Estimated value detected below Reporting Limit  
 Rpt Lim Reporting Limit

< Less than Result value  
 E Estimated (value above quantitation range)  
 N Analyte not NELAC certified  
 S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank  
 H Holding times for preparation or analysis exceeded  
 R RPD outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164240**

Sample ID: <b>LCS-164240</b>	Client ID:				Units: <b>ug/L</b>	Prep Date:	<b>07/24/2012</b>	Run No: <b>225686</b>			
SampleType: <b>LCS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>164240</b>	Analysis Date:	<b>07/24/2012</b>	Seq No: <b>4723985</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	60.63	5.0	50	0	121	60	140	0	0	0
Benzene	58.26	5.0	50	0	117	70	130	0	0	0
Chlorobenzene	49.99	5.0	50	0	100	70	130	0	0	0
Toluene	55.55	5.0	50	0	111	70	130	0	0	0
Trichloroethene	47.04	5.0	50	0	94.1	70	130	0	0	0
Surr: 4-Bromofluorobenzene	54.36	0	50	0	109	67.4	123	0	0	0
Surr: Dibromofluoromethane	55.40	0	50	0	111	75.5	128	0	0	0
Surr: Toluene-d8	48.80	0	50	0	97.6	70	120	0	0	0

Sample ID: <b>1207E25-018AMS</b>	Client ID: <b>MW-4B</b>				Units: <b>ug/L</b>	Prep Date:	<b>07/24/2012</b>	Run No: <b>225686</b>			
SampleType: <b>MS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>164240</b>	Analysis Date:	<b>07/24/2012</b>	Seq No: <b>4723989</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	669.1	50	500	17.20	130	50.1	179	0	0	0
Benzene	597.4	50	500	0	119	61.2	150	0	0	0
Chlorobenzene	513.9	50	500	0	103	72.1	140	0	0	0
Toluene	569.2	50	500	0	114	58.7	154	0	0	0
Trichloroethene	825.8	50	500	320.2	101	68.3	149	0	0	0
Surr: 4-Bromofluorobenzene	556.2	0	500	0	111	67.4	123	0	0	0
Surr: Dibromofluoromethane	538.3	0	500	0	108	75.5	128	0	0	0
Surr: Toluene-d8	511.9	0	500	0	102	70	120	0	0	0

Sample ID: <b>1207E25-018AMSD</b>	Client ID: <b>MW-4B</b>				Units: <b>ug/L</b>	Prep Date:	<b>07/24/2012</b>	Run No: <b>225686</b>			
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>164240</b>	Analysis Date:	<b>07/24/2012</b>	Seq No: <b>4723993</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	703.7	50	500	17.20	137	50.1	179	669.1	5.04	23.3
Benzene	588.9	50	500	0	118	61.2	150	597.4	1.43	19

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164240**

Sample ID: 1207E25-018AMSD	Client ID: MW-4B					Units: ug/L	Prep Date: 07/24/2012	Run No: 225686
SampleType: MSD	TestCode: TCL VOLATILE ORGANICS SW8260B					BatchID: 164240	Analysis Date: 07/24/2012	Seq No: 4723993
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val
Chlorobenzene	512.6	50	500	0	103	72.1	140	513.9
Toluene	553.3	50	500	0	111	58.7	154	569.2
Trichloroethene	831.3	50	500	320.2	102	68.3	149	825.8
Surr: 4-Bromofluorobenzene	540.9	0	500	0	108	67.4	123	556.2
Surr: Dibromofluoromethane	521.4	0	500	0	104	75.5	128	538.3
Surr: Toluene-d8	487.0	0	500	0	97.4	70	120	511.9
								Qual

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164250**

Sample ID: <b>MB-164250</b>	Client ID:				Units: <b>mg/L</b>	Prep Date: <b>07/24/2012</b>	Run No: <b>225618</b>				
SampleType: <b>MLBK</b>	TestCode: <b>VOLATILES, TCLP SW1311/8260B</b>				BatchID: <b>164250</b>	Analysis Date: <b>07/24/2012</b>	Seq No: <b>4723401</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	BRL	0.10	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	0.10	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	0.20	0	0	0	0	0	0	0	0	0
Benzene	BRL	0.10	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	0.10	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	0.10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	0.10	0	0	0	0	0	0	0	0	0
Tetrachloroethene	BRL	0.10	0	0	0	0	0	0	0	0	0
Trichloroethene	BRL	0.10	0	0	0	0	0	0	0	0	0
Vinyl chloride	BRL	0.040	0	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	0.9620	0	1	0	96.2	64.6	131	0	0	0	0
Surr: Dibromofluoromethane	0.9272	0	1	0	92.7	70.6	128	0	0	0	0
Surr: Toluene-d8	0.9602	0	1	0	96	70.5	116	0	0	0	0

Sample ID: <b>LCS-164250</b>	Client ID:				Units: <b>mg/L</b>	Prep Date: <b>07/24/2012</b>	Run No: <b>225618</b>				
SampleType: <b>LCS</b>	TestCode: <b>VOLATILES, TCLP SW1311/8260B</b>				BatchID: <b>164250</b>	Analysis Date: <b>07/24/2012</b>	Seq No: <b>4723402</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	1.100	0.10	1	0	110	51.3	142	0	0	0	0
1,2-Dichloroethane	1.103	0.10	1	0	110	65.3	132	0	0	0	0
2-Butanone	2.247	0.20	2	0	112	46.4	147	0	0	0	0
Benzene	1.134	0.10	1	0	113	70.2	125	0	0	0	0
Carbon tetrachloride	0.9824	0.10	1	0	98.2	53.1	148	0	0	0	0
Chlorobenzene	1.131	0.10	1	0	113	73.5	121	0	0	0	0
Chloroform	1.019	0.10	1	0	102	66.6	121	0	0	0	0
Tetrachloroethene	1.185	0.10	1	0	119	65.3	137	0	0	0	0
Trichloroethene	1.132	0.10	1	0	113	63.6	129	0	0	0	0
Vinyl chloride	0.9670	0.040	1	0	96.7	47.6	145	0	0	0	0

Qualifiers: &gt; Greater than Result value

&lt; Less than Result value

B Analyte detected in the associated method blank

BRL Below reporting limit

E Estimated (value above quantitation range)

H Holding times for preparation or analysis exceeded

J Estimated value detected below Reporting Limit

N Analyte not NELAC certified

R RPD outside limits due to matrix

Rpt Lim Reporting Limit

S Spike Recovery outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164250**

Sample ID: <b>LCS-164250</b>	Client ID:				Units: <b>mg/L</b>	Prep Date:	<b>07/24/2012</b>	Run No: <b>225618</b>			
SampleType: <b>LCS</b>	TestCode: <b>VOLATILES, TCLP</b>	<b>SW1311/8260B</b>			BatchID: <b>164250</b>	Analysis Date:	<b>07/24/2012</b>	Seq No: <b>4723402</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Surr: 4-Bromofluorobenzene	0.9884	0	1	0	98.8	64.6	131	0	0	0
Surr: Dibromofluoromethane	0.9846	0	1	0	98.5	70.6	128	0	0	0
Surr: Toluene-d8	1.021	0	1	0	102	70.5	116	0	0	0

Sample ID: <b>1207E35-002AMS</b>	Client ID:				Units: <b>mg/L</b>	Prep Date:	<b>07/24/2012</b>	Run No: <b>225618</b>			
SampleType: <b>MS</b>	TestCode: <b>VOLATILES, TCLP</b>	<b>SW1311/8260B</b>			BatchID: <b>164250</b>	Analysis Date:	<b>07/24/2012</b>	Seq No: <b>4723414</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	5.792	0.50	5	0	116	46.9	155	0	0	0
1,2-Dichloroethane	5.890	0.50	5	0	118	57.1	136	0	0	0
2-Butanone	16.94	1.0	10	0	169	36.2	167	0	0	0
Benzene	5.906	0.50	5	0	118	65.5	134	0	0	0
Carbon tetrachloride	4.849	0.50	5	0	97	51.3	151	0	0	0
Chlorobenzene	5.880	0.50	5	0	118	73	124	0	0	0
Chloroform	5.642	0.50	5	0.1800	109	61.3	128	0	0	0
Tetrachloroethene	6.128	0.50	5	0	123	62.3	146	0	0	0
Trichloroethene	9.916	0.50	5	0	198	66.2	140	0	0	0
Vinyl chloride	5.635	0.20	5	0	113	35.3	161	0	0	0
Surr: 4-Bromofluorobenzene	5.202	0	5	0	104	64.6	131	0	0	0
Surr: Dibromofluoromethane	4.932	0	5	0	98.6	70.6	128	0	0	0
Surr: Toluene-d8	5.083	0	5	0	102	70.5	116	0	0	0

Sample ID: <b>1207E35-002ADUP</b>	Client ID:				Units: <b>mg/L</b>	Prep Date:	<b>07/24/2012</b>	Run No: <b>225618</b>			
SampleType: <b>DUP</b>	TestCode: <b>VOLATILES, TCLP</b>	<b>SW1311/8260B</b>			BatchID: <b>164250</b>	Analysis Date:	<b>07/24/2012</b>	Seq No: <b>4723412</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	BRL	0.50	0	0	0	0	0	0	0	30	
1,2-Dichloroethane	BRL	0.50	0	0	0	0	0	0	0	30	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1207E25

**ANALYTICAL QC SUMMARY REPORT****BatchID: 164250**

Sample ID: 1207E35-002ADUP	Client ID:				Units: mg/L	Prep Date: 07/24/2012	Run No: 225618				
SampleType: DUP	TestCode: VOLATILES, TCLP	SW1311/8260B			BatchID: 164250	Analysis Date: 07/24/2012	Seq No: 4723412				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2-Butanone	BRL	1.0	0	0	0	0	0	0	0	30	
Benzene	BRL	0.50	0	0	0	0	0	0	0	30	
Carbon tetrachloride	BRL	0.50	0	0	0	0	0	0	0	30	
Chlorobenzene	BRL	0.50	0	0	0	0	0	0	0	30	
Chloroform	BRL	0.50	0	0	0	0	0	0.1800	0	30	
Tetrachloroethene	BRL	0.50	0	0	0	0	0	0	0	30	
Trichloroethene	BRL	0.50	0	0	0	0	0	0	0	30	
Vinyl chloride	BRL	0.20	0	0	0	0	0	0	0	30	
Surr: 4-Bromofluorobenzene	5.060	0	5	0	101	64.6	131	5.089	0	0	
Surr: Dibromofluoromethane	4.706	0	5	0	94.1	70.6	128	4.714	0	0	
Surr: Toluene-d8	4.818	0	5	0	96.4	70.5	116	4.840	0	0	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		



## ANALYTICAL ENVIRONMENTAL SERVICES, INC.

October 10, 2012

Andrew Romanek  
CDM Smith Inc.  
3715 Northside Parkway  
Atlanta GA 30327

TEL: (404) 720-1400  
FAX: (404) 467-4130

RE: Former Manchester Tank

Dear Andrew Romanek:

Order No: 1210289

Analytical Environmental Services, Inc. received 3 samples on 10/3/2012 4:25:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/12-06/30/13.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in black ink that reads "Sharissa Hall".

Sharissa Hall  
Project Manager

## ANALYTICAL ENVIRONMENTAL SERVICES, INC

3785 Presidential Parkway, Atlanta GA 30340-3704

AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

## CHAIN OF CUSTODY

Work Order: 12/0289

COMPANY: <b>com Smith</b>		ADDRESS: <b>3715 Northside Parkway Bldg 300 S. 400 Atlanta, GA 30327</b>		ANALYSIS REQUESTED		Visit our website <a href="http://www.aesatlanta.com">www.aesatlanta.com</a> to check on the status of your results, place bottle orders, etc.	
PHONE: <b>(404) 720-1400</b>	FAX:	SAMPLED BY: <b>Nick Fuller</b>	SIGNATURE: <b>2i-2</b>			No. # of Containers	
#	SAMPLE ID	SAMPLED		DATE	TIME	GRAB	REMARKS
1	GP-24			10/21/2	16:50	X	6W X
2	GP-10A			10/21/2	13:00	X	6W X
3	Trip Blank					X	W X
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
RELEASER BY: <b>2i-2</b>		DATE/TIME RECEIVED BY <b>10/31/2003 from B</b>		DATE/TIME RECEIVED BY <b>10/31/2003 from B</b>		PROJECT INFORMATION	
						PROJECT NAME: <b>Former Manchester Tank</b>	RECEIPT Total # of Containers <b>6</b>
						PROJECT #: <b>2</b>	Turnaround Time Request: Standard 5 Business Days
						SITE ADDRESS: <b>Cedartown GA</b>	2 Business Day Rush Next Business Day Rush
						SEND REPORT TO: <b>Bronx AP@consimith.com</b> <b>daffey JT@consimith.com</b>	Same Day Rush (auth req): Other _____
						INVOICE TO: (IF DIFFERENT FROM ABOVE)	STATE PROGRAM (if any): _____
						QUOTE #: <b>PO#:</b>	E-mail? Y / N; Fax? Y / N; Data Package: I II III IV
SPECIAL INSTRUCTIONS/COMMENTS:  <b>3.</b> <b>2i-2</b>							
SHIPMENT METHOD OUT / / VIA: IN / / VIA: COURIER GREYHOUND OTHER							
SAMPLES RECEIVED AFTER 3PM OR SATURDAY ARE CONSIDERED AS RECEIVED ON THE NEXT BUSINESS DAY; IF NO TAT IS MARKED ON COC AES WILL PROCEED AS STANDARD TAT. SAMPLES ARE DISPOSED OF 30 DAYS AFTER COMPLETION OF REPORT UNLESS OTHER ARRANGEMENTS ARE MADE.							

MATRIX CODES: A = Air    GW = Groundwater    SE = Sediment    SO = Soil    SW = Surface Water    W = Water (Blanks)    O = Other (specify)    WW = Waste Water  
 PRESERVATIVE CODES: H+1 = Hydrochloric acid + ice    I = Ice only    N = Nitric acid    S+I = Sulfuric acid + ice    SM+I = Sodium Bisulfate/Methanol + ice    O = Other (specify)    NA = None  
 White Copy - Original; Yellow Copy - Client

**Analytical Environmental Services, Inc**
**Date:** 10-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	GP-2A					
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/2/2012 4:50:00 PM					
<b>Lab ID:</b>	1210289-001	<b>Matrix:</b>	Groundwater					
<b>Analyses</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>Qual</b>	<b>Units</b>	<b>BatchID</b>	<b>Dilution Factor</b>	<b>Date Analyzed</b>	<b>Analyst</b>
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	86	5.0		ug/L	167513	1	10/09/2012 23:56	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
1,1-Dichloroethane	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
1,1-Dichloroethene	16	5.0		ug/L	167513	1	10/09/2012 23:56	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
1,2-Dibromoethane	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
1,2-Dichloroethane	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
1,2-Dichloropropane	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
2-Butanone	BRL	50		ug/L	167513	1	10/09/2012 23:56	NP
2-Hexanone	BRL	10		ug/L	167513	1	10/09/2012 23:56	NP
4-Methyl-2-pentanone	BRL	10		ug/L	167513	1	10/09/2012 23:56	NP
Acetone	BRL	50		ug/L	167513	1	10/09/2012 23:56	NP
Benzene	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Bromodichloromethane	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Bromoform	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Bromomethane	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Carbon disulfide	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Carbon tetrachloride	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Chlorobenzene	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Chloroethane	BRL	10		ug/L	167513	1	10/09/2012 23:56	NP
Chloroform	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Chloromethane	BRL	10		ug/L	167513	1	10/09/2012 23:56	NP
cis-1,2-Dichloroethene	320	50		ug/L	167513	10	10/10/2012 11:00	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Cyclohexane	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Dibromochloromethane	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Dichlorodifluoromethane	BRL	10		ug/L	167513	1	10/09/2012 23:56	NP
Ethylbenzene	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Freon-113	BRL	10		ug/L	167513	1	10/09/2012 23:56	NP
Isopropylbenzene	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
m,p-Xylene	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Methyl acetate	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Methylcyclohexane	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Methylene chloride	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
o-Xylene	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 10-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	GP-2A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/2/2012 4:50:00 PM
<b>Lab ID:</b>	1210289-001	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Tetrachloroethene	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Toluene	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
trans-1,2-Dichloroethene	5.6	5.0		ug/L	167513	1	10/09/2012 23:56	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Trichloroethene	490	50		ug/L	167513	10	10/10/2012 11:00	NP
Trichlorofluoromethane	BRL	5.0		ug/L	167513	1	10/09/2012 23:56	NP
Vinyl chloride	BRL	2.0		ug/L	167513	1	10/09/2012 23:56	NP
Surr: 4-Bromofluorobenzene	82.7	67.4-123		%REC	167513	1	10/09/2012 23:56	NP
Surr: 4-Bromofluorobenzene	85	67.4-123		%REC	167513	10	10/10/2012 11:00	NP
Surr: Dibromofluoromethane	87.6	75.5-128		%REC	167513	10	10/10/2012 11:00	NP
Surr: Dibromofluoromethane	107	75.5-128		%REC	167513	1	10/09/2012 23:56	NP
Surr: Toluene-d8	85.9	70-120		%REC	167513	1	10/09/2012 23:56	NP
Surr: Toluene-d8	86.1	70-120		%REC	167513	10	10/10/2012 11:00	NP

<b>Qualifiers:</b>	*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
	BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
	H	Holding times for preparation or analysis exceeded	Narr	See case narrative
	N	Analyte not NELAC certified	NC	Not confirmed
	B	Analyte detected in the associated method blank	<	Less than Result value
	>	Greater than Result value	J	Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 10-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	GP-10A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/3/2012 1:00:00 PM
<b>Lab ID:</b>	1210289-002	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
1,1-Dichloroethane	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
1,1-Dichloroethene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
1,2-Dibromoethane	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
1,2-Dichloroethane	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
1,2-Dichloropropane	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
2-Butanone	BRL	50		ug/L	167513	1	10/10/2012 00:25	NP
2-Hexanone	BRL	10		ug/L	167513	1	10/10/2012 00:25	NP
4-Methyl-2-pentanone	BRL	10		ug/L	167513	1	10/10/2012 00:25	NP
Acetone	BRL	50		ug/L	167513	1	10/10/2012 00:25	NP
Benzene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Bromodichloromethane	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Bromoform	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Bromomethane	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Carbon disulfide	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Carbon tetrachloride	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Chlorobenzene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Chloroethane	BRL	10		ug/L	167513	1	10/10/2012 00:25	NP
Chloroform	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Chloromethane	BRL	10		ug/L	167513	1	10/10/2012 00:25	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Cyclohexane	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Dibromochloromethane	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Dichlorodifluoromethane	BRL	10		ug/L	167513	1	10/10/2012 00:25	NP
Ethylbenzene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Freon-113	BRL	10		ug/L	167513	1	10/10/2012 00:25	NP
Isopropylbenzene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
m,p-Xylene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Methyl acetate	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Methylcyclohexane	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Methylene chloride	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
o-Xylene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 10-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	GP-10A
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/3/2012 1:00:00 PM
<b>Lab ID:</b>	1210289-002	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Tetrachloroethene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Toluene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Trichloroethene	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Trichlorofluoromethane	BRL	5.0		ug/L	167513	1	10/10/2012 00:25	NP
Vinyl chloride	BRL	2.0		ug/L	167513	1	10/10/2012 00:25	NP
Surr: 4-Bromofluorobenzene	91.3	67.4-123		%REC	167513	1	10/10/2012 00:25	NP
Surr: Dibromofluoromethane	96.5	75.5-128		%REC	167513	1	10/10/2012 00:25	NP
Surr: Toluene-d8	92.4	70-120		%REC	167513	1	10/10/2012 00:25	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 10-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	TRIP BLANK
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/3/2012
<b>Lab ID:</b>	1210289-003	<b>Matrix:</b>	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
1,1-Dichloroethane	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
1,1-Dichloroethene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
1,2-Dibromoethane	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
1,2-Dichloroethane	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
1,2-Dichloropropane	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
2-Butanone	BRL	50		ug/L	167513	1	10/09/2012 21:02	NP
2-Hexanone	BRL	10		ug/L	167513	1	10/09/2012 21:02	NP
4-Methyl-2-pentanone	BRL	10		ug/L	167513	1	10/09/2012 21:02	NP
Acetone	BRL	50		ug/L	167513	1	10/09/2012 21:02	NP
Benzene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Bromodichloromethane	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Bromoform	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Bromomethane	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Carbon disulfide	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Carbon tetrachloride	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Chlorobenzene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Chloroethane	BRL	10		ug/L	167513	1	10/09/2012 21:02	NP
Chloroform	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Chloromethane	BRL	10		ug/L	167513	1	10/09/2012 21:02	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Cyclohexane	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Dibromochloromethane	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Dichlorodifluoromethane	BRL	10		ug/L	167513	1	10/09/2012 21:02	NP
Ethylbenzene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Freon-113	BRL	10		ug/L	167513	1	10/09/2012 21:02	NP
Isopropylbenzene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
m,p-Xylene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Methyl acetate	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Methylcyclohexane	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Methylene chloride	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
o-Xylene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 10-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	TRIP BLANK
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/3/2012
<b>Lab ID:</b>	1210289-003	<b>Matrix:</b>	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Tetrachloroethene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Toluene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Trichloroethene	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Trichlorofluoromethane	BRL	5.0		ug/L	167513	1	10/09/2012 21:02	NP
Vinyl chloride	BRL	2.0		ug/L	167513	1	10/09/2012 21:02	NP
Surr: 4-Bromofluorobenzene	84.9	67.4-123		%REC	167513	1	10/09/2012 21:02	NP
Surr: Dibromofluoromethane	89	75.5-128		%REC	167513	1	10/09/2012 21:02	NP
Surr: Toluene-d8	90	70-120		%REC	167513	1	10/09/2012 21:02	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc.**

## Sample/Cooler Receipt Checklist

Client CDM SmithWork Order Number 1210289Checklist completed by JLW Date 10/04/20

Signature

Carrier name: FedEx  UPS  Courier  Client  US Mail  Other \_\_\_\_\_Shipping container/coolers in good condition? Yes  No  Not Present Custody seals intact on shipping container/coolers? Yes  No  Not Present Custody seals intact on sample bottles? Yes  No  Not Present Container/Temp Blank temperature in compliance? (4°C±2)\* Yes  No Cooler #1 3.3 Cooler #2 \_\_\_\_\_ Cooler #3 \_\_\_\_\_ Cooler #4 \_\_\_\_\_ Cooler #5 \_\_\_\_\_ Cooler #6 \_\_\_\_\_Chain of custody present? Yes  No Chain of custody signed when relinquished and received? Yes  No Chain of custody agrees with sample labels? Yes  No Samples in proper container/bottle? Yes  No Sample containers intact? Yes  No Sufficient sample volume for indicated test? Yes  No All samples received within holding time? Yes  No Was TAT marked on the COC? Yes  No Proceed with Standard TAT as per project history? Yes  No  Not Applicable Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No Water - pH acceptable upon receipt? Yes  No  Not Applicable 

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Sample Condition: Good  Other(Explain) \_\_\_\_\_(For diffusive samples or AIHA lead) Is a known blank included? Yes  No **See Case Narrative for resolution of the Non-Conformance.**

\* Samples do not have to comply with the given range for certain parameters.

Client: CDM Smith Inc.  
Project: Former Manchester Tank  
Lab Order: 1210289

**Dates Report**

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1210289-001A	GP-2A	10/2/2012 4:50:00PM	Groundwater	TCL VOLATILE ORGANICS		10/09/2012	10/09/2012
1210289-001A	GP-2A	10/2/2012 4:50:00PM	Groundwater	TCL VOLATILE ORGANICS		10/09/2012	10/10/2012
1210289-002A	GP-10A	10/3/2012 1:00:00PM	Groundwater	TCL VOLATILE ORGANICS		10/09/2012	10/10/2012
1210289-003A	TRIP BLANK	10/3/2012 12:00:00AM	Aqueous	TCL VOLATILE ORGANICS		10/09/2012	10/09/2012

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1210289

**ANALYTICAL QC SUMMARY REPORT****BatchID: 167513**

Sample ID: MB-167513	Client ID:	Units: ug/L			Prep Date:	10/09/2012	Run No: 230650				
SampleType: MBLK	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 167513			Analysis Date:	10/09/2012	Seq No: 4828701				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	0
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	0
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	0
Acetone	BRL	50	0	0	0	0	0	0	0	0	0
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	0

Qualifiers: &gt; Greater than Result value

&lt; Less than Result value

B Analyte detected in the associated method blank

BRL Below reporting limit

E Estimated (value above quantitation range)

H Holding times for preparation or analysis exceeded

J Estimated value detected below Reporting Limit

N Analyte not NELAC certified

R RPD outside limits due to matrix

Rpt Lim Reporting Limit

S Spike Recovery outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1210289

**ANALYTICAL QC SUMMARY REPORT****BatchID: 167513**

Sample ID: <b>MB-167513</b>	Client ID:	Units: ug/L			Prep Date:	10/09/2012	Run No: <b>230650</b>				
SampleType: <b>MLBK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>167513</b>			Analysis Date:	<b>10/09/2012</b>	Seq No: <b>4828701</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	0
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	0
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	0
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Freon-113	BRL	10	0	0	0	0	0	0	0	0	0
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	0
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	0
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	0
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	0
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	0
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	0
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	0
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	0
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	45.95	0	50	0	91.9	67.4	123	0	0	0	0
Surr: Dibromofluoromethane	49.07	0	50	0	98.1	75.5	128	0	0	0	0
Surr: Toluene-d8	43.20	0	50	0	86.4	70	120	0	0	0	0

**Qualifiers:** > Greater than Result value  
 BRL Below reporting limit  
 J Estimated value detected below Reporting Limit  
 Rpt Lim Reporting Limit

< Less than Result value  
 E Estimated (value above quantitation range)  
 N Analyte not NELAC certified  
 S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank  
 H Holding times for preparation or analysis exceeded  
 R RPD outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1210289

**ANALYTICAL QC SUMMARY REPORT****BatchID: 167513**

Sample ID: <b>LCS-167513</b>	Client ID:				Units: <b>ug/L</b>	Prep Date: <b>10/09/2012</b>	Run No: <b>230650</b>				
SampleType: <b>LCS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>167513</b>	Analysis Date: <b>10/09/2012</b>	Seq No: <b>4828691</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	50.90	5.0	50	0	102	60	140	0	0	0
Benzene	52.11	5.0	50	0	104	70	130	0	0	0
Chlorobenzene	47.06	5.0	50	0	94.1	70	130	0	0	0
Toluene	52.07	5.0	50	0	104	70	130	0	0	0
Trichloroethene	51.46	5.0	50	0	103	70	130	0	0	0
Surr: 4-Bromofluorobenzene	50.89	0	50	0	102	67.4	123	0	0	0
Surr: Dibromofluoromethane	48.01	0	50	0	96	75.5	128	0	0	0
Surr: Toluene-d8	45.90	0	50	0	91.8	70	120	0	0	0

Sample ID: <b>1210366-002AMS</b>	Client ID:				Units: <b>ug/L</b>	Prep Date: <b>10/09/2012</b>	Run No: <b>230650</b>				
SampleType: <b>MS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>167513</b>	Analysis Date: <b>10/09/2012</b>	Seq No: <b>4828694</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	29950	2500	25000	0	120	50.1	179	0	0	0
Benzene	25960	2500	25000	0	104	61.2	150	0	0	0
Chlorobenzene	24680	2500	25000	0	98.7	72.1	140	0	0	0
Toluene	31190	2500	25000	5065	104	58.7	154	0	0	0
Trichloroethene	25320	2500	25000	0	101	68.3	149	0	0	0
Surr: 4-Bromofluorobenzene	25300	0	25000	0	101	67.4	123	0	0	0
Surr: Dibromofluoromethane	21470	0	25000	0	85.9	75.5	128	0	0	0
Surr: Toluene-d8	23220	0	25000	0	92.9	70	120	0	0	0

Sample ID: <b>1210366-002AMSD</b>	Client ID:				Units: <b>ug/L</b>	Prep Date: <b>10/09/2012</b>	Run No: <b>230650</b>				
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>167513</b>	Analysis Date: <b>10/09/2012</b>	Seq No: <b>4828697</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	28790	2500	25000	0	115	50.1	179	29950	3.95	23.3
Benzene	26670	2500	25000	0	107	61.2	150	25960	2.7	19

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1210289

**ANALYTICAL QC SUMMARY REPORT****BatchID: 167513**

Sample ID: 1210366-002AMSD	Client ID:				Units: ug/L	Prep Date: 10/09/2012	Run No: 230650				
SampleType: MSD	TestCode: TCL VOLATILE ORGANICS SW8260B				BatchID: 167513	Analysis Date: 10/09/2012	Seq No: 4828697				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	25400	2500	25000	0	102	72.1	140	24680	2.86	21.5	
Toluene	32000	2500	25000	5065	108	58.7	154	31190	2.56	20	
Trichloroethene	26970	2500	25000	0	108	68.3	149	25320	6.31	17.7	
Surr: 4-Bromofluorobenzene	25630	0	25000	0	103	67.4	123	25300	0	0	
Surr: Dibromofluoromethane	23220	0	25000	0	92.9	75.5	128	21470	0	0	
Surr: Toluene-d8	22850	0	25000	0	91.4	70	120	23220	0	0	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		



## ANALYTICAL ENVIRONMENTAL SERVICES, INC.

October 22, 2012

Andrew Romanek  
CDM Smith Inc.  
3715 Northside Parkway  
Atlanta GA 30327

TEL: (404) 720-1400  
FAX: (404) 467-4130

RE: Former Manchester Tank

Dear Andrew Romanek:

Order No: 1210D23

Analytical Environmental Services, Inc. received 9 samples on 10/16/2012 8:40:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/12-06/30/13.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in black ink that reads "Sharissa Hall".

Sharissa Hall  
Project Manager



**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-52C					
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012 12:50:00 PM					
<b>Lab ID:</b>	1210D23-001	<b>Matrix:</b>	Groundwater					
<b>Analyses</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>Qual</b>	<b>Units</b>	<b>BatchID</b>	<b>Dilution Factor</b>	<b>Date Analyzed</b>	<b>Analyst</b>
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
1,1-Dichloroethane	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
1,1-Dichloroethene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
1,2-Dibromoethane	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
1,2-Dichloroethane	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
1,2-Dichloropropane	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
2-Butanone	BRL	50		ug/L	167828	1	10/17/2012 19:06	NP
2-Hexanone	BRL	10		ug/L	167828	1	10/17/2012 19:06	NP
4-Methyl-2-pentanone	BRL	10		ug/L	167828	1	10/17/2012 19:06	NP
Acetone	BRL	50		ug/L	167828	1	10/17/2012 19:06	NP
Benzene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Bromodichloromethane	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Bromoform	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Bromomethane	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Carbon disulfide	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Carbon tetrachloride	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Chlorobenzene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Chloroethane	BRL	10		ug/L	167828	1	10/17/2012 19:06	NP
Chloroform	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Chloromethane	BRL	10		ug/L	167828	1	10/17/2012 19:06	NP
cis-1,2-Dichloroethene		21		ug/L	167828	1	10/17/2012 19:06	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Cyclohexane	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Dibromochloromethane	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Dichlorodifluoromethane	BRL	10		ug/L	167828	1	10/17/2012 19:06	NP
Ethylbenzene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Freon-113	BRL	10		ug/L	167828	1	10/17/2012 19:06	NP
Isopropylbenzene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
m,p-Xylene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Methyl acetate	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Methylcyclohexane	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Methylene chloride	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
o-Xylene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-52C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012 12:50:00 PM
<b>Lab ID:</b>	1210D23-001	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Tetrachloroethene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Toluene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Trichloroethene	86	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Trichlorofluoromethane	BRL	5.0		ug/L	167828	1	10/17/2012 19:06	NP
Vinyl chloride	BRL	2.0		ug/L	167828	1	10/17/2012 19:06	NP
Surr: 4-Bromofluorobenzene	93.3	64.6-123		%REC	167828	1	10/17/2012 19:06	NP
Surr: Dibromofluoromethane	98.3	76.6-133		%REC	167828	1	10/17/2012 19:06	NP
Surr: Toluene-d8	96	77.8-120		%REC	167828	1	10/17/2012 19:06	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-46C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012 1:55:00 PM
<b>Lab ID:</b>	1210D23-002	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
1,1-Dichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
1,1-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
1,2-Dibromoethane	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
1,2-Dichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
1,2-Dichloropropane	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
2-Butanone	BRL	50		ug/L	167828	1	10/19/2012 17:47	NP
2-Hexanone	BRL	10		ug/L	167828	1	10/19/2012 17:47	NP
4-Methyl-2-pentanone	BRL	10		ug/L	167828	1	10/19/2012 17:47	NP
Acetone	BRL	50		ug/L	167828	1	10/19/2012 17:47	NP
Benzene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Bromodichloromethane	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Bromoform	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Bromomethane	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Carbon disulfide	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Carbon tetrachloride	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Chlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Chloroethane	BRL	10		ug/L	167828	1	10/19/2012 17:47	NP
Chloroform	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Chloromethane	BRL	10		ug/L	167828	1	10/19/2012 17:47	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Cyclohexane	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Dibromochloromethane	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Dichlorodifluoromethane	BRL	10		ug/L	167828	1	10/19/2012 17:47	NP
Ethylbenzene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Freon-113	BRL	10		ug/L	167828	1	10/19/2012 17:47	NP
Isopropylbenzene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
m,p-Xylene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Methyl acetate	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Methylcyclohexane	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Methylene chloride	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
o-Xylene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-46C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012 1:55:00 PM
<b>Lab ID:</b>	1210D23-002	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Tetrachloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Toluene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Trichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Trichlorofluoromethane	BRL	5.0		ug/L	167828	1	10/19/2012 17:47	NP
Vinyl chloride	BRL	2.0		ug/L	167828	1	10/19/2012 17:47	NP
Surr: 4-Bromofluorobenzene	101	64.6-123	%REC		167828	1	10/19/2012 17:47	NP
Surr: Dibromofluoromethane	103	76.6-133	%REC		167828	1	10/19/2012 17:47	NP
Surr: Toluene-d8	95.1	77.8-120	%REC		167828	1	10/19/2012 17:47	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-47C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012 2:30:00 PM
<b>Lab ID:</b>	1210D23-003	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
1,1-Dichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
1,1-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
1,2-Dibromoethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
1,2-Dichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
1,2-Dichloropropane	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
2-Butanone	BRL	50		ug/L	167828	1	10/19/2012 18:16	NP
2-Hexanone	BRL	10		ug/L	167828	1	10/19/2012 18:16	NP
4-Methyl-2-pentanone	BRL	10		ug/L	167828	1	10/19/2012 18:16	NP
Acetone	BRL	50		ug/L	167828	1	10/19/2012 18:16	NP
Benzene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Bromodichloromethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Bromoform	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Bromomethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Carbon disulfide	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Carbon tetrachloride	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Chlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Chloroethane	BRL	10		ug/L	167828	1	10/19/2012 18:16	NP
Chloroform	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Chloromethane	BRL	10		ug/L	167828	1	10/19/2012 18:16	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Cyclohexane	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Dibromochloromethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Dichlorodifluoromethane	BRL	10		ug/L	167828	1	10/19/2012 18:16	NP
Ethylbenzene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Freon-113	BRL	10		ug/L	167828	1	10/19/2012 18:16	NP
Isopropylbenzene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
m,p-Xylene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Methyl acetate	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Methylcyclohexane	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Methylene chloride	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
o-Xylene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-47C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012 2:30:00 PM
<b>Lab ID:</b>	1210D23-003	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Tetrachloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Toluene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Trichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Trichlorofluoromethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:16	NP
Vinyl chloride	BRL	2.0		ug/L	167828	1	10/19/2012 18:16	NP
Surr: 4-Bromofluorobenzene	101	64.6-123	%REC		167828	1	10/19/2012 18:16	NP
Surr: Dibromofluoromethane	106	76.6-133	%REC		167828	1	10/19/2012 18:16	NP
Surr: Toluene-d8	93.2	77.8-120	%REC		167828	1	10/19/2012 18:16	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-49C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012 3:15:00 PM
<b>Lab ID:</b>	1210D23-004	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
1,1-Dichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
1,1-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
1,2-Dibromoethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
1,2-Dichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
1,2-Dichloropropane	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
2-Butanone	BRL	50		ug/L	167828	1	10/19/2012 18:45	NP
2-Hexanone	BRL	10		ug/L	167828	1	10/19/2012 18:45	NP
4-Methyl-2-pentanone	BRL	10		ug/L	167828	1	10/19/2012 18:45	NP
Acetone	BRL	50		ug/L	167828	1	10/19/2012 18:45	NP
Benzene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Bromodichloromethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Bromoform	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Bromomethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Carbon disulfide	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Carbon tetrachloride	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Chlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Chloroethane	BRL	10		ug/L	167828	1	10/19/2012 18:45	NP
Chloroform	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Chloromethane	BRL	10		ug/L	167828	1	10/19/2012 18:45	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Cyclohexane	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Dibromochloromethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Dichlorodifluoromethane	BRL	10		ug/L	167828	1	10/19/2012 18:45	NP
Ethylbenzene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Freon-113	BRL	10		ug/L	167828	1	10/19/2012 18:45	NP
Isopropylbenzene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
m,p-Xylene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Methyl acetate	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Methylcyclohexane	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Methylene chloride	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
o-Xylene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-49C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012 3:15:00 PM
<b>Lab ID:</b>	1210D23-004	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Tetrachloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Toluene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Trichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Trichlorofluoromethane	BRL	5.0		ug/L	167828	1	10/19/2012 18:45	NP
Vinyl chloride	BRL	2.0		ug/L	167828	1	10/19/2012 18:45	NP
Surr: 4-Bromofluorobenzene	101	64.6-123	%REC		167828	1	10/19/2012 18:45	NP
Surr: Dibromofluoromethane	106	76.6-133	%REC		167828	1	10/19/2012 18:45	NP
Surr: Toluene-d8	91.2	77.8-120	%REC		167828	1	10/19/2012 18:45	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-50C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012 3:45:00 PM
<b>Lab ID:</b>	1210D23-005	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
1,1-Dichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
1,1-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
1,2-Dibromoethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
1,2-Dichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
1,2-Dichloropropane	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
2-Butanone	BRL	50		ug/L	167828	1	10/19/2012 19:14	NP
2-Hexanone	BRL	10		ug/L	167828	1	10/19/2012 19:14	NP
4-Methyl-2-pentanone	BRL	10		ug/L	167828	1	10/19/2012 19:14	NP
Acetone	BRL	50		ug/L	167828	1	10/19/2012 19:14	NP
Benzene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Bromodichloromethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Bromoform	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Bromomethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Carbon disulfide	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Carbon tetrachloride	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Chlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Chloroethane	BRL	10		ug/L	167828	1	10/19/2012 19:14	NP
Chloroform	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Chloromethane	BRL	10		ug/L	167828	1	10/19/2012 19:14	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Cyclohexane	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Dibromochloromethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Dichlorodifluoromethane	BRL	10		ug/L	167828	1	10/19/2012 19:14	NP
Ethylbenzene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Freon-113	BRL	10		ug/L	167828	1	10/19/2012 19:14	NP
Isopropylbenzene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
m,p-Xylene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Methyl acetate	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Methylcyclohexane	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Methylene chloride	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
o-Xylene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-50C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012 3:45:00 PM
<b>Lab ID:</b>	1210D23-005	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Tetrachloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Toluene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Trichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Trichlorofluoromethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:14	NP
Vinyl chloride	BRL	2.0		ug/L	167828	1	10/19/2012 19:14	NP
Surr: 4-Bromofluorobenzene	101	64.6-123	%REC		167828	1	10/19/2012 19:14	NP
Surr: Dibromofluoromethane	107	76.6-133	%REC		167828	1	10/19/2012 19:14	NP
Surr: Toluene-d8	95.9	77.8-120	%REC		167828	1	10/19/2012 19:14	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-48C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012 4:15:00 PM
<b>Lab ID:</b>	1210D23-006	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
1,1-Dichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
1,1-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
1,2-Dibromoethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
1,2-Dichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
1,2-Dichloropropane	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
2-Butanone	BRL	50		ug/L	167828	1	10/19/2012 19:42	NP
2-Hexanone	BRL	10		ug/L	167828	1	10/19/2012 19:42	NP
4-Methyl-2-pentanone	BRL	10		ug/L	167828	1	10/19/2012 19:42	NP
Acetone	BRL	50		ug/L	167828	1	10/19/2012 19:42	NP
Benzene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Bromodichloromethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Bromoform	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Bromomethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Carbon disulfide	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Carbon tetrachloride	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Chlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Chloroethane	BRL	10		ug/L	167828	1	10/19/2012 19:42	NP
Chloroform	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Chloromethane	BRL	10		ug/L	167828	1	10/19/2012 19:42	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Cyclohexane	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Dibromochloromethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Dichlorodifluoromethane	BRL	10		ug/L	167828	1	10/19/2012 19:42	NP
Ethylbenzene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Freon-113	BRL	10		ug/L	167828	1	10/19/2012 19:42	NP
Isopropylbenzene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
m,p-Xylene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Methyl acetate	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Methylcyclohexane	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Methylene chloride	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
o-Xylene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-48C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012 4:15:00 PM
<b>Lab ID:</b>	1210D23-006	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Tetrachloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Toluene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Trichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Trichlorofluoromethane	BRL	5.0		ug/L	167828	1	10/19/2012 19:42	NP
Vinyl chloride	BRL	2.0		ug/L	167828	1	10/19/2012 19:42	NP
Surr: 4-Bromofluorobenzene	104	64.6-123	%REC		167828	1	10/19/2012 19:42	NP
Surr: Dibromofluoromethane	104	76.6-133	%REC		167828	1	10/19/2012 19:42	NP
Surr: Toluene-d8	93.4	77.8-120	%REC		167828	1	10/19/2012 19:42	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-51C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012 4:55:00 PM
<b>Lab ID:</b>	1210D23-007	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
1,1-Dichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
1,1-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
1,2-Dibromoethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
1,2-Dichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
1,2-Dichloropropane	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
2-Butanone	BRL	50		ug/L	167828	1	10/19/2012 20:11	NP
2-Hexanone	BRL	10		ug/L	167828	1	10/19/2012 20:11	NP
4-Methyl-2-pentanone	BRL	10		ug/L	167828	1	10/19/2012 20:11	NP
Acetone	BRL	50		ug/L	167828	1	10/19/2012 20:11	NP
Benzene	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Bromodichloromethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Bromoform	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Bromomethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Carbon disulfide	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Carbon tetrachloride	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Chlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Chloroethane	BRL	10		ug/L	167828	1	10/19/2012 20:11	NP
Chloroform	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Chloromethane	BRL	10		ug/L	167828	1	10/19/2012 20:11	NP
cis-1,2-Dichloroethene	250	50		ug/L	167828	10	10/22/2012 11:50	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Cyclohexane	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Dibromochloromethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Dichlorodifluoromethane	BRL	10		ug/L	167828	1	10/19/2012 20:11	NP
Ethylbenzene	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Freon-113	BRL	10		ug/L	167828	1	10/19/2012 20:11	NP
Isopropylbenzene	9.9	5.0		ug/L	167828	1	10/19/2012 20:11	NP
m,p-Xylene	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Methyl acetate	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Methylcyclohexane	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Methylene chloride	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
o-Xylene	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-51C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012 4:55:00 PM
<b>Lab ID:</b>	1210D23-007	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Tetrachloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Toluene	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Trichloroethene	330	50		ug/L	167828	10	10/22/2012 11:50	NP
Trichlorofluoromethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:11	NP
Vinyl chloride	35	2.0		ug/L	167828	1	10/19/2012 20:11	NP
Surr: 4-Bromofluorobenzene	110	64.6-123		%REC	167828	10	10/22/2012 11:50	NP
Surr: 4-Bromofluorobenzene	115	64.6-123		%REC	167828	1	10/19/2012 20:11	NP
Surr: Dibromofluoromethane	100	76.6-133		%REC	167828	10	10/22/2012 11:50	NP
Surr: Dibromofluoromethane	107	76.6-133		%REC	167828	1	10/19/2012 20:11	NP
Surr: Toluene-d8	91.2	77.8-120		%REC	167828	10	10/22/2012 11:50	NP
Surr: Toluene-d8	96.6	77.8-120		%REC	167828	1	10/19/2012 20:11	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-43D
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012 5:35:00 PM
<b>Lab ID:</b>	1210D23-008	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								<b>(SW5030B)</b>
1,1,1-Trichloroethane	26	5.0		ug/L	167828	1	10/19/2012 20:40	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
1,1-Dichloroethane	10	5.0		ug/L	167828	1	10/19/2012 20:40	NP
1,1-Dichloroethene	54	5.0		ug/L	167828	1	10/19/2012 20:40	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
1,2-Dibromoethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
1,2-Dichloroethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
1,2-Dichloropropane	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
2-Butanone	BRL	50		ug/L	167828	1	10/19/2012 20:40	NP
2-Hexanone	BRL	10		ug/L	167828	1	10/19/2012 20:40	NP
4-Methyl-2-pentanone	BRL	10		ug/L	167828	1	10/19/2012 20:40	NP
Acetone	BRL	50		ug/L	167828	1	10/19/2012 20:40	NP
Benzene	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Bromodichloromethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Bromoform	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Bromomethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Carbon disulfide	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Carbon tetrachloride	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Chlorobenzene	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Chloroethane	BRL	10		ug/L	167828	1	10/19/2012 20:40	NP
Chloroform	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Chloromethane	BRL	10		ug/L	167828	1	10/19/2012 20:40	NP
cis-1,2-Dichloroethene	290	100		ug/L	167828	20	10/22/2012 12:18	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Cyclohexane	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Dibromochloromethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Dichlorodifluoromethane	BRL	10		ug/L	167828	1	10/19/2012 20:40	NP
Ethylbenzene	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Freon-113	BRL	10		ug/L	167828	1	10/19/2012 20:40	NP
Isopropylbenzene	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
m,p-Xylene	14	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Methyl acetate	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Methylcyclohexane	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Methylene chloride	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
o-Xylene	6.4	5.0		ug/L	167828	1	10/19/2012 20:40	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-43D
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012 5:35:00 PM
<b>Lab ID:</b>	1210D23-008	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Tetrachloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Toluene	20	5.0		ug/L	167828	1	10/19/2012 20:40	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Trichloroethene	1400	100		ug/L	167828	20	10/22/2012 12:18	NP
Trichlorofluoromethane	BRL	5.0		ug/L	167828	1	10/19/2012 20:40	NP
Vinyl chloride	BRL	2.0		ug/L	167828	1	10/19/2012 20:40	NP
Surr: 4-Bromofluorobenzene	105	64.6-123		%REC	167828	20	10/22/2012 12:18	NP
Surr: 4-Bromofluorobenzene	109	64.6-123		%REC	167828	1	10/19/2012 20:40	NP
Surr: Dibromofluoromethane	104	76.6-133		%REC	167828	1	10/19/2012 20:40	NP
Surr: Dibromofluoromethane	95.2	76.6-133		%REC	167828	20	10/22/2012 12:18	NP
Surr: Toluene-d8	97.8	77.8-120		%REC	167828	1	10/19/2012 20:40	NP
Surr: Toluene-d8	89	77.8-120		%REC	167828	20	10/22/2012 12:18	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	TRIP BLANK
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012
<b>Lab ID:</b>	1210D23-009	<b>Matrix:</b>	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
1,1,2-Trichloroethane	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
1,1-Dichloroethane	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
1,1-Dichloroethene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
1,2-Dibromoethane	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
1,2-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
1,2-Dichloroethane	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
1,2-Dichloropropane	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
1,3-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
1,4-Dichlorobenzene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
2-Butanone	BRL	50		ug/L	167828	1	10/17/2012 18:36	NP
2-Hexanone	BRL	10		ug/L	167828	1	10/17/2012 18:36	NP
4-Methyl-2-pentanone	BRL	10		ug/L	167828	1	10/17/2012 18:36	NP
Acetone	BRL	50		ug/L	167828	1	10/17/2012 18:36	NP
Benzene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Bromodichloromethane	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Bromoform	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Bromomethane	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Carbon disulfide	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Carbon tetrachloride	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Chlorobenzene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Chloroethane	BRL	10		ug/L	167828	1	10/17/2012 18:36	NP
Chloroform	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Chloromethane	BRL	10		ug/L	167828	1	10/17/2012 18:36	NP
cis-1,2-Dichloroethene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
cis-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Cyclohexane	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Dibromochloromethane	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Dichlorodifluoromethane	BRL	10		ug/L	167828	1	10/17/2012 18:36	NP
Ethylbenzene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Freon-113	BRL	10		ug/L	167828	1	10/17/2012 18:36	NP
Isopropylbenzene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
m,p-Xylene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Methyl acetate	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Methyl tert-butyl ether	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Methylcyclohexane	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Methylene chloride	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
o-Xylene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 22-Oct-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	TRIP BLANK
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/15/2012
<b>Lab ID:</b>	1210D23-009	<b>Matrix:</b>	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Tetrachloroethene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Toluene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
trans-1,2-Dichloroethene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
trans-1,3-Dichloropropene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Trichloroethene	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Trichlorofluoromethane	BRL	5.0		ug/L	167828	1	10/17/2012 18:36	NP
Vinyl chloride	BRL	2.0		ug/L	167828	1	10/17/2012 18:36	NP
Surr: 4-Bromofluorobenzene	91.7	64.6-123	%REC		167828	1	10/17/2012 18:36	NP
Surr: Dibromofluoromethane	97.9	76.6-133	%REC		167828	1	10/17/2012 18:36	NP
Surr: Toluene-d8	96.2	77.8-120	%REC		167828	1	10/17/2012 18:36	NP

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc.**

## Sample/Cooler Receipt Checklist

Client CDM SmithWork Order Number 1210D23Checklist completed by DeB Signature \_\_\_\_\_ Date 10/16/12Carrier name: FedEx  UPS  Courier  Client  US Mail  Other \_\_\_\_\_Shipping container/cooler in good condition? Yes  No  Not Present Custody seals intact on shipping container/cooler? Yes  No  Not Present Custody seals intact on sample bottles? Yes  No  Not Present Container/Temp Blank temperature in compliance? (4°C±2)\* Yes  No Cooler #1 38°C Cooler #2 \_\_\_\_\_ Cooler #3 \_\_\_\_\_ Cooler #4 \_\_\_\_\_ Cooler #5 \_\_\_\_\_ Cooler #6 \_\_\_\_\_Chain of custody present? Yes  No Chain of custody signed when relinquished and received? Yes  No Chain of custody agrees with sample labels? Yes  No Samples in proper container/bottle? Yes  No Sample containers intact? Yes  No Sufficient sample volume for indicated test? Yes  No All samples received within holding time? Yes  No Was TAT marked on the COC? Yes  No Proceed with Standard TAT as per project history? Yes  No  Not Applicable Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No Water - pH acceptable upon receipt? Yes  No  Not Applicable 

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Sample Condition: Good  Other(Explain) \_\_\_\_\_(For diffusive samples or AIHA lead) Is a known blank included? Yes  No **See Case Narrative for resolution of the Non-Conformance.**

\* Samples do not have to comply with the given range for certain parameters.

<b>Client:</b>	CDM Smith Inc.	<b>Dates Report</b>
<b>Project:</b>	Former Manchester Tank	
<b>Lab Order:</b>	1210D23	

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1210D23-001A	MW-52C	10/15/2012 12:50:00PM	Groundwater	TCL VOLATILE ORGANICS		10/16/2012	10/17/2012
1210D23-002A	MW-46C	10/15/2012 1:55:00PM	Groundwater	TCL VOLATILE ORGANICS		10/16/2012	10/19/2012
1210D23-003A	MW-47C	10/15/2012 2:30:00PM	Groundwater	TCL VOLATILE ORGANICS		10/16/2012	10/19/2012
1210D23-004A	MW-49C	10/15/2012 3:15:00PM	Groundwater	TCL VOLATILE ORGANICS		10/16/2012	10/19/2012
1210D23-005A	MW-50C	10/15/2012 3:45:00PM	Groundwater	TCL VOLATILE ORGANICS		10/16/2012	10/19/2012
1210D23-006A	MW-48C	10/15/2012 4:15:00PM	Groundwater	TCL VOLATILE ORGANICS		10/16/2012	10/19/2012
1210D23-007A	MW-51C	10/15/2012 4:55:00PM	Groundwater	TCL VOLATILE ORGANICS		10/16/2012	10/19/2012
1210D23-007A	MW-51C	10/15/2012 4:55:00PM	Groundwater	TCL VOLATILE ORGANICS		10/16/2012	10/22/2012
1210D23-008A	MW-43D	10/15/2012 5:35:00PM	Groundwater	TCL VOLATILE ORGANICS		10/16/2012	10/19/2012
1210D23-008A	MW-43D	10/15/2012 5:35:00PM	Groundwater	TCL VOLATILE ORGANICS		10/16/2012	10/22/2012
1210D23-009A	TRIP BLANK	10/15/2012 12:00:00AM	Aqueous	TCL VOLATILE ORGANICS		10/16/2012	10/17/2012

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1210D23

**ANALYTICAL QC SUMMARY REPORT****BatchID: 167828**

Sample ID: MB-167828	Client ID: TCL VOLATILE ORGANICS SW8260B	Units: ug/L	Prep Date: 10/16/2012	Run No: 231067							
SampleType: MBLK	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 167828	Analysis Date: 10/16/2012	Seq No: 4838936							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	0
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	0
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	0
Acetone	BRL	50	0	0	0	0	0	0	0	0	0
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	0

Qualifiers: &gt; Greater than Result value

&lt; Less than Result value

B Analyte detected in the associated method blank

BRL Below reporting limit

E Estimated (value above quantitation range)

H Holding times for preparation or analysis exceeded

J Estimated value detected below Reporting Limit

N Analyte not NELAC certified

R RPD outside limits due to matrix

Rpt Lim Reporting Limit

S Spike Recovery outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1210D23

**ANALYTICAL QC SUMMARY REPORT****BatchID: 167828**

Sample ID: <b>MB-167828</b>	Client ID:	Units: ug/L			Prep Date:	10/16/2012	Run No:	<b>231067</b>			
SampleType: <b>MLBK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>167828</b>			Analysis Date:	<b>10/16/2012</b>	Seq No:	<b>4838936</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	0
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	0
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	0
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Freon-113	BRL	10	0	0	0	0	0	0	0	0	0
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	0
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	0
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	0
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	0
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	0
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	0
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	0
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	0
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	54.13	0	50	0	108	64.6	123	0	0	0	0
Surr: Dibromofluoromethane	39.30	0	50	0	78.6	76.6	133	0	0	0	0
Surr: Toluene-d8	44.19	0	50	0	88.4	77.8	120	0	0	0	0

**Qualifiers:** > Greater than Result value  
 BRL Below reporting limit  
 J Estimated value detected below Reporting Limit  
 Rpt Lim Reporting Limit

< Less than Result value  
 E Estimated (value above quantitation range)  
 N Analyte not NELAC certified  
 S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank  
 H Holding times for preparation or analysis exceeded  
 R RPD outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1210D23

**ANALYTICAL QC SUMMARY REPORT****BatchID: 167828**

Sample ID: <b>LCS-167828</b>	Client ID:				Units: <b>ug/L</b>	Prep Date: <b>10/16/2012</b>	Run No: <b>231182</b>				
SampleType: <b>LCS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>167828</b>	Analysis Date: <b>10/17/2012</b>	Seq No: <b>4840298</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	47.27	5.0	50	0	94.5	60	140	0	0	0
Benzene	47.81	5.0	50	0	95.6	70	130	0	0	0
Chlorobenzene	43.62	5.0	50	0	87.2	70	130	0	0	0
Toluene	46.12	5.0	50	0	92.2	70	130	0	0	0
Trichloroethene	49.34	5.0	50	0	98.7	70	130	0	0	0
Surr: 4-Bromofluorobenzene	49.38	0	50	0	98.8	64.6	123	0	0	0
Surr: Dibromofluoromethane	49.70	0	50	0	99.4	76.6	133	0	0	0
Surr: Toluene-d8	49.40	0	50	0	98.8	77.8	120	0	0	0

Sample ID: <b>1210C23-004AMS</b>	Client ID:				Units: <b>ug/L</b>	Prep Date: <b>10/16/2012</b>	Run No: <b>231182</b>				
SampleType: <b>MS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>167828</b>	Analysis Date: <b>10/17/2012</b>	Seq No: <b>4840299</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	53.34	5.0	50	0	107	50.1	179	0	0	0
Benzene	52.84	5.0	50	0	106	61.2	150	0	0	0
Chlorobenzene	49.16	5.0	50	0	98.3	72.1	140	0	0	0
Toluene	52.80	5.0	50	0	106	58.7	154	0	0	0
Trichloroethene	51.77	5.0	50	0	104	68.3	149	0	0	0
Surr: 4-Bromofluorobenzene	51.70	0	50	0	103	64.6	123	0	0	0
Surr: Dibromofluoromethane	48.98	0	50	0	98	76.6	133	0	0	0
Surr: Toluene-d8	48.47	0	50	0	96.9	77.8	120	0	0	0

Sample ID: <b>1210C23-004AMSD</b>	Client ID:				Units: <b>ug/L</b>	Prep Date: <b>10/16/2012</b>	Run No: <b>231182</b>				
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>167828</b>	Analysis Date: <b>10/17/2012</b>	Seq No: <b>4840301</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	50.93	5.0	50	0	102	50.1	179	53.34	4.62	23.3
Benzene	51.89	5.0	50	0	104	61.2	150	52.84	1.81	19

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1210D23

**ANALYTICAL QC SUMMARY REPORT****BatchID: 167828**

Sample ID: 1210C23-004AMSD	Client ID:				Units: ug/L	Prep Date: 10/16/2012	Run No: 231182				
SampleType: MSD	TestCode: TCL VOLATILE ORGANICS SW8260B				BatchID: 167828	Analysis Date: 10/17/2012	Seq No: 4840301				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	48.26	5.0	50	0	96.5	72.1	140	49.16	1.85	21.5	
Toluene	51.16	5.0	50	0	102	58.7	154	52.80	3.16	20	
Trichloroethene	52.74	5.0	50	0	105	68.3	149	51.77	1.86	17.7	
Surr: 4-Bromofluorobenzene	52.01	0	50	0	104	64.6	123	51.70	0	0	
Surr: Dibromofluoromethane	49.99	0	50	0	100	76.6	133	48.98	0	0	
Surr: Toluene-d8	48.73	0	50	0	97.5	77.8	120	48.47	0	0	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		



## ANALYTICAL ENVIRONMENTAL SERVICES, INC.

November 06, 2012

Andrew Romanek  
CDM Smith Inc.  
3715 Northside Parkway  
Atlanta GA 30327

TEL: (404) 720-1400  
FAX: (404) 467-4130

RE: Former Manchester Tank

Dear Andrew Romanek:

Order No: 1210Q05

Analytical Environmental Services, Inc. received 4 samples on 10/31/2012 11:00:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/12-06/30/13.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in black ink that reads "Sharissa Hall".

Sharissa Hall  
Project Manager

**ANALYTICAL ENVIRONMENTAL SERVICES, INC**

3785 Presidential Parkway, Atlanta GA 30340-3704

**AES** TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

**CHAIN OF CUSTODY**

Work Order: **12100DS**

Page 2 of 1 Page

<b>COMPANY:</b> <b>Com Smith</b>	<b>ADDRESS:</b> <b>3715 Northside Drwy, NW Bldg. 303 Ste. 400 Atlanta, GA 30327</b>		<b>ANALYSIS REQUESTED</b>		<b>Visit our website <a href="http://www.aesatlanta.com">www.aesatlanta.com</a> to check on the status of your results, place bottle orders, etc.</b>		<b>No. # of Containers</b>
	SAMPLED BY: <b>Matthew R. Howe</b>	SIGNATURE: 					
#	SAMPLE ID	SAMPLED	TIME	Grab Composite (See codes)	PRESERVATION (See codes)	REMARKS	
1	MW45C01	1 sample	10/30/12 1540	X	GW	X	
2	MW45C02	1 sample	10/30/12 1542	X	GW	X	
3	MW44C01	1 sample	10/30/12 1620	X	GW	X	
4	MW44C02	1 sample	10/30/12 1622	X	GW	X	
5	MW41C01	1 sample	10/30/12 1845	X	GW	X	
6	MW41C02	1 sample	10/30/12 1847	X	GW	X	
7	Trip Blank		10/30/12		X		
8							
9							
10							
11							
12							
13							
14							
1:	RELINQUISHED BY 	DATE/TIME RECEIVED BY <b>10/30/12 11:00AM</b>	DATE/TIME RECEIVED BY <b>10/31/12 11:00</b>	PROJECT INFORMATION		RECEIPT	
2:				PROJECT NAME: <b>Former Manchester Tank</b>	PROJECT #: <b>Cedartown, GA</b>	Total # of Containers	
3:				SITE ADDRESS: <b>Andrew Romaneck/Tom Duffey</b>	TURNAROUND TIME REQUEST		
SPECIAL INSTRUCTIONS/COMMENTS: <b>* Grabbed pre bucket sample because I lost baster, use mw41C02 first.</b>		SHIPMENT METHOD OUT / / IN / / CLIENT FedEx UPS MAIL COURIER GREYHOUND OTHER		INVOICE TO: (IF DIFFERENT FROM ABOVE) <b>romaneck@comsmith.com duffeyjt@comsmith.com</b>		STATE PROGRAM (if any): <input checked="" type="radio"/> Standard 5 Business Days <input type="radio"/> 2 Business Day Rush <input type="radio"/> Next Business Day Rush <input type="radio"/> Same Day Rush (auth req.) <input type="radio"/> Other	
				SEND REPORT TO:		E-mail? Y / N; <input type="radio"/> Y / N; Fax? PO#:	
				QUOTE #:		DATA PACKAGE: <input type="radio"/> I <input type="radio"/> II <input type="radio"/> III <input type="radio"/> IV	

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.

SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil DW = Drinking Water (Blanks) W = Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+1 = Hydrochloric acid + ice S+1 = Sulfuric acid + ice I = Ice only N = Nitric acid SM+1 = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None White Copy - Original; Yellow Copy - Client

**Analytical Environmental Services, Inc**
**Date:** 6-Nov-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW45CO1/O2					
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/30/2012 3:42:00 PM					
<b>Lab ID:</b>	1210Q05-001	<b>Matrix:</b>	Groundwater					
<hr/>								
<b>Analyses</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>Qual</b>	<b>Units</b>	<b>BatchID</b>	<b>Dilution Factor</b>	<b>Date Analyzed</b>	<b>Analyst</b>
<b>TCL VOLATILE ORGANICS SW8260B</b>				<b>(SW5030B)</b>				
1,1,1-Trichloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
1,1,2-Trichloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
1,1-Dichloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
1,1-Dichloroethene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
1,2-Dibromoethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
1,2-Dichlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
1,2-Dichloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
1,2-Dichloropropane	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
1,3-Dichlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
1,4-Dichlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
2-Butanone	BRL	50		ug/L	168480	1	11/02/2012 16:44	YT
2-Hexanone	BRL	10		ug/L	168480	1	11/02/2012 16:44	YT
4-Methyl-2-pentanone	BRL	10		ug/L	168480	1	11/02/2012 16:44	YT
Acetone	BRL	50		ug/L	168480	1	11/02/2012 16:44	YT
Benzene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Bromodichloromethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Bromoform	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Bromomethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Carbon disulfide	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Carbon tetrachloride	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Chlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Chloroethane	BRL	10		ug/L	168480	1	11/02/2012 16:44	YT
Chloroform	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Chloromethane	BRL	10		ug/L	168480	1	11/02/2012 16:44	YT
cis-1,2-Dichloroethene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Cyclohexane	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Dibromochloromethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Dichlorodifluoromethane	BRL	10		ug/L	168480	1	11/02/2012 16:44	YT
Ethylbenzene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Freon-113	BRL	10		ug/L	168480	1	11/02/2012 16:44	YT
Isopropylbenzene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
m,p-Xylene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Methyl acetate	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Methyl tert-butyl ether	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Methylcyclohexane	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Methylene chloride	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
o-Xylene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 6-Nov-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW45CO1/O2
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/30/2012 3:42:00 PM
<b>Lab ID:</b>	1210Q05-001	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Tetrachloroethene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Toluene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Trichloroethene	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Trichlorofluoromethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:44	YT
Vinyl chloride	BRL	2.0		ug/L	168480	1	11/02/2012 16:44	YT
Surr: 4-Bromofluorobenzene	94.5	64.6-123		%REC	168480	1	11/02/2012 16:44	YT
Surr: Dibromofluoromethane	109	76.6-133		%REC	168480	1	11/02/2012 16:44	YT
Surr: Toluene-d8	100	77.8-120		%REC	168480	1	11/02/2012 16:44	YT

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 6-Nov-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW44CO1/O2
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/30/2012 4:22:00 PM
<b>Lab ID:</b>	1210Q05-002	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
1,1,2-Trichloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
1,1-Dichloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
1,1-Dichloroethene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
1,2-Dibromoethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
1,2-Dichlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
1,2-Dichloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
1,2-Dichloropropane	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
1,3-Dichlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
1,4-Dichlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
2-Butanone	BRL	50		ug/L	168480	1	11/02/2012 17:12	YT
2-Hexanone	BRL	10		ug/L	168480	1	11/02/2012 17:12	YT
4-Methyl-2-pentanone	BRL	10		ug/L	168480	1	11/02/2012 17:12	YT
Acetone	BRL	50		ug/L	168480	1	11/02/2012 17:12	YT
Benzene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Bromodichloromethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Bromoform	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Bromomethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Carbon disulfide	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Carbon tetrachloride	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Chlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Chloroethane	BRL	10		ug/L	168480	1	11/02/2012 17:12	YT
Chloroform	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Chloromethane	BRL	10		ug/L	168480	1	11/02/2012 17:12	YT
cis-1,2-Dichloroethene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Cyclohexane	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Dibromochloromethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Dichlorodifluoromethane	BRL	10		ug/L	168480	1	11/02/2012 17:12	YT
Ethylbenzene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Freon-113	BRL	10		ug/L	168480	1	11/02/2012 17:12	YT
Isopropylbenzene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
m,p-Xylene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Methyl acetate	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Methyl tert-butyl ether	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Methylcyclohexane	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Methylene chloride	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
o-Xylene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 6-Nov-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW44CO1/O2
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/30/2012 4:22:00 PM
<b>Lab ID:</b>	1210Q05-002	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Tetrachloroethene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Toluene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Trichloroethene	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Trichlorofluoromethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:12	YT
Vinyl chloride	BRL	2.0		ug/L	168480	1	11/02/2012 17:12	YT
Surr: 4-Bromofluorobenzene	92.4	64.6-123		%REC	168480	1	11/02/2012 17:12	YT
Surr: Dibromofluoromethane	106	76.6-133		%REC	168480	1	11/02/2012 17:12	YT
Surr: Toluene-d8	98.1	77.8-120		%REC	168480	1	11/02/2012 17:12	YT

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 6-Nov-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW41CO1/O2
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/30/2012 6:47:00 PM
<b>Lab ID:</b>	1210Q05-003	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								<b>(SW5030B)</b>
1,1,1-Trichloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
1,1,2-Trichloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
1,1-Dichloroethane	86	5.0		ug/L	168480	1	11/02/2012 17:42	YT
1,1-Dichloroethene	270	50		ug/L	168480	10	11/02/2012 20:11	YT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
1,2-Dibromoethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
1,2-Dichlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
1,2-Dichloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
1,2-Dichloropropane	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
1,3-Dichlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
1,4-Dichlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
2-Butanone	BRL	50		ug/L	168480	1	11/02/2012 17:42	YT
2-Hexanone	BRL	10		ug/L	168480	1	11/02/2012 17:42	YT
4-Methyl-2-pentanone	BRL	10		ug/L	168480	1	11/02/2012 17:42	YT
Acetone	BRL	50		ug/L	168480	1	11/02/2012 17:42	YT
Benzene	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Bromodichloromethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Bromoform	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Bromomethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Carbon disulfide	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Carbon tetrachloride	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Chlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Chloroethane	BRL	10		ug/L	168480	1	11/02/2012 17:42	YT
Chloroform	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Chloromethane	BRL	10		ug/L	168480	1	11/02/2012 17:42	YT
cis-1,2-Dichloroethene	6300	500		ug/L	168480	100	11/02/2012 19:42	YT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Cyclohexane	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Dibromochloromethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Dichlorodifluoromethane	BRL	10		ug/L	168480	1	11/02/2012 17:42	YT
Ethylbenzene	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Freon-113	BRL	10		ug/L	168480	1	11/02/2012 17:42	YT
Isopropylbenzene	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
m,p-Xylene	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Methyl acetate	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Methyl tert-butyl ether	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Methylcyclohexane	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Methylene chloride	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
o-Xylene	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 6-Nov-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW41CO1/O2
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/30/2012 6:47:00 PM
<b>Lab ID:</b>	1210Q05-003	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Tetrachloroethene	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Toluene	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
trans-1,2-Dichloroethene	65	5.0		ug/L	168480	1	11/02/2012 17:42	YT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Trichloroethene	6200	500		ug/L	168480	100	11/02/2012 19:42	YT
Trichlorofluoromethane	BRL	5.0		ug/L	168480	1	11/02/2012 17:42	YT
Vinyl chloride	150	2.0		ug/L	168480	1	11/02/2012 17:42	YT
Surr: 4-Bromofluorobenzene	90.5	64.6-123		%REC	168480	1	11/02/2012 17:42	YT
Surr: 4-Bromofluorobenzene	92.1	64.6-123		%REC	168480	100	11/02/2012 19:42	YT
Surr: 4-Bromofluorobenzene	93	64.6-123		%REC	168480	10	11/02/2012 20:11	YT
Surr: Dibromofluoromethane	106	76.6-133		%REC	168480	1	11/02/2012 17:42	YT
Surr: Dibromofluoromethane	109	76.6-133		%REC	168480	100	11/02/2012 19:42	YT
Surr: Dibromofluoromethane	110	76.6-133		%REC	168480	10	11/02/2012 20:11	YT
Surr: Toluene-d8	99.6	77.8-120		%REC	168480	1	11/02/2012 17:42	YT
Surr: Toluene-d8	99.4	77.8-120		%REC	168480	100	11/02/2012 19:42	YT
Surr: Toluene-d8	101	77.8-120		%REC	168480	10	11/02/2012 20:11	YT

<b>Qualifiers:</b>	*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
	BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
	H	Holding times for preparation or analysis exceeded	Narr	See case narrative
	N	Analyte not NELAC certified	NC	Not confirmed
	B	Analyte detected in the associated method blank	<	Less than Result value
	>	Greater than Result value	J	Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 6-Nov-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	TRIP BLANK
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/31/2012
<b>Lab ID:</b>	1210Q05-004	<b>Matrix:</b>	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
1,1,2-Trichloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
1,1-Dichloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
1,1-Dichloroethene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
1,2-Dibromoethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
1,2-Dichlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
1,2-Dichloroethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
1,2-Dichloropropane	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
1,3-Dichlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
1,4-Dichlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
2-Butanone	BRL	50		ug/L	168480	1	11/02/2012 16:15	YT
2-Hexanone	BRL	10		ug/L	168480	1	11/02/2012 16:15	YT
4-Methyl-2-pentanone	BRL	10		ug/L	168480	1	11/02/2012 16:15	YT
Acetone	BRL	50		ug/L	168480	1	11/02/2012 16:15	YT
Benzene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Bromodichloromethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Bromoform	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Bromomethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Carbon disulfide	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Carbon tetrachloride	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Chlorobenzene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Chloroethane	BRL	10		ug/L	168480	1	11/02/2012 16:15	YT
Chloroform	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Chloromethane	BRL	10		ug/L	168480	1	11/02/2012 16:15	YT
cis-1,2-Dichloroethene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Cyclohexane	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Dibromochloromethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Dichlorodifluoromethane	BRL	10		ug/L	168480	1	11/02/2012 16:15	YT
Ethylbenzene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Freon-113	BRL	10		ug/L	168480	1	11/02/2012 16:15	YT
Isopropylbenzene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
m,p-Xylene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Methyl acetate	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Methyl tert-butyl ether	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Methylcyclohexane	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Methylene chloride	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
o-Xylene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 6-Nov-12

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	TRIP BLANK
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	10/31/2012
<b>Lab ID:</b>	1210Q05-004	<b>Matrix:</b>	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Tetrachloroethene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Toluene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Trichloroethene	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Trichlorofluoromethane	BRL	5.0		ug/L	168480	1	11/02/2012 16:15	YT
Vinyl chloride	BRL	2.0		ug/L	168480	1	11/02/2012 16:15	YT
Surr: 4-Bromofluorobenzene	93.6	64.6-123	%REC		168480	1	11/02/2012 16:15	YT
Surr: Dibromofluoromethane	102	76.6-133	%REC		168480	1	11/02/2012 16:15	YT
Surr: Toluene-d8	97.4	77.8-120	%REC		168480	1	11/02/2012 16:15	YT

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc.**

## Sample/Cooler Receipt Checklist

Client CDM SmithWork Order Number 1216QDSChecklist completed by BMT 10/31/12  
Signature DateCarrier name: FedEx  UPS  Courier  Client  US Mail  Other \_\_\_\_\_Shipping container/coolers in good condition? Yes  No  Not Present Custody seals intact on shipping container/coolers? Yes  No  Not Present Custody seals intact on sample bottles? Yes  No  Not Present Container/Temp Blank temperature in compliance? (4°C±2)\* Yes  No Cooler #1 3.4 Cooler #2 \_\_\_\_\_ Cooler #3 \_\_\_\_\_ Cooler #4 \_\_\_\_\_ Cooler #5 \_\_\_\_\_ Cooler #6 \_\_\_\_\_Chain of custody present? Yes  No Chain of custody signed when relinquished and received? Yes  No Chain of custody agrees with sample labels? Yes  No Samples in proper container/bottle? Yes  No Sample containers intact? Yes  No Sufficient sample volume for indicated test? Yes  No All samples received within holding time? Yes  No Was TAT marked on the COC? Yes  No Proceed with Standard TAT as per project history? Yes  No  Not Applicable Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No Water - pH acceptable upon receipt? Yes  No  Not Applicable 

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Sample Condition: Good  Other(Explain) \_\_\_\_\_(For diffusive samples or AIHA lead) Is a known blank included? Yes  No **See Case Narrative for resolution of the Non-Conformance.**

\* Samples do not have to comply with the given range for certain parameters.

<b>Client:</b>	CDM Smith Inc.	<b>Dates Report</b>
<b>Project:</b>	Former Manchester Tank	
<b>Lab Order:</b>	1210Q05	

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1210Q05-001A	MW45CO1/O2	10/30/2012 3:42:00PM	Groundwater	TCL VOLATILE ORGANICS		11/01/2012	11/02/2012
1210Q05-002A	MW44CO1/O2	10/30/2012 4:22:00PM	Groundwater	TCL VOLATILE ORGANICS		11/01/2012	11/02/2012
1210Q05-003A	MW41CO1/O2	10/30/2012 6:47:00PM	Groundwater	TCL VOLATILE ORGANICS		11/01/2012	11/02/2012
1210Q05-004A	TRIP BLANK	10/31/2012 12:00:00AM	Aqueous	TCL VOLATILE ORGANICS		11/01/2012	11/02/2012

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1210Q05

**ANALYTICAL QC SUMMARY REPORT****BatchID: 168480**

Sample ID: MB-168480	Client ID: TCL VOLATILE ORGANICS SW8260B	Units: ug/L	Prep Date: 11/01/2012	Run No: 232123							
SampleType: MBLK	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 168480	Analysis Date: 11/01/2012	Seq No: 4862659							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	0
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	0
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	0
Acetone	BRL	50	0	0	0	0	0	0	0	0	0
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	0

**Qualifiers:** > Greater than Result value  
 BRL Below reporting limit  
 J Estimated value detected below Reporting Limit  
 Rpt Lim Reporting Limit

< Less than Result value  
 E Estimated (value above quantitation range)  
 N Analyte not NELAC certified  
 S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank  
 H Holding times for preparation or analysis exceeded  
 R RPD outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1210Q05

**ANALYTICAL QC SUMMARY REPORT****BatchID: 168480**

Sample ID: <b>MB-168480</b>	Client ID:	Units: <b>ug/L</b>			Prep Date:	<b>11/01/2012</b>	Run No: <b>232123</b>				
SampleType: <b>MLBK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>168480</b>			Analysis Date:	<b>11/01/2012</b>	Seq No: <b>4862659</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	0
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	0
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	0
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Freon-113	BRL	10	0	0	0	0	0	0	0	0	0
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	0
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	0
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	0
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	0
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	0
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	0
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	0
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	0
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	46.83	0	50	0	93.7	64.6	123	0	0	0	0
Surr: Dibromofluoromethane	54.11	0	50	0	108	76.6	133	0	0	0	0
Surr: Toluene-d8	49.68	0	50	0	99.4	77.8	120	0	0	0	0

**Qualifiers:** > Greater than Result value  
 BRL Below reporting limit  
 J Estimated value detected below Reporting Limit  
 Rpt Lim Reporting Limit

< Less than Result value  
 E Estimated (value above quantitation range)  
 N Analyte not NELAC certified  
 S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank  
 H Holding times for preparation or analysis exceeded  
 R RPD outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1210Q05

**ANALYTICAL QC SUMMARY REPORT****BatchID: 168480**

Sample ID: <b>LCS-168480</b>	Client ID:				Units: <b>ug/L</b>	Prep Date:	<b>11/01/2012</b>	Run No: <b>232123</b>			
SampleType: <b>LCS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>168480</b>	Analysis Date:	<b>11/01/2012</b>	Seq No: <b>4862652</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	62.83	5.0	50	0	126	60	140	0	0	0
Benzene	55.72	5.0	50	0	111	70	130	0	0	0
Chlorobenzene	48.21	5.0	50	0	96.4	70	130	0	0	0
Toluene	55.96	5.0	50	0	112	70	130	0	0	0
Trichloroethene	57.32	5.0	50	0	115	70	130	0	0	0
Surr: 4-Bromofluorobenzene	52.89	0	50	0	106	64.6	123	0	0	0
Surr: Dibromofluoromethane	53.96	0	50	0	108	76.6	133	0	0	0
Surr: Toluene-d8	50.74	0	50	0	101	77.8	120	0	0	0

Sample ID: <b>1210N84-007AMS</b>	Client ID:				Units: <b>ug/L</b>	Prep Date:	<b>11/01/2012</b>	Run No: <b>232123</b>			
SampleType: <b>MS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>168480</b>	Analysis Date:	<b>11/01/2012</b>	Seq No: <b>4862682</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	556.4	50	500	0	111	50.1	179	0	0	0
Benzene	485.2	50	500	0	97	61.2	150	0	0	0
Chlorobenzene	422.6	50	500	0	84.5	72.1	140	0	0	0
Toluene	490.2	50	500	0	98	58.7	154	0	0	0
Trichloroethene	526.0	50	500	0	105	68.3	149	0	0	0
Surr: 4-Bromofluorobenzene	508.9	0	500	0	102	64.6	123	0	0	0
Surr: Dibromofluoromethane	516.0	0	500	0	103	76.6	133	0	0	0
Surr: Toluene-d8	486.5	0	500	0	97.3	77.8	120	0	0	0

Sample ID: <b>1210N84-007AMSD</b>	Client ID:				Units: <b>ug/L</b>	Prep Date:	<b>11/01/2012</b>	Run No: <b>232123</b>			
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>168480</b>	Analysis Date:	<b>11/01/2012</b>	Seq No: <b>4862799</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	529.9	50	500	0	106	50.1	179	556.4	4.88	23.3
Benzene	471.2	50	500	0	94.2	61.2	150	485.2	2.93	19

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1210Q05

**ANALYTICAL QC SUMMARY REPORT****BatchID: 168480**

Sample ID: 1210N84-007AMSD	Client ID:				Units: ug/L	Prep Date: 11/01/2012	Run No: 232123				
SampleType: MSD	TestCode: TCL VOLATILE ORGANICS SW8260B				BatchID: 168480	Analysis Date: 11/01/2012	Seq No: 4862799				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	423.3	50	500	0	84.7	72.1	140	422.6	0.166	21.5	
Toluene	484.2	50	500	0	96.8	58.7	154	490.2	1.23	20	
Trichloroethene	514.0	50	500	0	103	68.3	149	526.0	2.31	17.7	
Surr: 4-Bromofluorobenzene	512.7	0	500	0	103	64.6	123	508.9	0	0	
Surr: Dibromofluoromethane	519.1	0	500	0	104	76.6	133	516.0	0	0	
Surr: Toluene-d8	490.1	0	500	0	98	77.8	120	486.5	0	0	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		



## ANALYTICAL ENVIRONMENTAL SERVICES, INC.

January 25, 2013

Andrew Romanek  
CDM Smith Inc.  
3715 Northside Parkway  
Atlanta GA 30327

TEL: (404) 720-1400  
FAX: (404) 467-4130

RE: Former Manchester Tank

Dear Andrew Romanek:

Order No: 1301G84

Analytical Environmental Services, Inc. received 1 samples on 1/23/2013 3:50:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/12-06/30/13.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in black ink that reads "Sharissa Hall".

Sharissa Hall  
Project Manager



ANALYTICAL ENVIRONMENTAL SERVICES, INC

3785 Presidential Parkway, Atlanta GA 30340-3704

AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

Work Order: 1301682  
PT + 12/18

CHAIN OF CUSTODY 1301684

Date: 11/23/13 Page / of /

COMPANY:		ADDRESS:		ANALYSIS REQUESTED		Visit our website <a href="http://www.aesatlanta.com">www.aesatlanta.com</a> to check on the status of your results, place bottle orders, etc.	
AES		3715 Northside Parkway NW B: 300 S: 400 Atlanta, GA 30327				No. # of Containers <u>2</u>	
PHONE:	(404) 720 1400	FAX:					
SAMPLED BY:	Dick Fuller	SIGNATURES:	<u>Dick Fuller</u>				
#	SAMPLE ID	SAMPLED	TIME	Grab	Composite	Matrix	REMARKS
1	MW-42C	1/23/13	0940	X	G.W.	X	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
RELINQUISHED BY		DATE/TIME RECEIVED BY		PROJECT INFORMATION		RECEIPT	
<u>Dick</u>		<u>1/23/13 1550</u>		<u>Tower Mountain Ranch Tank 4</u>		Total # of Containers <u>2</u>	
1:		1:		PROJECT NAME:		Turnaround Time Request	
2:		2:		PROJECT #:		Standard 5 Business Days	
3:		3:		SITE ADDRESS:		2 Business Day Rush	
				SEND REPORT TO:	<u>Cedar Town, GA</u>	Next Business Day Rush	
				INVOICE TO:	<u>Romanek A&amp;E Consulting, Inc.</u>	Same Day Rush (auth req.)	
				(IF DIFFERENT FROM ABOVE)		Other	
				QUOTE #:		STATE PROGRAM (if any):	
				PO#:		E-mail? Y / N: <u>      </u>	Fax? Y / N: <u>      </u>
				SHIPMENT METHOD		DATA PACKAGE: I II III IV	
				OUT / / VIA:			
				IN / / VIA:			
				CLIENT FedEx UPS MAIL COURIER			
				GREYHOUND OTHER			
SPECIAL INSTRUCTIONS/COMMENTS:  <u>Dick</u>							
SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY, IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES. SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.							
MATRIX CODES: A = Air GW = Groundwater SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water SE = Sediment SO = Soil I = Ice only N = Nutric acid S+I = Sulfuric acid + ice SM+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None PRESERVATIVE CODES: H+I = Hydrochloric acid + ice							

White Copy - Original; Yellow Copy - Client

White Copy - Original

**Analytical Environmental Services, Inc**
**Date:** 25-Jan-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-42C					
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	1/23/2013 9:40:00 AM					
<b>Lab ID:</b>	1301G84-001	<b>Matrix:</b>	Groundwater					
<hr/>								
<b>Analyses</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>Qual</b>	<b>Units</b>	<b>BatchID</b>	<b>Dilution Factor</b>	<b>Date Analyzed</b>	<b>Analyst</b>
<b>TCL VOLATILE ORGANICS SW8260B</b>				<b>(SW5030B)</b>				
1,1,1-Trichloroethane	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
1,1-Dichloroethane	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
1,1-Dichloroethene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
1,2-Dibromoethane	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
1,2-Dichlorobenzene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
1,2-Dichloroethane	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
1,2-Dichloropropane	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
1,3-Dichlorobenzene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
1,4-Dichlorobenzene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
2-Butanone	BRL	50		ug/L	171576	1	01/24/2013 17:44	GK
2-Hexanone	BRL	10		ug/L	171576	1	01/24/2013 17:44	GK
4-Methyl-2-pentanone	BRL	10		ug/L	171576	1	01/24/2013 17:44	GK
Acetone	BRL	50		ug/L	171576	1	01/24/2013 17:44	GK
Benzene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Bromodichloromethane	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Bromoform	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Bromomethane	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Carbon disulfide	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Carbon tetrachloride	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Chlorobenzene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Chloroethane	BRL	10		ug/L	171576	1	01/24/2013 17:44	GK
Chloroform	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Chloromethane	BRL	10		ug/L	171576	1	01/24/2013 17:44	GK
cis-1,2-Dichloroethene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
cis-1,3-Dichloropropene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Cyclohexane	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Dibromochloromethane	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Dichlorodifluoromethane	BRL	10		ug/L	171576	1	01/24/2013 17:44	GK
Ethylbenzene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Freon-113	BRL	10		ug/L	171576	1	01/24/2013 17:44	GK
Isopropylbenzene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
m,p-Xylene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Methyl acetate	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Methyl tert-butyl ether	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Methylcyclohexane	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Methylene chloride	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
o-Xylene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 25-Jan-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-42C
<b>Project Name:</b>	Former Manchester Tank	<b>Collection Date:</b>	1/23/2013 9:40:00 AM
<b>Lab ID:</b>	1301G84-001	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b> <b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Tetrachloroethene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Toluene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
trans-1,2-Dichloroethene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
trans-1,3-Dichloropropene	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Trichloroethene	30	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Trichlorofluoromethane	BRL	5.0		ug/L	171576	1	01/24/2013 17:44	GK
Vinyl chloride	BRL	2.0		ug/L	171576	1	01/24/2013 17:44	GK
Surr: 4-Bromofluorobenzene	90.8	64.6-123	%REC		171576	1	01/24/2013 17:44	GK
Surr: Dibromofluoromethane	108	76.6-133	%REC		171576	1	01/24/2013 17:44	GK
Surr: Toluene-d8	94.4	77.8-120	%REC		171576	1	01/24/2013 17:44	GK

<b>Qualifiers:</b>	*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
	BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
	H	Holding times for preparation or analysis exceeded	Narr	See case narrative
	N	Analyte not NELAC certified	NC	Not confirmed
	B	Analyte detected in the associated method blank	<	Less than Result value
	>	Greater than Result value	J	Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc.**

## Sample/Cooler Receipt Checklist

Client CDM Work Order Number 1301684Checklist completed by PB Date 1/24/13Carrier name: FedEx  UPS  Courier  Client  US Mail  Other Shipping container/coolers in good condition? Yes  No  Not Present Custody seals intact on shipping container/coolers? Yes  No  Not Present Custody seals intact on sample bottles? Yes  No  Not Present Container/Temp Blank temperature in compliance? (4°C±2)\* Yes  No Cooler #1 3 - 1 Cooler #2  Cooler #3  Cooler #4  Cooler #5  Cooler #6 Chain of custody present? Yes  No Chain of custody signed when relinquished and received? Yes  No Chain of custody agrees with sample labels? Yes  No Samples in proper container/bottle? Yes  No Sample containers intact? Yes  No Sufficient sample volume for indicated test? Yes  No All samples received within holding time? Yes  No Was TAT marked on the COC? Yes  No Proceed with Standard TAT as per project history? Yes  No  Not Applicable Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No Water - pH acceptable upon receipt? Yes  No  Not Applicable Adjusted?  Checked by Sample Condition: Good  Other(Explain) \_\_\_\_\_(For diffusive samples or AIHA lead) Is a known blank included? Yes  No **See Case Narrative for resolution of the Non-Conformance.**

\* Samples do not have to comply with the given range for certain parameters.

Client: CDM Smith Inc.  
Project: Former Manchester Tank  
Lab Order: 1301G84

**Dates Report**

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1301G84-001A	MW-42C	1/23/2013 9:40:00AM	Groundwater	TCL VOLATILE ORGANICS		01/24/2013	01/24/2013

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1301G84

**ANALYTICAL QC SUMMARY REPORT****BatchID: 171576**

Sample ID: MB-171576	Client ID:	Units: ug/L			Prep Date:	01/24/2013	Run No: 237157				
SampleType: MBLK	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 171576			Analysis Date:	01/24/2013	Seq No: 4965762				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	0
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	0
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	0
Acetone	BRL	50	0	0	0	0	0	0	0	0	0
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	0

Qualifiers: &gt; Greater than Result value

&lt; Less than Result value

B Analyte detected in the associated method blank

BRL Below reporting limit

E Estimated (value above quantitation range)

H Holding times for preparation or analysis exceeded

J Estimated value detected below Reporting Limit

N Analyte not NELAC certified

R RPD outside limits due to matrix

Rpt Lim Reporting Limit

S Spike Recovery outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1301G84

**ANALYTICAL QC SUMMARY REPORT****BatchID: 171576**

Sample ID: <b>MB-171576</b>	Client ID:	Units: ug/L			Prep Date:	01/24/2013	Run No: <b>237157</b>				
SampleType: <b>MLBK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>171576</b>			Analysis Date:	01/24/2013	Seq No: <b>4965762</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Freon-113	BRL	10	0	0	0	0	0	0	0	0	
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	44.30	0	50	0	88.6	64.6	123	0	0	0	
Surr: Dibromofluoromethane	54.33	0	50	0	109	76.6	133	0	0	0	
Surr: Toluene-d8	47.66	0	50	0	95.3	77.8	120	0	0	0	

Qualifiers: &gt; Greater than Result value

&lt; Less than Result value

B Analyte detected in the associated method blank

BRL Below reporting limit

E Estimated (value above quantitation range)

H Holding times for preparation or analysis exceeded

J Estimated value detected below Reporting Limit

N Analyte not NELAC certified

R RPD outside limits due to matrix

Rpt Lim Reporting Limit

S Spike Recovery outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1301G84

**ANALYTICAL QC SUMMARY REPORT****BatchID: 171576**

Sample ID: <b>LCS-171576</b>	Client ID:				Units: <b>ug/L</b>	Prep Date:	<b>01/24/2013</b>	Run No: <b>237157</b>			
SampleType: <b>LCS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>171576</b>	Analysis Date:	<b>01/24/2013</b>	Seq No: <b>4965760</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	47.74	5.0	50	0	95.5	61.1	142	0	0	0
Benzene	52.80	5.0	50	0	106	73.5	130	0	0	0
Chlorobenzene	58.91	5.0	50	0	118	72.4	123	0	0	0
Toluene	52.11	5.0	50	0	104	73.6	130	0	0	0
Trichloroethene	56.19	5.0	50	0	112	70	135	0	0	0
Surr: 4-Bromofluorobenzene	53.58	0	50	0	107	64.6	123	0	0	0
Surr: Dibromofluoromethane	55.95	0	50	0	112	76.6	133	0	0	0
Surr: Toluene-d8	47.12	0	50	0	94.2	77.8	120	0	0	0

Sample ID: <b>1301G77-001AMS</b>	Client ID:				Units: <b>ug/L</b>	Prep Date:	<b>01/24/2013</b>	Run No: <b>237157</b>			
SampleType: <b>MS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>171576</b>	Analysis Date:	<b>01/24/2013</b>	Seq No: <b>4965765</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	51.33	5.0	50	0	103	60	168	0	0	0
Benzene	54.28	5.0	50	0	109	66.6	148	0	0	0
Chlorobenzene	57.16	5.0	50	0	114	71.9	135	0	0	0
Toluene	54.76	5.0	50	0	110	68	149	0	0	0
Trichloroethene	57.31	5.0	50	0	115	71.1	154	0	0	0
Surr: 4-Bromofluorobenzene	50.29	0	50	0	101	64.6	123	0	0	0
Surr: Dibromofluoromethane	55.28	0	50	0	111	76.6	133	0	0	0
Surr: Toluene-d8	48.72	0	50	0	97.4	77.8	120	0	0	0

Sample ID: <b>1301G77-001AMSD</b>	Client ID:				Units: <b>ug/L</b>	Prep Date:	<b>01/24/2013</b>	Run No: <b>237157</b>			
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>171576</b>	Analysis Date:	<b>01/24/2013</b>	Seq No: <b>4965767</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	50.10	5.0	50	0	100	60	168	51.33	2.43	18.6
Benzene	52.42	5.0	50	0	105	66.6	148	54.28	3.49	20

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Former Manchester Tank  
**Workorder:** 1301G84

**ANALYTICAL QC SUMMARY REPORT****BatchID: 171576**

Sample ID: <b>1301G77-001AMSD</b>	Client ID:				Units: <b>ug/L</b>	Prep Date: <b>01/24/2013</b>	Run No: <b>237157</b>				
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>171576</b>	Analysis Date: <b>01/24/2013</b>	Seq No: <b>4965767</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	56.86	5.0	50	0	114	71.9	135	57.16	0.526	20	
Toluene	54.03	5.0	50	0	108	68	149	54.76	1.34	20	
Trichloroethene	57.21	5.0	50	0	114	71.1	154	57.31	0.175	20	
Surr: 4-Bromofluorobenzene	51.48	0	50	0	103	64.6	123	50.29	0	0	
Surr: Dibromofluoromethane	56.38	0	50	0	113	76.6	133	55.28	0	0	
Surr: Toluene-d8	49.25	0	50	0	98.5	77.8	120	48.72	0	0	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		



## ANALYTICAL ENVIRONMENTAL SERVICES, INC.

March 11, 2013

Andrew Romanek  
CDM Smith Inc.  
3715 Northside Parkway, Northcreek 30  
Atlanta            GA    30327

TEL: (404) 720-1400  
FAX: (404) 467-4130

RE: Cedartown

Dear Andrew Romanek:

Order No: 1303122

Analytical Environmental Services, Inc. received 4 samples on March 1, 2013 3:35 pm for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/12-06/30/13.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in black ink that reads "Larissa Elsley".

Larissa Elsley  
Project Manager



**ANALYTICAL ENVIRONMENTAL SERVICES, INC.**  
3785 Presidential Parkway, Atlanta GA 30340-3704  
**AES** TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

### CHAIN OF CUSTODY

Work Order: S4504

COMPANY: <b>CJM Smith</b>		ADDRESS: 3715 Northside Drwy, Bldg 300, Suite 400 Atlanta, GA 30327		ANALYSIS REQUESTED		Visit our website <a href="http://www.aesatlanta.com">www.aesatlanta.com</a> to check on the status of your results, place bottle orders, etc.		No. of Containers	
PHONE: 404-720-1400	FAX:	SAMPLED BY: <b>Daniel Forbes</b>	SIGNATURE: <i>Daniel Forbes</i>						
#	SAMPLE ID	DATE	TIME	Temp	Composite	Preservation (See codes)	REMARKS		
1	MW-41C	2-28-13	1510	✓	6W	2	Note that bottle label 2	2	
2	MW-43D	2-28-13	1650	✓	6W	2	For MW-41C 143 D are 2	2	
3	MW-54C Soil IDW	3-1-13	0930	✓	SO	2	dated 2/27/13 but	2	
4	TRIP BLANKS	—	—	✓	W	2	was sampled on 2/28/13.	2	
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
REINQUISITIONED BY		DATE/TIME RECEIVED BY		DATE/TIME		PROJECT INFORMATION		RECEIPT	
1: <i>Daniel Forbes</i> 3/1/13		2: <i>3/1/13</i>		3: <i>3/1/13</i>		PROJECT NAME: <i>Cedartown</i>		Total # of Containers <b>8</b>	
3: <i>3/1/13</i>		3: <i>3/1/13</i>		3: <i>3/1/13</i>		PROJECT #: <i>3-1-13</i>		Turnaround Time Request Standard 5 Business Days 2 Business Day Rush Next Business Day Rush Same Day Rush (auth req.) Other _____	
3: <i>3/1/13</i>		3: <i>3/1/13</i>		3: <i>3/1/13</i>		SITE ADDRESS: <i>3:35</i>		STATE PROGRAM (if any): _____ E-mail? Y/N; Fax? Y/N	
3: <i>3/1/13</i>		3: <i>3/1/13</i>		3: <i>3/1/13</i>		SEND REPORT TO: <i>Andrew Romanchuk</i>		DATA PACKAGE: I II III IV	
3: <i>3/1/13</i>		3: <i>3/1/13</i>		3: <i>3/1/13</i>		INVOICE TO: (IF DIFFERENT FROM ABOVE)		QUOTE #: _____ PO#: _____	
3: <i>3/1/13</i>		3: <i>3/1/13</i>		3: <i>3/1/13</i>		SHIPMENT METHOD			
3: <i>3/1/13</i>		3: <i>3/1/13</i>		OUT / /	VIA: / /	CLIENT FedEx UPS MAIL COURIER			
3: <i>3/1/13</i>		3: <i>3/1/13</i>		IN / /	VIA: / /	GREYHOUND OTHER			
SPECIAL INSTRUCTIONS/COMMENTS:									
SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TIME OF SAMPLES. SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.									
MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water PRESERVATIVE CODES: H+1 = Hydrochloric acid + ice I = Ice only N = Nitric acid S+1 = Sulfuric acid + ice SM+1 = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None									

**Analytical Environmental Services, Inc**
**Date:** 11-Mar-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-41C					
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	2/28/2013 3:10:00 PM					
<b>Lab ID:</b>	1303122-001	<b>Matrix:</b>	Groundwater					
<hr/>								
<b>Analyses</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>Qual</b>	<b>Units</b>	<b>BatchID</b>	<b>Dilution Factor</b>	<b>Date Analyzed</b>	<b>Analyst</b>
<b>TCL VOLATILE ORGANICS SW8260B</b>				<b>(SW5030B)</b>				
1,1,1-Trichloroethane	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
1,1,2-Trichloroethane	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
1,1-Dichloroethane	91	5.0		ug/L	173092	1	03/04/2013 19:53	YT
1,1-Dichloroethene	120	50		ug/L	173092	10	03/07/2013 20:22	GK
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
1,2-Dibromoethane	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
1,2-Dichlorobenzene	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
1,2-Dichloroethane	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
1,2-Dichloropropane	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
1,3-Dichlorobenzene	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
1,4-Dichlorobenzene	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
2-Butanone	BRL	50		ug/L	173092	1	03/04/2013 19:53	YT
2-Hexanone	BRL	10		ug/L	173092	1	03/04/2013 19:53	YT
4-Methyl-2-pentanone	BRL	10		ug/L	173092	1	03/04/2013 19:53	YT
Acetone	BRL	50		ug/L	173092	1	03/04/2013 19:53	YT
Benzene	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Bromodichloromethane	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Bromoform	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Bromomethane	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Carbon disulfide	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Carbon tetrachloride	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Chlorobenzene	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Chloroethane	BRL	10		ug/L	173092	1	03/04/2013 19:53	YT
Chloroform	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Chloromethane	BRL	10		ug/L	173092	1	03/04/2013 19:53	YT
cis-1,2-Dichloroethene	4900	500		ug/L	173092	100	03/05/2013 15:14	YT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Cyclohexane	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Dibromochloromethane	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Dichlorodifluoromethane	BRL	10		ug/L	173092	1	03/04/2013 19:53	YT
Ethylbenzene	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Freon-113	BRL	10		ug/L	173092	1	03/04/2013 19:53	YT
Isopropylbenzene	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
m,p-Xylene	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Methyl acetate	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Methyl tert-butyl ether	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Methylcyclohexane	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Methylene chloride	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
o-Xylene	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 11-Mar-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-41C
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	2/28/2013 3:10:00 PM
<b>Lab ID:</b>	1303122-001	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Tetrachloroethene	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Toluene	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
trans-1,2-Dichloroethene	54	5.0		ug/L	173092	1	03/04/2013 19:53	YT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Trichloroethene	4100	500		ug/L	173092	100	03/05/2013 15:14	YT
Trichlorofluoromethane	BRL	5.0		ug/L	173092	1	03/04/2013 19:53	YT
Vinyl chloride	100	2.0		ug/L	173092	1	03/04/2013 19:53	YT
Surr: 4-Bromofluorobenzene	92.8	64.6-123		%REC	173092	1	03/04/2013 19:53	YT
Surr: 4-Bromofluorobenzene	93.3	64.6-123		%REC	173092	100	03/05/2013 15:14	YT
Surr: 4-Bromofluorobenzene	94.6	64.6-123		%REC	173092	10	03/07/2013 20:22	GK
Surr: Dibromofluoromethane	97.8	76.6-133		%REC	173092	10	03/07/2013 20:22	GK
Surr: Dibromofluoromethane	108	76.6-133		%REC	173092	1	03/04/2013 19:53	YT
Surr: Dibromofluoromethane	109	76.6-133		%REC	173092	100	03/05/2013 15:14	YT
Surr: Toluene-d8	92	77.8-120		%REC	173092	1	03/04/2013 19:53	YT
Surr: Toluene-d8	99.1	77.8-120		%REC	173092	10	03/07/2013 20:22	GK
Surr: Toluene-d8	101	77.8-120		%REC	173092	100	03/05/2013 15:14	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 11-Mar-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-43D
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	2/28/2013 4:50:00 PM
<b>Lab ID:</b>	1303122-002	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	16	5.0		ug/L	173092	1	03/05/2013 17:14	YT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
1,1,2-Trichloroethane	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
1,1-Dichloroethane	9.9	5.0		ug/L	173092	1	03/05/2013 17:14	YT
1,1-Dichloroethene	52	5.0		ug/L	173092	1	03/05/2013 17:14	YT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
1,2-Dibromoethane	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
1,2-Dichlorobenzene	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
1,2-Dichloroethane	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
1,2-Dichloropropane	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
1,3-Dichlorobenzene	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
1,4-Dichlorobenzene	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
2-Butanone	BRL	50		ug/L	173092	1	03/05/2013 17:14	YT
2-Hexanone	BRL	10		ug/L	173092	1	03/05/2013 17:14	YT
4-Methyl-2-pentanone	BRL	10		ug/L	173092	1	03/05/2013 17:14	YT
Acetone	BRL	50		ug/L	173092	1	03/05/2013 17:14	YT
Benzene	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Bromodichloromethane	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Bromoform	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Bromomethane	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Carbon disulfide	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Carbon tetrachloride	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Chlorobenzene	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Chloroethane	BRL	10		ug/L	173092	1	03/05/2013 17:14	YT
Chloroform	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Chloromethane	BRL	10		ug/L	173092	1	03/05/2013 17:14	YT
cis-1,2-Dichloroethene	240	50		ug/L	173092	10	03/04/2013 18:25	YT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Cyclohexane	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Dibromochloromethane	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Dichlorodifluoromethane	BRL	10		ug/L	173092	1	03/05/2013 17:14	YT
Ethylbenzene	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Freon-113	BRL	10		ug/L	173092	1	03/05/2013 17:14	YT
Isopropylbenzene	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
m,p-Xylene	6.3	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Methyl acetate	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Methyl tert-butyl ether	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Methylcyclohexane	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Methylene chloride	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
o-Xylene	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 11-Mar-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-43D
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	2/28/2013 4:50:00 PM
<b>Lab ID:</b>	1303122-002	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Tetrachloroethene	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Toluene	8.5	5.0		ug/L	173092	1	03/05/2013 17:14	YT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Trichloroethene	910	50		ug/L	173092	10	03/04/2013 18:25	YT
Trichlorofluoromethane	BRL	5.0		ug/L	173092	1	03/05/2013 17:14	YT
Vinyl chloride	BRL	2.0		ug/L	173092	1	03/05/2013 17:14	YT
Surr: 4-Bromofluorobenzene	82.6	64.6-123		%REC	173092	1	03/05/2013 17:14	YT
Surr: 4-Bromofluorobenzene	86.4	64.6-123		%REC	173092	10	03/04/2013 18:25	YT
Surr: Dibromofluoromethane	101	76.6-133		%REC	173092	10	03/04/2013 18:25	YT
Surr: Dibromofluoromethane	108	76.6-133		%REC	173092	1	03/05/2013 17:14	YT
Surr: Toluene-d8	94.5	77.8-120		%REC	173092	1	03/05/2013 17:14	YT
Surr: Toluene-d8	96.2	77.8-120		%REC	173092	10	03/04/2013 18:25	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 11-Mar-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-54C SOIL IDW
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	3/1/2013 9:30:00 AM
<b>Lab ID:</b>	1303122-003	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>VOLATILES, TCLP SW1311/8260B (SW1311)</b>								
1,1-Dichloroethene	BRL	0.10		mg/L	173124	20	03/05/2013 16:45	YT
1,2-Dichloroethane	BRL	0.10		mg/L	173124	20	03/05/2013 16:45	YT
2-Butanone	BRL	0.20		mg/L	173124	20	03/05/2013 16:45	YT
Benzene	BRL	0.10		mg/L	173124	20	03/05/2013 16:45	YT
Carbon tetrachloride	BRL	0.10		mg/L	173124	20	03/05/2013 16:45	YT
Chlorobenzene	BRL	0.10		mg/L	173124	20	03/05/2013 16:45	YT
Chloroform	BRL	0.10		mg/L	173124	20	03/05/2013 16:45	YT
Tetrachloroethene	BRL	0.10		mg/L	173124	20	03/05/2013 16:45	YT
Trichloroethene	BRL	0.10		mg/L	173124	20	03/05/2013 16:45	YT
Vinyl chloride	BRL	0.040		mg/L	173124	20	03/05/2013 16:45	YT
Surr: 4-Bromofluorobenzene	76.2	65-129	%REC		173124	20	03/05/2013 16:45	YT
Surr: Dibromofluoromethane	108	72.3-129	%REC		173124	20	03/05/2013 16:45	YT
Surr: Toluene-d8	96.2	74.2-118	%REC		173124	20	03/05/2013 16:45	YT

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 11-Mar-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	TRIP BLANKS
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	3/1/2013
<b>Lab ID:</b>	1303122-004	<b>Matrix:</b>	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
1,1,2-Trichloroethane	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
1,1-Dichloroethane	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
1,1-Dichloroethene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
1,2-Dibromoethane	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
1,2-Dichlorobenzene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
1,2-Dichloroethane	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
1,2-Dichloropropane	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
1,3-Dichlorobenzene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
1,4-Dichlorobenzene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
2-Butanone	BRL	50		ug/L	173092	1	03/04/2013 18:54	YT
2-Hexanone	BRL	10		ug/L	173092	1	03/04/2013 18:54	YT
4-Methyl-2-pentanone	BRL	10		ug/L	173092	1	03/04/2013 18:54	YT
Acetone	BRL	50		ug/L	173092	1	03/04/2013 18:54	YT
Benzene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Bromodichloromethane	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Bromoform	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Bromomethane	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Carbon disulfide	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Carbon tetrachloride	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Chlorobenzene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Chloroethane	BRL	10		ug/L	173092	1	03/04/2013 18:54	YT
Chloroform	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Chloromethane	BRL	10		ug/L	173092	1	03/04/2013 18:54	YT
cis-1,2-Dichloroethene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Cyclohexane	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Dibromochloromethane	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Dichlorodifluoromethane	BRL	10		ug/L	173092	1	03/04/2013 18:54	YT
Ethylbenzene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Freon-113	BRL	10		ug/L	173092	1	03/04/2013 18:54	YT
Isopropylbenzene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
m,p-Xylene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Methyl acetate	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Methyl tert-butyl ether	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Methylcyclohexane	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Methylene chloride	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
o-Xylene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 11-Mar-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	TRIP BLANKS
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	3/1/2013
<b>Lab ID:</b>	1303122-004	<b>Matrix:</b>	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Tetrachloroethene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Toluene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Trichloroethene	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Trichlorofluoromethane	BRL	5.0		ug/L	173092	1	03/04/2013 18:54	YT
Vinyl chloride	BRL	2.0		ug/L	173092	1	03/04/2013 18:54	YT
Surr: 4-Bromofluorobenzene	91.8	64.6-123		%REC	173092	1	03/04/2013 18:54	YT
Surr: Dibromofluoromethane	102	76.6-133		%REC	173092	1	03/04/2013 18:54	YT
Surr: Toluene-d8	94.8	77.8-120		%REC	173092	1	03/04/2013 18:54	YT

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc.****Sample/Cooler Receipt Checklist**Client CORWork Order Number 1303122Checklist completed by MJ 3/11/13  
Signature DateCarrier name: FedEx    UPS    Courier ✓ Client    US Mail    Other   Shipping container/cooler in good condition? Yes ✓ No    Not Present   Custody seals intact on shipping container/cooler? Yes    No    Not Present ✓Custody seals intact on sample bottles? Yes    No    Not Present ✓Container/Temp Blank temperature in compliance? (4°C±2)\* Yes ✓ No   Cooler #1 31 Cooler #2    Cooler #3    Cooler #4    Cooler#5    Cooler #6   Chain of custody present? Yes ✓ No   Chain of custody signed when relinquished and received? Yes ✓ No   Chain of custody agrees with sample labels? Yes ✓ No   Samples in proper container/bottle? Yes ✓ No   Sample containers intact? Yes ✓ No   Sufficient sample volume for indicated test? Yes ✓ No   All samples received within holding time? Yes ✓ No   Was TAT marked on the COC? Yes ✓ No   Proceed with Standard TAT as per project history? Yes    No    Not Applicable ✓Water - VOA vials have zero headspace? No VOA vials submitted    Yes ✓ No   Water - pH acceptable upon receipt? Yes ✓ No    Not Applicable   

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Sample Condition: Good ✓ Other(Explain) \_\_\_\_\_(For diffusive samples or AIHA lead) Is a known blank included? Yes    No ✓**See Case Narrative for resolution of the Non-Conformance.**

\* Samples do not have to comply with the given range for certain parameters.

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1303122

**ANALYTICAL QC SUMMARY REPORT****BatchID: 173092**

Sample ID: MB-173092	Client ID:	Units: ug/L			Prep Date:	03/04/2013	Run No: 239444				
SampleType: MBLK	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 173092			Analysis Date:	03/04/2013	Seq No: 5012159				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	0
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	0
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	0
Acetone	BRL	50	0	0	0	0	0	0	0	0	0
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	0

Qualifiers: &gt; Greater than Result value

&lt; Less than Result value

B Analyte detected in the associated method blank

BRL Below reporting limit

E Estimated (value above quantitation range)

H Holding times for preparation or analysis exceeded

J Estimated value detected below Reporting Limit

N Analyte not NELAC certified

R RPD outside limits due to matrix

Rpt Lim Reporting Limit

S Spike Recovery outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1303122

**ANALYTICAL QC SUMMARY REPORT****BatchID: 173092**

Sample ID: <b>MB-173092</b>	Client ID:	Units: ug/L			Prep Date:	03/04/2013	Run No: <b>239444</b>				
SampleType: <b>MLBK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>173092</b>			Analysis Date:	03/04/2013	Seq No: <b>5012159</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	0
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	0
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	0
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Freon-113	BRL	10	0	0	0	0	0	0	0	0	0
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	0
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	0
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	0
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	0
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	0
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	0
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	0
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	0
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	44.72	0	50	0	89.4	64.6	123	0	0	0	0
Surr: Dibromofluoromethane	48.64	0	50	0	97.3	76.6	133	0	0	0	0
Surr: Toluene-d8	47.25	0	50	0	94.5	77.8	120	0	0	0	0

Qualifiers: &gt; Greater than Result value

&lt; Less than Result value

B Analyte detected in the associated method blank

BRL Below reporting limit

E Estimated (value above quantitation range)

H Holding times for preparation or analysis exceeded

J Estimated value detected below Reporting Limit

N Analyte not NELAC certified

R RPD outside limits due to matrix

Rpt Lim Reporting Limit

S Spike Recovery outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1303122

**ANALYTICAL QC SUMMARY REPORT****BatchID: 173092**

Sample ID: <b>LCS-173092</b>	Client ID:				Units: <b>ug/L</b>	Prep Date: <b>03/04/2013</b>	Run No: <b>239444</b>				
SampleType: <b>LCS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>173092</b>	Analysis Date: <b>03/04/2013</b>	Seq No: <b>5012157</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	53.05	5.0	50	0	106	61.1	142	0	0	0	
Benzene	49.61	5.0	50	0	99.2	73.5	130	0	0	0	
Chlorobenzene	43.07	5.0	50	0	86.1	72.4	123	0	0	0	
Toluene	44.23	5.0	50	0	88.5	73.6	130	0	0	0	
Trichloroethene	47.98	5.0	50	0	96	70	135	0	0	0	
Surr: 4-Bromofluorobenzene	53.31	0	50	0	107	64.6	123	0	0	0	
Surr: Dibromofluoromethane	48.63	0	50	0	97.3	76.6	133	0	0	0	
Surr: Toluene-d8	48.60	0	50	0	97.2	77.8	120	0	0	0	
Sample ID: <b>1303022-001AMS</b>	Client ID:				Units: <b>ug/L</b>	Prep Date: <b>03/04/2013</b>	Run No: <b>239568</b>				
SampleType: <b>MS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>173092</b>	Analysis Date: <b>03/06/2013</b>	Seq No: <b>5016423</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	2210	250	2500	0	88.4	60	168	0	0	0	
Benzene	2142	250	2500	0	85.7	66.6	148	0	0	0	
Chlorobenzene	2656	250	2500	0	106	71.9	135	0	0	0	
Toluene	1933	250	2500	0	77.3	68	149	0	0	0	
Trichloroethene	8612	250	2500	7152	58.4	71.1	154	0	0	0	S
Surr: 4-Bromofluorobenzene	2400	0	2500	0	96	64.6	123	0	0	0	
Surr: Dibromofluoromethane	2376	0	2500	0	95.1	76.6	133	0	0	0	
Surr: Toluene-d8	2268	0	2500	0	90.7	77.8	120	0	0	0	
Sample ID: <b>1303022-001AMSD</b>	Client ID:				Units: <b>ug/L</b>	Prep Date: <b>03/04/2013</b>	Run No: <b>239568</b>				
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>173092</b>	Analysis Date: <b>03/06/2013</b>	Seq No: <b>5016424</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	2110	250	2500	0	84.4	60	168	2210	4.58	18.6	
Benzene	2041	250	2500	0	81.6	66.6	148	2142	4.85	20	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL		Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J		Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1303122

**ANALYTICAL QC SUMMARY REPORT****BatchID: 173092**

Sample ID: 1303022-001AMSD	Client ID:				Units: ug/L	Prep Date:	03/04/2013	Run No: 239568
SampleType: MSD	TestCode: TCL VOLATILE ORGANICS SW8260B				BatchID: 173092	Analysis Date:	03/06/2013	Seq No: 5016424
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val
Chlorobenzene	2472	250	2500	0	98.9	71.9	135	2656
Toluene	1837	250	2500	0	73.5	68	149	1933
Trichloroethene	8146	250	2500	7152	39.8	71.1	154	8612
Surr: 4-Bromofluorobenzene	2285	0	2500	0	91.4	64.6	123	2400
Surr: Dibromofluoromethane	2334	0	2500	0	93.3	76.6	133	2376
Surr: Toluene-d8	2206	0	2500	0	88.3	77.8	120	2268
								Qual

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1303122

**ANALYTICAL QC SUMMARY REPORT****BatchID: 173124**

Sample ID: <b>MB-173124</b>	Client ID:				Units: <b>mg/L</b>	Prep Date: <b>03/05/2013</b>	Run No: <b>239500</b>				
SampleType: <b>MLBK</b>	TestCode: <b>VOLATILES, TCLP</b>	<b>SW1311/8260B</b>			BatchID: <b>173124</b>	Analysis Date: <b>03/05/2013</b>	Seq No: <b>5013317</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	BRL	0.10	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	0.10	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	0.20	0	0	0	0	0	0	0	0	0
Benzene	BRL	0.10	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	0.10	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	0.10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	0.10	0	0	0	0	0	0	0	0	0
Tetrachloroethene	BRL	0.10	0	0	0	0	0	0	0	0	0
Trichloroethene	BRL	0.10	0	0	0	0	0	0	0	0	0
Vinyl chloride	BRL	0.040	0	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	0.8568	0	1	0	85.7	65	129	0	0	0	0
Surr: Dibromofluoromethane	1.020	0	1	0	102	72.3	129	0	0	0	0
Surr: Toluene-d8	0.9686	0	1	0	96.9	74.2	118	0	0	0	0

Sample ID: <b>LCS-173124</b>	Client ID:				Units: <b>mg/L</b>	Prep Date: <b>03/05/2013</b>	Run No: <b>239500</b>				
SampleType: <b>LCS</b>	TestCode: <b>VOLATILES, TCLP</b>	<b>SW1311/8260B</b>			BatchID: <b>173124</b>	Analysis Date: <b>03/05/2013</b>	Seq No: <b>5013316</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	0.9780	0.10	1	0	97.8	53	139	0	0	0	0
1,2-Dichloroethane	1.123	0.10	1	0	112	62	143	0	0	0	0
2-Butanone	1.996	0.20	2	0	99.8	42	146	0	0	0	0
Benzene	0.9910	0.10	1	0	99.1	70.6	128	0	0	0	0
Carbon tetrachloride	0.8600	0.10	1	0	86	56	146	0	0	0	0
Chlorobenzene	0.8960	0.10	1	0	89.6	73	121	0	0	0	0
Chloroform	1.080	0.10	1	0	108	64.6	129	0	0	0	0
Tetrachloroethene	0.8314	0.10	1	0	83.1	70.5	131	0	0	0	0
Trichloroethene	0.9422	0.10	1	0	94.2	69.3	129	0	0	0	0
Vinyl chloride	1.033	0.040	1	0	103	46.1	139	0	0	0	0

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1303122

**ANALYTICAL QC SUMMARY REPORT****BatchID: 173124**

Sample ID: <b>LCS-173124</b>	Client ID:				Units: <b>mg/L</b>	Prep Date:	<b>03/05/2013</b>	Run No: <b>239500</b>			
SampleType: <b>LCS</b>	TestCode: <b>VOLATILES, TCLP</b>	<b>SW1311/8260B</b>			BatchID: <b>173124</b>	Analysis Date:	<b>03/05/2013</b>	Seq No: <b>5013316</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Surr: 4-Bromofluorobenzene	1.067	0	1	0	107	65	129	0	0	0
Surr: Dibromofluoromethane	1.040	0	1	0	104	72.3	129	0	0	0
Surr: Toluene-d8	1.108	0	1	0	111	74.2	118	0	0	0

Sample ID: <b>1303091-001BMS</b>	Client ID:				Units: <b>mg/L</b>	Prep Date:	<b>03/05/2013</b>	Run No: <b>239500</b>			
SampleType: <b>MS</b>	TestCode: <b>VOLATILES, TCLP</b>	<b>SW1311/8260B</b>			BatchID: <b>173124</b>	Analysis Date:	<b>03/05/2013</b>	Seq No: <b>5013878</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	1.088	0.10	1	0	109	52.3	155	0	0	0
1,2-Dichloroethane	1.008	0.10	1	0	101	58.3	144	0	0	0
2-Butanone	2.012	0.20	2	0	101	39.1	160	0	0	0
Benzene	1.291	0.10	1	0.2346	106	70	139	0	0	0
Carbon tetrachloride	0.9592	0.10	1	0	95.9	53.3	147	0	0	0
Chlorobenzene	0.8724	0.10	1	0	87.2	72.2	132	0	0	0
Chloroform	1.055	0.10	1	0	106	63.7	135	0	0	0
Tetrachloroethene	0.8854	0.10	1	0	88.5	70	148	0	0	0
Trichloroethene	0.9822	0.10	1	0	98.2	67.8	149	0	0	0
Vinyl chloride	1.070	0.040	1	0	107	46.1	152	0	0	0
Surr: 4-Bromofluorobenzene	1.085	0	1	0	109	65	129	0	0	0
Surr: Dibromofluoromethane	1.070	0	1	0	107	72.3	129	0	0	0
Surr: Toluene-d8	1.145	0	1	0	115	74.2	118	0	0	0

Sample ID: <b>1303091-001BDUP</b>	Client ID:				Units: <b>mg/L</b>	Prep Date:	<b>03/05/2013</b>	Run No: <b>239500</b>			
SampleType: <b>DUP</b>	TestCode: <b>VOLATILES, TCLP</b>	<b>SW1311/8260B</b>			BatchID: <b>173124</b>	Analysis Date:	<b>03/05/2013</b>	Seq No: <b>5013502</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	BRL	0.10	0	0	0	0	0	0	0	30	
1,2-Dichloroethane	BRL	0.10	0	0	0	0	0	0	0	30	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1303122

**ANALYTICAL QC SUMMARY REPORT****BatchID: 173124**

Sample ID: <b>1303091-001BDUP</b>	Client ID:				Units: <b>mg/L</b>	Prep Date: <b>03/05/2013</b>	Run No: <b>239500</b>				
SampleType: <b>DUP</b>	TestCode: <b>VOLATILES, TCLP SW1311/8260B</b>				BatchID: <b>173124</b>	Analysis Date: <b>03/05/2013</b>	Seq No: <b>5013502</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2-Butanone	BRL	0.20	0	0	0	0	0	0	0	30	
Benzene	0.2528	0.10	0	0	0	0	0	0.2346	7.47	30	
Carbon tetrachloride	BRL	0.10	0	0	0	0	0	0	0	30	
Chlorobenzene	BRL	0.10	0	0	0	0	0	0	0	30	
Chloroform	BRL	0.10	0	0	0	0	0	0	0	30	
Tetrachloroethene	BRL	0.10	0	0	0	0	0	0	0	30	
Trichloroethene	BRL	0.10	0	0	0	0	0	0	0	30	
Vinyl chloride	BRL	0.040	0	0	0	0	0	0	0	30	
Surr: 4-Bromofluorobenzene	0.8914	0	1	0	89.1	65	129	0.8578	0	0	
Surr: Dibromofluoromethane	1.075	0	1	0	107	72.3	129	1.071	0	0	
Surr: Toluene-d8	1.002	0	1	0	100	74.2	118	1.001	0	0	

**Qualifiers:** > Greater than Result value  
 BRL Below reporting limit  
 J Estimated value detected below Reporting Limit  
 Rpt Lim Reporting Limit

< Less than Result value  
 E Estimated (value above quantitation range)  
 N Analyte not NELAC certified  
 S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank  
 H Holding times for preparation or analysis exceeded  
 R RPD outside limits due to matrix



## ANALYTICAL ENVIRONMENTAL SERVICES, INC.

March 18, 2013

Andrew Romanek  
CDM Smith Inc.  
3715 Northside Parkway, Northcreek 30  
Atlanta            GA    30327

TEL: (404) 720-1400  
FAX: (404) 467-4130

RE: Cedartown

Dear Andrew Romanek:

Order No: 1303784

Analytical Environmental Services, Inc. received 5 samples on 3/9/2013 10:22:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/12-06/30/13.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in black ink that reads "Larissa Elsley".

Larissa Elsley  
Project Manager

**CHAIN OF CUSTODY**

Work Order: **1303784**

Date:

Page \_\_\_\_\_ of \_\_\_\_\_

COMPANY: <b>C DM Smith</b>		ADDRESS: 3715 Northside Pkwy #300/400 Atlanta, GA 30327		ANALYSIS REQUESTED		Visit our website <a href="http://www.aesatlanta.com">www.aesatlanta.com</a> to check on the status of your results, place bottle orders, etc.	
PHONE: <b>404-720-1400</b>		FAX:				No # of Containers	
SAMPLED BY: <b>Jeff Weeber</b>		SIGNATURE: <b>JW/JW/JW</b>				to check on the status of your results, place bottle orders, etc.	
#	SAMPLE ID	SAMPLED	COMPOSITE	MATRIX (See codes)	PRESERVATION (See codes)	REMARKS	
		DATE	TIME	GRADE	# T		
1	MW-53C Soil TOW	3/5/13	1340	X	50		
2	MW-53C	3/6/13	0800	X	GW	1	
3	MW-54C	3/6/13	0910	X	GW	2	
4	MW-54 Purge	3/6/13	0950	X	GW	2	
5	MW-41/43 Purge	3/6/13	1015	X	PW	2	
6							
7							
8							
9							
10							
11							
12							
13							
14							
RELINQUISHED BY		DATE/TIME RECEIVED BY		PROJECT INFORMATION		RECEIPT	
1: <b>JW Weller 3/7/13 11:07 AM</b>		1: <b>NJ-C 3-7-13 11:07 AM</b>		PROJECT NAME: <b>Cedartown</b>		Total # of Containers <b>8</b>	
2: <b>NJC 3-7-13 10:00 PM</b>		2: <b>Coventry 3/9/13 10:22 AM</b>		PROJECT #: _____		Turnaround Time Request: <input checked="" type="radio"/> Standard 5 Business Days <input type="radio"/> 2 Business Day Rush <input type="radio"/> Next Business Day Rush <input type="radio"/> Same Day Rush (auth req) <input type="radio"/> Other _____	
3: _____		3: _____		SEND REPORT TO: <b>Andrew Romanek</b>		STATE PROGRAM (if any): <input type="checkbox"/> Email? Y / N; <input type="checkbox"/> Fax? Y / N <input type="checkbox"/> PO# _____	
SPECIAL INSTRUCTIONS/COMMENTS:		SHIPMENT METHOD		INVOICE TO: (IF DIFFERENT FROM ABOVE)		DATA PACKAGE: <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV	
1: <b>JW Weller 3/7/13 11:07 AM</b>		OUT / / VIA: IN / / VIA: CLIENT FedEx UPS MAIL COURIER GREYHOUND OTHER _____		QUOTE #: _____			
2: <b>NJC 3-7-13 10:00 PM</b>		3: _____					

SAMPLES RECEIVED AFTER 5PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY, IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.  
 SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air      GW = Groundwater      SW = Surface Water      W = Water (Blanks)      DW = Drinking Water (Blanks)      O = Other (specify)      WW = Waste Water  
 PRESERVATIVE CODES: H+I = Hydrochloric acid + ice      I = Ice only      N = Nitric acid      S+H = Sulfuric acid + ice      O = Other (specify)      NA = None      White Copy - Original; Yellow Copy - Client

**Client:** CDM Smith Inc.  
**Project:** Cedartown  
**Lab ID:** 1303784

**Case Narrative**

Volatile Organic Compounds Analysis by Method 8260B:

Sample 1303784-002A as received did not meet method specified preservation requirements of pH <2.

**Analytical Environmental Services, Inc**
**Date:** 18-Mar-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-53C SOIL IDW					
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	3/5/2013 1:40:00 PM					
<b>Lab ID:</b>	1303784-001	<b>Matrix:</b>	Soil					
Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>VOLATILES, TCLP SW1311/8260B</b>							<b>(SW1311)</b>	
1,1-Dichloroethene	BRL	0.10		mg/L	173514	20	03/15/2013 15:48	YT
1,2-Dichloroethane	BRL	0.10		mg/L	173514	20	03/15/2013 15:48	YT
2-Butanone	BRL	0.20		mg/L	173514	20	03/15/2013 15:48	YT
Benzene	BRL	0.10		mg/L	173514	20	03/15/2013 15:48	YT
Carbon tetrachloride	BRL	0.10		mg/L	173514	20	03/15/2013 15:48	YT
Chlorobenzene	BRL	0.10		mg/L	173514	20	03/15/2013 15:48	YT
Chloroform	BRL	0.10		mg/L	173514	20	03/15/2013 15:48	YT
Tetrachloroethene	BRL	0.10		mg/L	173514	20	03/15/2013 15:48	YT
Trichloroethene	BRL	0.10		mg/L	173514	20	03/15/2013 15:48	YT
Vinyl chloride	BRL	0.040		mg/L	173514	20	03/15/2013 15:48	YT
Surr: 4-Bromofluorobenzene	89.2	65-129	%REC		173514	20	03/15/2013 15:48	YT
Surr: Dibromofluoromethane	101	72.3-129	%REC		173514	20	03/15/2013 15:48	YT
Surr: Toluene-d8	98.5	74.2-118	%REC		173514	20	03/15/2013 15:48	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 18-Mar-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-53C
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	3/6/2013 8:00:00 AM
<b>Lab ID:</b>	1303784-002	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
1,1,2-Trichloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
1,1-Dichloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
1,1-Dichloroethene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
1,2-Dibromoethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
1,2-Dichlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
1,2-Dichloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
1,2-Dichloropropane	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
1,3-Dichlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
1,4-Dichlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
2-Butanone	BRL	50		ug/L	173519	1	03/14/2013 18:08	YT
2-Hexanone	BRL	10		ug/L	173519	1	03/14/2013 18:08	YT
4-Methyl-2-pentanone	BRL	10		ug/L	173519	1	03/14/2013 18:08	YT
Acetone	BRL	50		ug/L	173519	1	03/14/2013 18:08	YT
Benzene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Bromodichloromethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Bromoform	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Bromomethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Carbon disulfide	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Carbon tetrachloride	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Chlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Chloroethane	BRL	10		ug/L	173519	1	03/14/2013 18:08	YT
Chloroform	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Chloromethane	BRL	10		ug/L	173519	1	03/14/2013 18:08	YT
cis-1,2-Dichloroethene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Cyclohexane	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Dibromochloromethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Dichlorodifluoromethane	BRL	10		ug/L	173519	1	03/14/2013 18:08	YT
Ethylbenzene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Freon-113	BRL	10		ug/L	173519	1	03/14/2013 18:08	YT
Isopropylbenzene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
m,p-Xylene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Methyl acetate	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Methyl tert-butyl ether	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Methylcyclohexane	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Methylene chloride	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
o-Xylene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 18-Mar-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-53C
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	3/6/2013 8:00:00 AM
<b>Lab ID:</b>	1303784-002	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Tetrachloroethene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Toluene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Trichloroethene	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Trichlorofluoromethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:08	YT
Vinyl chloride	BRL	2.0		ug/L	173519	1	03/14/2013 18:08	YT
Surr: 4-Bromofluorobenzene	92.4	64.6-123		%REC	173519	1	03/14/2013 18:08	YT
Surr: Dibromofluoromethane	102	76.6-133		%REC	173519	1	03/14/2013 18:08	YT
Surr: Toluene-d8	101	77.8-120		%REC	173519	1	03/14/2013 18:08	YT

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 18-Mar-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-54C
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	3/6/2013 9:10:00 AM
<b>Lab ID:</b>	1303784-003	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
1,1,2-Trichloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
1,1-Dichloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
1,1-Dichloroethene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
1,2-Dibromoethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
1,2-Dichlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
1,2-Dichloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
1,2-Dichloropropane	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
1,3-Dichlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
1,4-Dichlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
2-Butanone	BRL	50		ug/L	173519	1	03/14/2013 18:37	YT
2-Hexanone	BRL	10		ug/L	173519	1	03/14/2013 18:37	YT
4-Methyl-2-pentanone	BRL	10		ug/L	173519	1	03/14/2013 18:37	YT
Acetone	BRL	50		ug/L	173519	1	03/14/2013 18:37	YT
Benzene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Bromodichloromethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Bromoform	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Bromomethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Carbon disulfide	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Carbon tetrachloride	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Chlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Chloroethane	BRL	10		ug/L	173519	1	03/14/2013 18:37	YT
Chloroform	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Chloromethane	BRL	10		ug/L	173519	1	03/14/2013 18:37	YT
cis-1,2-Dichloroethene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Cyclohexane	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Dibromochloromethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Dichlorodifluoromethane	BRL	10		ug/L	173519	1	03/14/2013 18:37	YT
Ethylbenzene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Freon-113	BRL	10		ug/L	173519	1	03/14/2013 18:37	YT
Isopropylbenzene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
m,p-Xylene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Methyl acetate	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Methyl tert-butyl ether	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Methylcyclohexane	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Methylene chloride	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
o-Xylene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 18-Mar-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-54C
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	3/6/2013 9:10:00 AM
<b>Lab ID:</b>	1303784-003	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Tetrachloroethene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Toluene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Trichloroethene	6.8	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Trichlorofluoromethane	BRL	5.0		ug/L	173519	1	03/14/2013 18:37	YT
Vinyl chloride	BRL	2.0		ug/L	173519	1	03/14/2013 18:37	YT
Surr: 4-Bromofluorobenzene	94	64.6-123	%REC		173519	1	03/14/2013 18:37	YT
Surr: Dibromofluoromethane	103	76.6-133	%REC		173519	1	03/14/2013 18:37	YT
Surr: Toluene-d8	98.3	77.8-120	%REC		173519	1	03/14/2013 18:37	YT

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 18-Mar-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-54 PURGE
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	3/6/2013 9:50:00 AM
<b>Lab ID:</b>	1303784-004	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
1,1,2-Trichloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
1,1-Dichloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
1,1-Dichloroethene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
1,2-Dibromoethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
1,2-Dichlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
1,2-Dichloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
1,2-Dichloropropane	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
1,3-Dichlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
1,4-Dichlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
2-Butanone	BRL	50		ug/L	173519	1	03/14/2013 19:06	YT
2-Hexanone	BRL	10		ug/L	173519	1	03/14/2013 19:06	YT
4-Methyl-2-pentanone	BRL	10		ug/L	173519	1	03/14/2013 19:06	YT
Acetone	BRL	50		ug/L	173519	1	03/14/2013 19:06	YT
Benzene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Bromodichloromethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Bromoform	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Bromomethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Carbon disulfide	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Carbon tetrachloride	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Chlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Chloroethane	BRL	10		ug/L	173519	1	03/14/2013 19:06	YT
Chloroform	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Chloromethane	BRL	10		ug/L	173519	1	03/14/2013 19:06	YT
cis-1,2-Dichloroethene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Cyclohexane	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Dibromochloromethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Dichlorodifluoromethane	BRL	10		ug/L	173519	1	03/14/2013 19:06	YT
Ethylbenzene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Freon-113	BRL	10		ug/L	173519	1	03/14/2013 19:06	YT
Isopropylbenzene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
m,p-Xylene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Methyl acetate	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Methyl tert-butyl ether	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Methylcyclohexane	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Methylene chloride	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
o-Xylene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 18-Mar-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-54 PURGE
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	3/6/2013 9:50:00 AM
<b>Lab ID:</b>	1303784-004	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Tetrachloroethene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Toluene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Trichloroethene	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Trichlorofluoromethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:06	YT
Vinyl chloride	BRL	2.0		ug/L	173519	1	03/14/2013 19:06	YT
Surr: 4-Bromofluorobenzene	87.7	64.6-123		%REC	173519	1	03/14/2013 19:06	YT
Surr: Dibromofluoromethane	108	76.6-133		%REC	173519	1	03/14/2013 19:06	YT
Surr: Toluene-d8	101	77.8-120		%REC	173519	1	03/14/2013 19:06	YT

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 18-Mar-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-41/43 PURGE
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	3/6/2013 10:15:00 AM
<b>Lab ID:</b>	1303784-005	<b>Matrix:</b>	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
1,1,2-Trichloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
1,1-Dichloroethane	23	5.0		ug/L	173519	1	03/14/2013 19:35	YT
1,1-Dichloroethene	34	5.0		ug/L	173519	1	03/14/2013 19:35	YT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
1,2-Dibromoethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
1,2-Dichlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
1,2-Dichloroethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
1,2-Dichloropropane	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
1,3-Dichlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
1,4-Dichlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
2-Butanone	BRL	50		ug/L	173519	1	03/14/2013 19:35	YT
2-Hexanone	BRL	10		ug/L	173519	1	03/14/2013 19:35	YT
4-Methyl-2-pentanone	BRL	10		ug/L	173519	1	03/14/2013 19:35	YT
Acetone	BRL	50		ug/L	173519	1	03/14/2013 19:35	YT
Benzene	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Bromodichloromethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Bromoform	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Bromomethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Carbon disulfide	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Carbon tetrachloride	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Chlorobenzene	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Chloroethane	BRL	10		ug/L	173519	1	03/14/2013 19:35	YT
Chloroform	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Chloromethane	BRL	10		ug/L	173519	1	03/14/2013 19:35	YT
cis-1,2-Dichloroethene	1400	100		ug/L	173519	20	03/15/2013 14:48	YT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Cyclohexane	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Dibromochloromethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Dichlorodifluoromethane	BRL	10		ug/L	173519	1	03/14/2013 19:35	YT
Ethylbenzene	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Freon-113	BRL	10		ug/L	173519	1	03/14/2013 19:35	YT
Isopropylbenzene	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
m,p-Xylene	15	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Methyl acetate	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Methyl tert-butyl ether	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Methylcyclohexane	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Methylene chloride	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
o-Xylene	14	5.0		ug/L	173519	1	03/14/2013 19:35	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 18-Mar-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-41/43 PURGE					
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	3/6/2013 10:15:00 AM					
<b>Lab ID:</b>	1303784-005	<b>Matrix:</b>	Groundwater					
Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Tetrachloroethene	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Toluene	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
trans-1,2-Dichloroethene	11	5.0		ug/L	173519	1	03/14/2013 19:35	YT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Trichloroethene	870	100		ug/L	173519	20	03/15/2013 14:48	YT
Trichlorofluoromethane	BRL	5.0		ug/L	173519	1	03/14/2013 19:35	YT
Vinyl chloride	17	2.0		ug/L	173519	1	03/14/2013 19:35	YT
Surr: 4-Bromofluorobenzene	97.8	64.6-123		%REC	173519	1	03/14/2013 19:35	YT
Surr: 4-Bromofluorobenzene	88.5	64.6-123		%REC	173519	20	03/15/2013 14:48	YT
Surr: Dibromofluoromethane	103	76.6-133		%REC	173519	20	03/15/2013 14:48	YT
Surr: Dibromofluoromethane	108	76.6-133		%REC	173519	1	03/14/2013 19:35	YT
Surr: Toluene-d8	102	77.8-120		%REC	173519	1	03/14/2013 19:35	YT
Surr: Toluene-d8	96	77.8-120		%REC	173519	20	03/15/2013 14:48	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc.**

## Sample/Cooler Receipt Checklist

Client CDM SMITHWork Order Number 1303784Checklist completed by Courtney 3/9/13  
Signature DateCarrier name: FedEx    UPS    Courier X Client    US Mail    Other   Shipping container/coolers in good condition? Yes X No    Not Present   Custody seals intact on shipping container/coolers? Yes X No    Not Present   Custody seals intact on sample bottles? Yes    No    Not Present XContainer/Temp Blank temperature in compliance? (4°C±2)\* Yes X No   Cooler #1 3.1 Cooler #2    Cooler #3    Cooler #4    Cooler #5    Cooler #6   Chain of custody present? Yes X No   Chain of custody signed when relinquished and received? Yes X No   Chain of custody agrees with sample labels? Yes X No   Samples in proper container/bottle? Yes X No   Sample containers intact? Yes X No   Sufficient sample volume for indicated test? Yes X No   All samples received within holding time? Yes X No   Was TAT marked on the COC? Yes X No   Proceed with Standard TAT as per project history? Yes    No    Not Applicable XWater - VOA vials have zero headspace? No VOA vials submitted    Yes P No   Water - pH acceptable upon receipt? Yes    No    Not Applicable XAdjusted?    Checked by   Sample Condition: Good X Other(Explain)   (For diffusive samples or AIHA lead) Is a known blank included? Yes    No X

See Case Narrative for resolution of the Non-Conformance.

\* Samples do not have to comply with the given range for certain parameters.

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1303784

**ANALYTICAL QC SUMMARY REPORT****BatchID: 173514**

Sample ID: MB-173514		Client ID: TestCode: VOLATILES, TCLP SW1311/8260B		Units: mg/L		Prep Date: 03/14/2013		Run No: 240109			
SampleType: MBLK				BatchID: 173514		Analysis Date: 03/14/2013		Seq No: 5025924			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	BRL	0.10	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	0.10	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	0.20	0	0	0	0	0	0	0	0	0
Benzene	BRL	0.10	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	0.10	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	0.10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	0.10	0	0	0	0	0	0	0	0	0
Tetrachloroethene	BRL	0.10	0	0	0	0	0	0	0	0	0
Trichloroethene	BRL	0.10	0	0	0	0	0	0	0	0	0
Vinyl chloride	BRL	0.040	0	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	0.8526	0	1	0	85.3	65	129	0	0	0	0
Surr: Dibromofluoromethane	1.050	0	1	0	105	72.3	129	0	0	0	0
Surr: Toluene-d8	1.002	0	1	0	100	74.2	118	0	0	0	0

Sample ID: LCS-173514		Client ID: TestCode: VOLATILES, TCLP SW1311/8260B		Units: mg/L		Prep Date: 03/14/2013		Run No: 240109			
SampleType: LCS				BatchID: 173514		Analysis Date: 03/14/2013		Seq No: 5025925			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	0.8970	0.10	1	0	89.7	53	139	0	0	0	0
1,2-Dichloroethane	1.002	0.10	1	0	100	62	143	0	0	0	0
2-Butanone	1.859	0.20	2	0	93	42	146	0	0	0	0
Benzene	1.033	0.10	1	0	103	70.6	128	0	0	0	0
Carbon tetrachloride	1.118	0.10	1	0	112	56	146	0	0	0	0
Chlorobenzene	0.9608	0.10	1	0	96.1	73	121	0	0	0	0
Chloroform	0.9452	0.10	1	0	94.5	64.6	129	0	0	0	0
Tetrachloroethene	0.9572	0.10	1	0	95.7	70.5	131	0	0	0	0
Trichloroethene	1.019	0.10	1	0	102	69.3	129	0	0	0	0

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1303784

**ANALYTICAL QC SUMMARY REPORT****BatchID: 173514**

Sample ID: <b>LCS-173514</b>	Client ID:				Units: <b>mg/L</b>	Prep Date:	<b>03/14/2013</b>	Run No: <b>240109</b>			
SampleType: <b>LCS</b>	TestCode: <b>VOLATILES, TCLP</b>	<b>SW1311/8260B</b>			BatchID: <b>173514</b>	Analysis Date:	<b>03/14/2013</b>	Seq No: <b>5025925</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Vinyl chloride	0.8378	0.040	1	0	83.8	46.1	139	0	0	0	
Surr: 4-Bromofluorobenzene	1.018	0	1	0	102	65	129	0	0	0	
Surr: Dibromofluoromethane	1.017	0	1	0	102	72.3	129	0	0	0	
Surr: Toluene-d8	1.056	0	1	0	106	74.2	118	0	0	0	
Sample ID: <b>1303A95-002AMS</b>	Client ID:				Units: <b>mg/L</b>	Prep Date:	<b>03/14/2013</b>	Run No: <b>240109</b>			
SampleType: <b>MS</b>	TestCode: <b>VOLATILES, TCLP</b>	<b>SW1311/8260B</b>			BatchID: <b>173514</b>	Analysis Date:	<b>03/14/2013</b>	Seq No: <b>5025928</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	1.093	0.10	1	0	109	52.3	155	0	0	0	
1,2-Dichloroethane	1.091	0.10	1	0	109	58.3	144	0	0	0	
2-Butanone	2.412	0.20	2	0	121	39.1	160	0	0	0	
Benzene	1.088	0.10	1	0	109	70	139	0	0	0	
Carbon tetrachloride	1.210	0.10	1	0	121	53.3	147	0	0	0	
Chlorobenzene	1.041	0.10	1	0	104	72.2	132	0	0	0	
Chloroform	1.235	0.10	1	0.1512	108	63.7	135	0	0	0	
Tetrachloroethene	1.101	0.10	1	0	110	70	148	0	0	0	
Trichloroethene	1.966	0.10	1	0	197	67.8	149	0	0	0	S
Vinyl chloride	1.239	0.040	1	0	124	46.1	152	0	0	0	
Surr: 4-Bromofluorobenzene	1.103	0	1	0	110	65	129	0	0	0	
Surr: Dibromofluoromethane	1.010	0	1	0	101	72.3	129	0	0	0	
Surr: Toluene-d8	1.044	0	1	0	104	74.2	118	0	0	0	
Sample ID: <b>1303A95-002ADUP</b>	Client ID:				Units: <b>mg/L</b>	Prep Date:	<b>03/14/2013</b>	Run No: <b>240109</b>			
SampleType: <b>DUP</b>	TestCode: <b>VOLATILES, TCLP</b>	<b>SW1311/8260B</b>			BatchID: <b>173514</b>	Analysis Date:	<b>03/14/2013</b>	Seq No: <b>5025927</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	BRL	0.10	0	0	0	0	0	0	0	30	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1303784

**ANALYTICAL QC SUMMARY REPORT****BatchID: 173514**

Sample ID: 1303A95-002ADUP	Client ID:				Units: mg/L	Prep Date:	03/14/2013	Run No: 240109
SampleType: DUP	TestCode: VOLATILES, TCLP	SW1311/8260B			BatchID: 173514	Analysis Date:	03/14/2013	Seq No: 5025927
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val
1,2-Dichloroethane	BRL	0.10	0	0	0	0	0	0
2-Butanone	BRL	0.20	0	0	0	0	0	0
Benzene	BRL	0.10	0	0	0	0	0	0
Carbon tetrachloride	BRL	0.10	0	0	0	0	0	0
Chlorobenzene	BRL	0.10	0	0	0	0	0	0
Chloroform	0.1290	0.10	0	0	0	0	0.1512	15.8
Tetrachloroethene	BRL	0.10	0	0	0	0	0	0
Trichloroethene	BRL	0.10	0	0	0	0	0	0
Vinyl chloride	BRL	0.040	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	1.071	0	1	0	107	65	129	1.052
Surr: Dibromofluoromethane	1.024	0	1	0	102	72.3	129	1.119
Surr: Toluene-d8	0.9682	0	1	0	96.8	74.2	118	0.9874

**Qualifiers:** > Greater than Result value  
 BRL Below reporting limit  
 J Estimated value detected below Reporting Limit  
 Rpt Lim Reporting Limit

< Less than Result value  
 E Estimated (value above quantitation range)  
 N Analyte not NELAC certified  
 S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank  
 H Holding times for preparation or analysis exceeded  
 R RPD outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1303784

**ANALYTICAL QC SUMMARY REPORT****BatchID: 173519**

Sample ID: <b>MB-173519</b>	Client ID:	Units: ug/L			Prep Date:	03/14/2013	Run No: <b>240132</b>				
SampleType: <b>MLBK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>173519</b>			Analysis Date:	03/14/2013	Seq No: <b>5026595</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	0
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	0
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	0
Acetone	BRL	50	0	0	0	0	0	0	0	0	0
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	0

Qualifiers: &gt; Greater than Result value

&lt; Less than Result value

B Analyte detected in the associated method blank

BRL Below reporting limit

E Estimated (value above quantitation range)

H Holding times for preparation or analysis exceeded

J Estimated value detected below Reporting Limit

N Analyte not NELAC certified

R RPD outside limits due to matrix

Rpt Lim Reporting Limit

S Spike Recovery outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1303784

**ANALYTICAL QC SUMMARY REPORT****BatchID: 173519**

Sample ID: <b>MB-173519</b>	Client ID:	Units: ug/L			Prep Date:	03/14/2013	Run No: <b>240132</b>				
SampleType: <b>MLBK</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>	BatchID: <b>173519</b>			Analysis Date:	03/14/2013	Seq No: <b>5026595</b>				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	0
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	0
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	0
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Freon-113	BRL	10	0	0	0	0	0	0	0	0	0
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	0
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	0
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	0
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	0
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	0
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	0
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	0
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	0
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	0
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	0
Surr: 4-Bromofluorobenzene	45.51	0	50	0	91	64.6	123	0	0	0	0
Surr: Dibromofluoromethane	53.43	0	50	0	107	76.6	133	0	0	0	0
Surr: Toluene-d8	47.43	0	50	0	94.9	77.8	120	0	0	0	0

**Qualifiers:** > Greater than Result value  
 BRL Below reporting limit  
 J Estimated value detected below Reporting Limit  
 Rpt Lim Reporting Limit

< Less than Result value  
 E Estimated (value above quantitation range)  
 N Analyte not NELAC certified  
 S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank  
 H Holding times for preparation or analysis exceeded  
 R RPD outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1303784

**ANALYTICAL QC SUMMARY REPORT****BatchID: 173519**

Sample ID: <b>LCS-173519</b>	Client ID:				Units: <b>ug/L</b>	Prep Date:	<b>03/14/2013</b>	Run No: <b>240132</b>			
SampleType: <b>LCS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>173519</b>	Analysis Date:	<b>03/14/2013</b>	Seq No: <b>5026589</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	69.03	5.0	50	0	138	61.1	142	0	0	0
Benzene	58.68	5.0	50	0	117	73.5	130	0	0	0
Chlorobenzene	56.50	5.0	50	0	113	72.4	123	0	0	0
Toluene	57.37	5.0	50	0	115	73.6	130	0	0	0
Trichloroethene	58.70	5.0	50	0	117	70	135	0	0	0
Surr: 4-Bromofluorobenzene	48.46	0	50	0	96.9	64.6	123	0	0	0
Surr: Dibromofluoromethane	53.90	0	50	0	108	76.6	133	0	0	0
Surr: Toluene-d8	50.67	0	50	0	101	77.8	120	0	0	0

Sample ID: <b>1303818-001AMS</b>	Client ID:				Units: <b>ug/L</b>	Prep Date:	<b>03/14/2013</b>	Run No: <b>240132</b>			
SampleType: <b>MS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>173519</b>	Analysis Date:	<b>03/14/2013</b>	Seq No: <b>5026591</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	69.05	5.0	50	0	138	60	168	0	0	0
Benzene	71.39	5.0	50	12.25	118	66.6	148	0	0	0
Chlorobenzene	133.0	5.0	50	83.05	99.9	71.9	135	0	0	0
Toluene	58.96	5.0	50	2.050	114	68	149	0	0	0
Trichloroethene	90.04	5.0	50	30.53	119	71.1	154	0	0	0
Surr: 4-Bromofluorobenzene	47.39	0	50	0	94.8	64.6	123	0	0	0
Surr: Dibromofluoromethane	53.85	0	50	0	108	76.6	133	0	0	0
Surr: Toluene-d8	48.79	0	50	0	97.6	77.8	120	0	0	0

Sample ID: <b>1303818-001AMSD</b>	Client ID:				Units: <b>ug/L</b>	Prep Date:	<b>03/14/2013</b>	Run No: <b>240132</b>			
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>173519</b>	Analysis Date:	<b>03/14/2013</b>	Seq No: <b>5026593</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	68.73	5.0	50	0	137	60	168	69.05	0.465	18.6
Benzene	69.77	5.0	50	12.25	115	66.6	148	71.39	2.3	20

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value		B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)		H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified		R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix			

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1303784

**ANALYTICAL QC SUMMARY REPORT****BatchID: 173519**

Sample ID: 1303818-001AMSD	Client ID:				Units: ug/L	Prep Date:	03/14/2013	Run No: 240132
SampleType: MSD	TestCode: TCL VOLATILE ORGANICS SW8260B				BatchID: 173519	Analysis Date:	03/14/2013	Seq No: 5026593
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val
Chlorobenzene	132.2	5.0	50	83.05	98.3	71.9	135	133.0
Toluene	57.28	5.0	50	2.050	110	68	149	58.96
Trichloroethene	87.91	5.0	50	30.53	115	71.1	154	90.04
Surr: 4-Bromofluorobenzene	46.95	0	50	0	93.9	64.6	123	47.39
Surr: Dibromofluoromethane	52.88	0	50	0	106	76.6	133	53.85
Surr: Toluene-d8	48.09	0	50	0	96.2	77.8	120	48.79
								Qual

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		



## ANALYTICAL ENVIRONMENTAL SERVICES, INC.

May 29, 2013

Andrew Romanek  
CDM Smith Inc.  
3715 Northside Parkway, Northcreek 30  
Atlanta            GA    30327

TEL: (404) 720-1400  
FAX: (404) 467-4130

RE: Cedartown

Dear Andrew Romanek:

Order No: 1305M32

Analytical Environmental Services, Inc. received **2** samples on **5/24/2013 5:45:00 PM** for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/12-06/30/13.  
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in black ink that reads "Larissa Elsley".

Larissa Elsley  
Project Manager

## ANALYTICAL ENVIRONMENTAL SERVICES, INC

3785 Residential Parkway, Atlanta GA 30340-3704

TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

## CHAIN OF CUSTODY

Work Order: 1305132

AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188



COMPANY:

Cdm Smith

ADDRESS:

3715 Northside Plaza, NW  
Bldg 300, Suite 400  
Atlanta, GA 30327

PHONE:

404-725-1400

FAX:

(770) 457-8177

SAMPLED BY:

Daniel Forbes

SIGNATURE:

Daniel Forbes

ANALYSIS REQUESTED

Visit our website  
[www.aesatlanta.com](http://www.aesatlanta.com)  
to check on the status of  
your results, place bottle  
orders, etc.

#	SAMPLE ID	DATE	TIME	GRAD	COMPOSITE	MATRIX (See codes)	PRESERVATION (See codes)	REMARKS	No. # of Containers
1	MW-SJd	5/23/13	2:00	X	6in	✓			2
2	Trip Blank	—	—	X	W	✓			2
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									

RELINQUISHED BY

DATE/TIME RECEIVED BY

DATE/TIME PROJECT INFORMATION

RECEIPT

Total # of Containers

Turnaround Time Request

Standard 5 Business Days

2 Business Day Rush

Next Business Day Rush

Same Day Rush (auth req.)

Other

STATE PROGRAM (if any): NoneFax? Y / N: NoneEmail?: None

DATA PACKAGE: I II III IV

PO#:

QUOTE #:

PROJECT NAME: CedartownPROJECT #: 5/24/13 4:35

SITE ADDRESS:

SEND REPORT TO: Andrew Remanek

INVOICE TO: (IF DIFFERENT FROM ABOVE)

SHIPMENT METHOD

OUT / / VIA: COURIERIN / / VIA: COURIERCLIENT FedEx UPS MAIL COURIER

GREYHOUND OTHER

SPECIAL INSTRUCTIONS/COMMENTS:

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.

SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water DW = Drinking Water (Banks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice N = Nitric acid S+I = Sulfuric acid + ice SM+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

**Analytical Environmental Services, Inc**
**Date:** 29-May-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-55D					
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	5/23/2013 9:00:00 PM					
<b>Lab ID:</b>	1305M32-001	<b>Matrix:</b>	Groundwater					
<hr/>								
<b>Analyses</b>	<b>Result</b>	<b>Reporting Limit</b>	<b>Qual</b>	<b>Units</b>	<b>BatchID</b>	<b>Dilution Factor</b>	<b>Date Analyzed</b>	<b>Analyst</b>
<b>TCL VOLATILE ORGANICS SW8260B</b>				<b>(SW5030B)</b>				
1,1,1-Trichloroethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
1,1,2-Trichloroethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
1,1-Dichloroethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
1,1-Dichloroethene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
1,2-Dibromoethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
1,2-Dichlorobenzene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
1,2-Dichloroethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
1,2-Dichloropropane	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
1,3-Dichlorobenzene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
1,4-Dichlorobenzene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
2-Butanone	BRL	50		ug/L	176695	1	05/28/2013 16:53	YT
2-Hexanone	BRL	10		ug/L	176695	1	05/28/2013 16:53	YT
4-Methyl-2-pentanone	BRL	10		ug/L	176695	1	05/28/2013 16:53	YT
Acetone	BRL	50		ug/L	176695	1	05/28/2013 16:53	YT
Benzene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Bromodichloromethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Bromoform	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Bromomethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Carbon disulfide	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Carbon tetrachloride	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Chlorobenzene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Chloroethane	BRL	10		ug/L	176695	1	05/28/2013 16:53	YT
Chloroform	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Chloromethane	BRL	10		ug/L	176695	1	05/28/2013 16:53	YT
cis-1,2-Dichloroethene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Cyclohexane	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Dibromochloromethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Dichlorodifluoromethane	BRL	10		ug/L	176695	1	05/28/2013 16:53	YT
Ethylbenzene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Freon-113	BRL	10		ug/L	176695	1	05/28/2013 16:53	YT
Isopropylbenzene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
m,p-Xylene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Methyl acetate	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Methyl tert-butyl ether	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Methylcyclohexane	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Methylene chloride	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
o-Xylene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

E Estimated (value above quantitation range)

BRL Below reporting limit

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

Narr See case narrative

N Analyte not NELAC certified

NC Not confirmed

B Analyte detected in the associated method blank

&lt; Less than Result value

&gt; Greater than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 29-May-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	MW-55D					
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	5/23/2013 9:00:00 PM					
<b>Lab ID:</b>	1305M32-001	<b>Matrix:</b>	Groundwater					
<b>TCL VOLATILE ORGANICS SW8260B</b>								
Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>(SW5030B)</b>								
Styrene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Tetrachloroethene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Toluene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Trichloroethene	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Trichlorofluoromethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:53	YT
Vinyl chloride	BRL	2.0		ug/L	176695	1	05/28/2013 16:53	YT
Surr: 4-Bromofluorobenzene	92.2	64.6-123		%REC	176695	1	05/28/2013 16:53	YT
Surr: Dibromofluoromethane	94.5	76.6-133		%REC	176695	1	05/28/2013 16:53	YT
Surr: Toluene-d8	95.2	77.8-120		%REC	176695	1	05/28/2013 16:53	YT

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 29-May-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	TRIP BLANK
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	5/24/2013
<b>Lab ID:</b>	1305M32-002	<b>Matrix:</b>	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>							<b>(SW5030B)</b>	
1,1,1-Trichloroethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
1,1,2-Trichloroethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
1,1-Dichloroethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
1,1-Dichloroethene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
1,2-Dibromoethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
1,2-Dichlorobenzene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
1,2-Dichloroethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
1,2-Dichloropropane	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
1,3-Dichlorobenzene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
1,4-Dichlorobenzene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
2-Butanone	BRL	50		ug/L	176695	1	05/28/2013 16:25	YT
2-Hexanone	BRL	10		ug/L	176695	1	05/28/2013 16:25	YT
4-Methyl-2-pentanone	BRL	10		ug/L	176695	1	05/28/2013 16:25	YT
Acetone	BRL	50		ug/L	176695	1	05/28/2013 16:25	YT
Benzene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Bromodichloromethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Bromoform	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Bromomethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Carbon disulfide	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Carbon tetrachloride	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Chlorobenzene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Chloroethane	BRL	10		ug/L	176695	1	05/28/2013 16:25	YT
Chloroform	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Chloromethane	BRL	10		ug/L	176695	1	05/28/2013 16:25	YT
cis-1,2-Dichloroethene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Cyclohexane	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Dibromochloromethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Dichlorodifluoromethane	BRL	10		ug/L	176695	1	05/28/2013 16:25	YT
Ethylbenzene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Freon-113	BRL	10		ug/L	176695	1	05/28/2013 16:25	YT
Isopropylbenzene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
m,p-Xylene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Methyl acetate	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Methyl tert-butyl ether	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Methylcyclohexane	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Methylene chloride	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
o-Xylene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT

**Qualifiers:** \* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

&gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

&lt; Less than Result value

J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc**
**Date:** 29-May-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	TRIP BLANK
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	5/24/2013
<b>Lab ID:</b>	1305M32-002	<b>Matrix:</b>	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>TCL VOLATILE ORGANICS SW8260B</b>								
							<b>(SW5030B)</b>	
Styrene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Tetrachloroethene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Toluene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Trichloroethene	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Trichlorofluoromethane	BRL	5.0		ug/L	176695	1	05/28/2013 16:25	YT
Vinyl chloride	BRL	2.0		ug/L	176695	1	05/28/2013 16:25	YT
Surr: 4-Bromofluorobenzene	92.7	64.6-123	%REC		176695	1	05/28/2013 16:25	YT
Surr: Dibromofluoromethane	95	76.6-133	%REC		176695	1	05/28/2013 16:25	YT
Surr: Toluene-d8	96.5	77.8-120	%REC		176695	1	05/28/2013 16:25	YT

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

# Analytical Environmental Services, Inc.

## Sample/Cooler Receipt Checklist

Client CDM Smith

Work Order Number 1305M32

Checklist completed by T. Weller Date 5/25/13

Signature

Carrier name: FedEx  UPS  Courier  Client  US Mail  Other \_\_\_\_\_

Shipping container/cooler in good condition? Yes  No  Not Present

Custody seals intact on shipping container/cooler? Yes  No  Not Present

Custody seals intact on sample bottles? Yes  No  Not Present

Container/Temp Blank temperature in compliance? (4°C±2)\* Yes  No

Cooler #1 3.3 Cooler #2 \_\_\_\_\_ Cooler #3 \_\_\_\_\_ Cooler #4 \_\_\_\_\_ Cooler#5 \_\_\_\_\_ Cooler #6 \_\_\_\_\_

Chain of custody present? Yes  No

Chain of custody signed when relinquished and received? Yes  No

Chain of custody agrees with sample labels? Yes  No

Samples in proper container/bottle? Yes  No

Sample containers intact? Yes  No

Sufficient sample volume for indicated test? Yes  No

All samples received within holding time? Yes  No

Was TAT marked on the COC? Yes  No

Proceed with Standard TAT as per project history? Yes  No  Not Applicable

Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No

Water - pH acceptable upon receipt? Yes  No  Not Applicable

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Sample Condition: Good  Other(Explain) \_\_\_\_\_

(For diffusive samples or AIHA lead) Is a known blank included? Yes  No

See Case Narrative for resolution of the Non-Conformance.

\* Samples do not have to comply with the given range for certain parameters.

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1305M32

**ANALYTICAL QC SUMMARY REPORT****BatchID: 176695**

Sample ID: MB-176695	Client ID: TCL VOLATILE ORGANICS SW8260B	Units: ug/L	Prep Date: 05/28/2013	Run No: 244839							
SampleType: MBLK		BatchID: 176695	Analysis Date: 05/28/2013	Seq No: 5127510							
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	0
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	0
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	0
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	0
Acetone	BRL	50	0	0	0	0	0	0	0	0	0
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	0
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	0
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	0
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	0
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	0
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	0

Qualifiers: &gt; Greater than Result value

&lt; Less than Result value

B Analyte detected in the associated method blank

BRL Below reporting limit

E Estimated (value above quantitation range)

H Holding times for preparation or analysis exceeded

J Estimated value detected below Reporting Limit

N Analyte not NELAC certified

R RPD outside limits due to matrix

Rpt Lim Reporting Limit

S Spike Recovery outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1305M32

**ANALYTICAL QC SUMMARY REPORT****BatchID: 176695**

Sample ID: MB-176695	Client ID:	Units: ug/L			Prep Date:	05/28/2013	Run No: 244839				
SampleType: MBLK	TestCode: TCL VOLATILE ORGANICS SW8260B	BatchID: 176695			Analysis Date:	05/28/2013	Seq No: 5127510				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Freon-113	BRL	10	0	0	0	0	0	0	0	0	
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	45.91	0	50.00	0	91.8	64.6	123	0	0	0	
Surr: Dibromofluoromethane	47.46	0	50.00	0	94.9	76.6	133	0	0	0	
Surr: Toluene-d8	48.35	0	50.00	0	96.7	77.8	120	0	0	0	

**Qualifiers:** > Greater than Result value  
 BRL Below reporting limit  
 J Estimated value detected below Reporting Limit  
 Rpt Lim Reporting Limit

< Less than Result value  
 E Estimated (value above quantitation range)  
 N Analyte not NELAC certified  
 S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank  
 H Holding times for preparation or analysis exceeded  
 R RPD outside limits due to matrix

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1305M32

**ANALYTICAL QC SUMMARY REPORT****BatchID: 176695**

Sample ID: <b>LCS-176695</b>	Client ID:				Units: <b>ug/L</b>	Prep Date:	<b>05/28/2013</b>	Run No: <b>244839</b>			
SampleType: <b>LCS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>176695</b>	Analysis Date:	<b>05/28/2013</b>	Seq No: <b>5127508</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	48.38	5.0	50.00	0	96.8	61.1	142	0	0	0
Benzene	48.75	5.0	50.00	0	97.5	73.5	130	0	0	0
Chlorobenzene	49.84	5.0	50.00	0	99.7	72.4	123	0	0	0
Toluene	51.09	5.0	50.00	0	102	73.6	130	0	0	0
Trichloroethene	48.60	5.0	50.00	0	97.2	70	135	0	0	0
Surr: 4-Bromofluorobenzene	51.32	0	50.00	0	103	64.6	123	0	0	0
Surr: Dibromofluoromethane	49.48	0	50.00	0	99.0	76.6	133	0	0	0
Surr: Toluene-d8	48.47	0	50.00	0	96.9	77.8	120	0	0	0

Sample ID: <b>1305M32-001AMS</b>	Client ID: <b>MW-55D</b>				Units: <b>ug/L</b>	Prep Date:	<b>05/28/2013</b>	Run No: <b>244839</b>			
SampleType: <b>MS</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>176695</b>	Analysis Date:	<b>05/28/2013</b>	Seq No: <b>5127758</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	53.30	5.0	50.00	0	107	60	168	0	0	0
Benzene	56.90	5.0	50.00	0	114	66.6	148	0	0	0
Chlorobenzene	55.10	5.0	50.00	0	110	71.9	135	0	0	0
Toluene	59.82	5.0	50.00	0	120	68	149	0	0	0
Trichloroethene	59.03	5.0	50.00	1.780	114	71.1	154	0	0	0
Surr: 4-Bromofluorobenzene	52.39	0	50.00	0	105	64.6	123	0	0	0
Surr: Dibromofluoromethane	45.42	0	50.00	0	90.8	76.6	133	0	0	0
Surr: Toluene-d8	47.21	0	50.00	0	94.4	77.8	120	0	0	0

Sample ID: <b>1305M32-001AMSD</b>	Client ID: <b>MW-55D</b>				Units: <b>ug/L</b>	Prep Date:	<b>05/28/2013</b>	Run No: <b>244839</b>			
SampleType: <b>MSD</b>	TestCode: <b>TCL VOLATILE ORGANICS SW8260B</b>				BatchID: <b>176695</b>	Analysis Date:	<b>05/28/2013</b>	Seq No: <b>5127759</b>			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

1,1-Dichloroethene	52.40	5.0	50.00	0	105	60	168	53.30	1.70	18.6
Benzene	56.23	5.0	50.00	0	112	66.6	148	56.90	1.18	20

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL		Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J		Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim		Reporting Limit	S	Spike Recovery outside limits due to matrix		

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1305M32

**ANALYTICAL QC SUMMARY REPORT****BatchID: 176695**

Sample ID: 1305M32-001AMSD	Client ID: MW-55D				Units: ug/L	Prep Date: 05/28/2013	Run No: 244839				
SampleType: MSD	TestCode: TCL VOLATILE ORGANICS SW8260B				BatchID: 176695	Analysis Date: 05/28/2013	Seq No: 5127759				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	51.57	5.0	50.00	0	103	71.9	135	55.10	6.62	20	
Toluene	57.11	5.0	50.00	0	114	68	149	59.82	4.64	20	
Trichloroethene	56.81	5.0	50.00	1.780	110	71.1	154	59.03	3.83	20	
Surr: 4-Bromofluorobenzene	49.88	0	50.00	0	99.8	64.6	123	52.39	0	0	
Surr: Dibromofluoromethane	48.40	0	50.00	0	96.8	76.6	133	45.42	0	0	
Surr: Toluene-d8	47.85	0	50.00	0	95.7	77.8	120	47.21	0	0	

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

## Appendix C

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### Soil Laboratory Report



## ANALYTICAL ENVIRONMENTAL SERVICES, INC.

May 31, 2013

Andrew Romanek  
CDM Smith Inc.  
3715 Northside Parkway, Northcreek 30  
Atlanta            GA    30327

TEL: (404) 720-1400  
FAX: (404) 467-4130

RE: Cedartown

Dear Andrew Romanek:

Order No: 1305M03

Analytical Environmental Services, Inc. received 11 samples on 5/23/2013 5:51:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/12-06/30/13.
- AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

A handwritten signature in black ink that reads "Larissa Elsley".

Larissa Elsley  
Project Manager



## CHAIN OF CUSTODY

Work Order: 1305M03

ANALYTICAL ENVIRONMENTAL SERVICES, INC  
3785 Presidential Parkway, Atlanta GA 30340-3704  
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

COMPANY: <b>CDA Smith</b>		ADDRESS: <b>3715 Northside Dray NW Bldg 300/ Ste 400 Atlanta, GA 30327</b>		ANALYSIS REQUESTED				Visit our website <a href="http://www.aesatlanta.com">www.aesatlanta.com</a> to check on the status of your results, place bottle orders, etc.	
PHONE: <b>404-720-1400</b>	FAX:	SAMPLER: <b>Jeff Weeber</b>		SIGNATURE: <b><i>Jeff Weeber</i></b>				No. # of Containers	
RELINQUISHED BY		DATE/TIME RECEIVED BY		DATE/TIME		PROJECT INFORMATION		RECEIPT	
1: <b><i>Jeff Weeber</i></b> 5/23/13 16:10		1: <b>K.U.C 5-23-13 4:30 pm</b>		PROJECT NAME: <b>Cedartown</b>		PROJECT #: <b>5/23/13 16:51</b>		Total # of Containers	
2: <b>N.C 5-23-13 5:51 P</b>		2: <b><i>M.Watson</i></b>		SITE ADDRESS:				Turnaround Time Request	
3: <b></b>		3: <b></b>		SEND REPORT TO:		<b>Andrew Romanek</b>		Standard 5 Business Days	
SPECIAL INSTRUCTIONS/COMMENTS:		SHIPMENT METHOD		INVOICE TO: (IF DIFFERENT FROM ABOVE)				2 Business Day Rush	
OUT / / IN / /		VIA: CLIENT FedEx UPS MAIL COURIER						Next Business Day Rush	
GREATHOUND OTHER								Same Day Rush (auth req.)	
								Other <b>None</b>	
								STATE PROGRAM (if any): <b>None</b>	
								E-mail? Y / N: <b>Y</b>	
								Fax? Y / N: <b>N</b>	
								PO#:	
SAMPLES RECEIVED AFTER 3 PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY, IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.									
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.									
MATRIX CODES: A = Air G = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/I+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None White Copy - Original; Yellow Copy - Client									

**Analytical Environmental Services, Inc****Date:** 31-May-13

<b>Client:</b> CDM Smith Inc.	<b>Client Sample ID:</b> SB-13-1							
<b>Project Name:</b> Cedartown	<b>Collection Date:</b> 5/22/2013 9:55:00 AM							
<b>Lab ID:</b> 1305M03-001	<b>Matrix:</b> Soil							
Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>METALS, TOTAL SW6010C (SW3050B)</b>								
Chromium	157	2.80		mg/Kg-dry	176745	1	05/31/2013 09:47	MR
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	15.5	0		wt%	R245020	1	05/30/2013 08:30	DM

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc****Date:** 31-May-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	SB-13-6
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	5/22/2013 10:25:00 AM
<b>Lab ID:</b>	1305M03-002	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>METALS, TOTAL SW6010C (SW3050B)</b>								
Chromium								
	64.1	2.75		mg/Kg-dry	176745	1	05/31/2013 09:51	MR
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	14.5	0		wt%	R245020	1	05/30/2013 08:30	DM

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc****Date:** 31-May-13

<b>Client:</b> CDM Smith Inc.	<b>Client Sample ID:</b> SB-11-1
<b>Project Name:</b> Cedartown	<b>Collection Date:</b> 5/22/2013 10:40:00 AM
<b>Lab ID:</b> 1305M03-003	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>METALS, TOTAL SW6010C (SW3050B)</b>								
Chromium								
	135	2.74		mg/Kg-dry	176745	1	05/31/2013 09:55	MR
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture								
	9.52	0		wt%	R245020	1	05/30/2013 08:30	DM

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc****Date:** 31-May-13

<b>Client:</b> CDM Smith Inc.	<b>Client Sample ID:</b> SB-11-6
<b>Project Name:</b> Cedartown	<b>Collection Date:</b> 5/22/2013 10:50:00 AM
<b>Lab ID:</b> 1305M03-004	<b>Matrix:</b> Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>METALS, TOTAL SW6010C (SW3050B)</b>								
Cadmium								
	BRL	2.73		mg/Kg-dry	176745	1	05/31/2013 09:59	MR
Lead	31.6	5.47		mg/Kg-dry	176745	1	05/31/2013 09:59	MR
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	13.8	0		wt%	R245020	1	05/30/2013 08:30	DM

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc****Date:** 31-May-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	SB-12-1
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	5/22/2013 11:35:00 AM
<b>Lab ID:</b>	1305M03-005	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>METALS, TOTAL SW6010C (SW3050B)</b>								
Chromium								
	73.3	2.71		mg/Kg-dry	176745	1	05/31/2013 10:03	MR
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	14.4	0		wt%	R245020	1	05/30/2013 08:30	DM

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc****Date:** 31-May-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	SB-14-1
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	5/22/2013 11:55:00 AM
<b>Lab ID:</b>	1305M03-006	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>METALS, TOTAL SW6010C (SW3050B)</b>								
Cadmium								
	BRL	2.67		mg/Kg-dry	176745	1	05/31/2013 10:09	MR
Chromium	62.7	2.67		mg/Kg-dry	176745	1	05/31/2013 10:09	MR
Lead	66.8	5.34		mg/Kg-dry	176745	1	05/31/2013 10:09	MR
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	11.9	0		wt%	R245020	1	05/30/2013 08:30	DM

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc****Date:** 31-May-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	SB-15-1
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	5/22/2013 12:10:00 PM
<b>Lab ID:</b>	1305M03-007	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>METALS, TOTAL SW6010C (SW3050B)</b>								
Cadmium								
	BRL	2.64		mg/Kg-dry	176745	1	05/31/2013 10:20	MR
Chromium	125	2.64		mg/Kg-dry	176745	1	05/31/2013 10:20	MR
Lead	70.3	5.28		mg/Kg-dry	176745	1	05/31/2013 10:20	MR
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	11.3	0		wt%	R245020	1	05/30/2013 08:30	DM

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc****Date:** 31-May-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	SB-16-1
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	5/22/2013 1:30:00 PM
<b>Lab ID:</b>	1305M03-008	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>METALS, TOTAL SW6010C (SW3050B)</b>								
Cadmium								
	BRL	2.90		mg/Kg-dry	176745	1	05/31/2013 10:24	MR
Chromium	31.7	2.90		mg/Kg-dry	176745	1	05/31/2013 10:24	MR
Lead	34.8	5.81		mg/Kg-dry	176745	1	05/31/2013 10:24	MR
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	21.1	0		wt%	R245020	1	05/30/2013 08:30	DM

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc****Date:** 31-May-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	SB-10-1
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	5/22/2013 1:45:00 PM
<b>Lab ID:</b>	1305M03-009	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>METALS, TOTAL SW6010C (SW3050B)</b>								
Chromium								
	48.3	3.05		mg/Kg-dry	176745	1	05/31/2013 10:28	MR
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	21.2	0		wt%	R245020	1	05/30/2013 08:30	DM

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc****Date:** 31-May-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	SB-17-1
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	5/22/2013 2:00:00 PM
<b>Lab ID:</b>	1305M03-010	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>METALS, TOTAL SW6010C (SW3050B)</b>								
Cadmium								
	BRL	2.77		mg/Kg-dry	176745	1	05/31/2013 10:32	MR
Chromium	41.3	2.77		mg/Kg-dry	176745	1	05/31/2013 10:32	MR
Lead	44.5	5.54		mg/Kg-dry	176745	1	05/31/2013 10:32	MR
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	14.4	0		wt%	R245020	1	05/30/2013 08:30	DM

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc****Date:** 31-May-13

<b>Client:</b>	CDM Smith Inc.	<b>Client Sample ID:</b>	SB-18-1
<b>Project Name:</b>	Cedartown	<b>Collection Date:</b>	5/22/2013 2:20:00 PM
<b>Lab ID:</b>	1305M03-011	<b>Matrix:</b>	Soil

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
<b>METALS, TOTAL SW6010C (SW3050B)</b>								
Cadmium								
	BRL	2.87		mg/Kg-dry	176745	1	05/30/2013 12:23	MR
Chromium	63.4	2.87		mg/Kg-dry	176745	1	05/30/2013 12:23	MR
Lead	47.9	5.74		mg/Kg-dry	176745	1	05/30/2013 12:23	MR
<b>PERCENT MOISTURE D2216</b>								
Percent Moisture	17.7	0		wt%	R245020	1	05/30/2013 08:30	DM

**Qualifiers:**

- \* Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value

- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

**Analytical Environmental Services, Inc.****Sample/Cooler Receipt Checklist**Client CDM SmithWork Order Number 1305M03Checklist completed by M. J. Lovell Date 5/24/13

Signature

Date

Carrier name: FedEx  UPS  Courier  Client  US Mail  Other \_\_\_\_\_Shipping container/cooler in good condition? Yes  No  Not Present Custody seals intact on shipping container/cooler? Yes  No  Not Present Custody seals intact on sample bottles? Yes  No  Not Present Container/Temp Blank temperature in compliance? (4°C±2)\* Yes  No Cooler #1 4.0 Cooler #2 \_\_\_\_\_ Cooler #3 \_\_\_\_\_ Cooler #4 \_\_\_\_\_ Cooler #5 \_\_\_\_\_ Cooler #6 \_\_\_\_\_Chain of custody present? Yes  No Chain of custody signed when relinquished and received? Yes  No Chain of custody agrees with sample labels? Yes  No Samples in proper container/bottle? Yes  No Sample containers intact? Yes  No Sufficient sample volume for indicated test? Yes  No All samples received within holding time? Yes  No Was TAT marked on the COC? Yes  No Proceed with Standard TAT as per project history? Yes  No  Not Applicable Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No Water - pH acceptable upon receipt? Yes  No  Not Applicable 

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Sample Condition: Good  Other(Explain) \_\_\_\_\_(For diffusive samples or AIHA lead) Is a known blank included? Yes  No **See Case Narrative for resolution of the Non-Conformance.**

\* Samples do not have to comply with the given range for certain parameters.

**Client:** CDM Smith Inc.  
**Project Name:** Cedartown  
**Workorder:** 1305M03

**ANALYTICAL QC SUMMARY REPORT****BatchID: 176745**

Sample ID: <b>MB-176745</b>	Client ID:	Units: <b>mg/Kg</b>				Prep Date:	<b>05/29/2013</b>	Run No:	<b>244983</b>		
SampleType: <b>MLBK</b>	TestCode: <b>METALS, TOTAL</b>	BatchID: <b>176745</b>				Analysis Date:	<b>05/30/2013</b>	Seq No:	<b>5130150</b>		
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cadmium	BRL	2.50	0	0	0	0	0	0	0	0	
Chromium	BRL	2.50	0	0	0	0	0	0	0	0	
Lead	BRL	5.00	0	0	0	0	0	0	0	0	
Sample ID: <b>LCS-176745</b>	Client ID:	Units: <b>mg/Kg</b>				Prep Date:	<b>05/29/2013</b>	Run No:	<b>244983</b>		
SampleType: <b>LCS</b>	TestCode: <b>METALS, TOTAL</b>	BatchID: <b>176745</b>				Analysis Date:	<b>05/30/2013</b>	Seq No:	<b>5130149</b>		
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cadmium	49.32	2.50	50.00	0	98.6	80	120	0	0	0	
Chromium	51.81	2.50	50.00	0.09700	103	80	120	0	0	0	
Lead	49.26	5.00	50.00	0	98.5	80	120	0	0	0	
Sample ID: <b>1305M03-011AMS</b>	Client ID: <b>SB-18-1</b>	Units: <b>mg/Kg-dry</b>				Prep Date:	<b>05/29/2013</b>	Run No:	<b>244983</b>		
SampleType: <b>MS</b>	TestCode: <b>METALS, TOTAL</b>	BatchID: <b>176745</b>				Analysis Date:	<b>05/30/2013</b>	Seq No:	<b>5130153</b>		
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cadmium	51.95	2.89	57.72	0.2273	89.6	75	125	0	0	0	
Chromium	105.4	2.89	57.72	63.41	72.8	75	125	0	0	0	S
Lead	112.5	5.77	57.72	47.90	112	75	125	0	0	0	
Sample ID: <b>1305M03-011AMSD</b>	Client ID: <b>SB-18-1</b>	Units: <b>mg/Kg-dry</b>				Prep Date:	<b>05/29/2013</b>	Run No:	<b>244983</b>		
SampleType: <b>MSD</b>	TestCode: <b>METALS, TOTAL</b>	BatchID: <b>176745</b>				Analysis Date:	<b>05/30/2013</b>	Seq No:	<b>5130154</b>		
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Cadmium	52.11	2.89	57.77	0.2273	89.8	75	125	51.95	0.307	20	
Chromium	99.57	2.89	57.77	63.41	62.6	75	125	105.4	5.71	20	S
Lead	88.99	5.78	57.77	47.90	71.1	75	125	112.5	23.3	20	SR

<b>Qualifiers:</b>	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

## Appendix D

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### Soil Gas Laboratory Report

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Burlington

30 Community Drive

Suite 11

South Burlington, VT 05403

Tel: (802)660-1990

TestAmerica Job ID: 200-16520-1

Client Project/Site: Cedartown

For:

CDM Smith, Inc.

3715 Northside Parkway, NW

Building 300, Suite 400

Atlanta, Georgia 30327

Attn: Andrew P Romanek, P.E.

---

Authorized for release by:

5/29/2013 7:08:53 AM

Don Dawicki, Customer Service Manager

[don.dawicki@testamericainc.com](mailto:don.dawicki@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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## Definitions/Glossary

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

### Qualifiers

#### Air - GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.

### Glossary

#### Abbreviation These commonly used abbreviations may or may not be present in this report.

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Case Narrative

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

**Job ID: 200-16520-1**

**Laboratory: TestAmerica Burlington**

Narrative

### CASE NARRATIVE

**Client: CDM Smith, Inc.**

**Project: Cedartown**

**Report Number: 200-16520-1**

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. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

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 05/17/2013; the samples arrived in good condition.

#### **VOLATILE ORGANIC COMPOUNDS**

Samples SG-1, SG-2 and SG-3 were analyzed for Volatile Organic Compounds in accordance with EPA Method TO-15. The samples were analyzed on 05/22/2013.

Methylene Chloride and n-Hexane were detected in method blank MB 200-55927/4 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

The analysis for sample SG-3 yielded concentrations of Acetone and Butane that exceeded the range of calibrated instrument response. With the client's permission, an additional dilution analysis was not performed, in order to provide for lower reporting limits for the remaining target analytes. The results for these compounds have been qualified with the "E" qualifier.

No difficulties were encountered during the VOC analyses.

All quality control parameters were within the acceptance limits.

# Detection Summary

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

## Client Sample ID: SG-1

## Lab Sample ID: 200-16520-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
n-Butane	7.3		5.0	0.22	ppb v/v	10		TO-15	Total/NA
Acetone	19	J	50	4.0	ppb v/v	10		TO-15	Total/NA
Isopropyl alcohol	4.2	J	50	0.76	ppb v/v	10		TO-15	Total/NA
Carbon disulfide	0.79	J	5.0	0.20	ppb v/v	10		TO-15	Total/NA
Methylene Chloride	0.86	J B	5.0	0.23	ppb v/v	10		TO-15	Total/NA
n-Hexane	1.8	J B	2.0	0.20	ppb v/v	10		TO-15	Total/NA
Methyl Ethyl Ketone	5.5		5.0	0.25	ppb v/v	10		TO-15	Total/NA
cis-1,2-Dichloroethene	1.8	J	2.0	0.84	ppb v/v	10		TO-15	Total/NA
1,2-Dichloroethene, Total	1.8	J	2.0	0.23	ppb v/v	10		TO-15	Total/NA
Benzene	0.88	J	2.0	0.18	ppb v/v	10		TO-15	Total/NA
n-Heptane	1.3	J	2.0	0.17	ppb v/v	10		TO-15	Total/NA
methyl isobutyl ketone	0.65	J	5.0	0.34	ppb v/v	10		TO-15	Total/NA
Toluene	6.8		2.0	0.14	ppb v/v	10		TO-15	Total/NA
Tetrachloroethene	0.27	J	2.0	0.15	ppb v/v	10		TO-15	Total/NA
Ethylbenzene	0.60	J	2.0	0.15	ppb v/v	10		TO-15	Total/NA
m,p-Xylene	1.8	J	5.0	0.22	ppb v/v	10		TO-15	Total/NA
Xylene, o-	0.62	J	2.0	0.16	ppb v/v	10		TO-15	Total/NA
Xylene (total)	2.4		2.0	0.16	ppb v/v	10		TO-15	Total/NA
1,2,4-Trimethylbenzene	0.72	J	2.0	0.21	ppb v/v	10		TO-15	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
n-Butane	17		12	0.52	ug/m <sup>3</sup>	10		TO-15	Total/NA
Acetone	46	J	120	9.5	ug/m <sup>3</sup>	10		TO-15	Total/NA
Isopropyl alcohol	10	J	120	1.9	ug/m <sup>3</sup>	10		TO-15	Total/NA
Carbon disulfide	2.5	J	16	0.62	ug/m <sup>3</sup>	10		TO-15	Total/NA
Methylene Chloride	3.0	J B	17	0.80	ug/m <sup>3</sup>	10		TO-15	Total/NA
n-Hexane	6.4	J B	7.0	0.70	ug/m <sup>3</sup>	10		TO-15	Total/NA
Methyl Ethyl Ketone	16		15	0.74	ug/m <sup>3</sup>	10		TO-15	Total/NA
cis-1,2-Dichloroethene	7.2	J	7.9	3.3	ug/m <sup>3</sup>	10		TO-15	Total/NA
1,2-Dichloroethene, Total	7.2	J	7.9	0.91	ug/m <sup>3</sup>	10		TO-15	Total/NA
Benzene	2.8	J	6.4	0.58	ug/m <sup>3</sup>	10		TO-15	Total/NA
n-Heptane	5.3	J	8.2	0.70	ug/m <sup>3</sup>	10		TO-15	Total/NA
methyl isobutyl ketone	2.6	J	20	1.4	ug/m <sup>3</sup>	10		TO-15	Total/NA
Toluene	26		7.5	0.53	ug/m <sup>3</sup>	10		TO-15	Total/NA
Tetrachloroethene	1.8	J	14	1.0	ug/m <sup>3</sup>	10		TO-15	Total/NA
Ethylbenzene	2.6	J	8.7	0.65	ug/m <sup>3</sup>	10		TO-15	Total/NA
m,p-Xylene	7.8	J	22	0.96	ug/m <sup>3</sup>	10		TO-15	Total/NA
Xylene, o-	2.7	J	8.7	0.69	ug/m <sup>3</sup>	10		TO-15	Total/NA
Xylene (total)	10		8.7	0.69	ug/m <sup>3</sup>	10		TO-15	Total/NA
1,2,4-Trimethylbenzene	3.5	J	9.8	1.0	ug/m <sup>3</sup>	10		TO-15	Total/NA

## Client Sample ID: SG-2

## Lab Sample ID: 200-16520-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
n-Butane	4.6	J	5.0	0.22	ppb v/v	10		TO-15	Total/NA
Acetone	17	J	50	4.0	ppb v/v	10		TO-15	Total/NA
Carbon disulfide	8.1		5.0	0.20	ppb v/v	10		TO-15	Total/NA
Methylene Chloride	0.77	J B	5.0	0.23	ppb v/v	10		TO-15	Total/NA
n-Hexane	1.1	J B	2.0	0.20	ppb v/v	10		TO-15	Total/NA
Methyl Ethyl Ketone	4.2	J	5.0	0.25	ppb v/v	10		TO-15	Total/NA
cis-1,2-Dichloroethene	1.5	J	2.0	0.84	ppb v/v	10		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Burlington

# Detection Summary

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

## Client Sample ID: SG-2 (Continued)

## Lab Sample ID: 200-16520-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, Total	1.5	J	2.0	0.23	ppb v/v	10		TO-15	Total/NA
1,1,1-Trichloroethane	1.4	J	2.0	0.20	ppb v/v	10		TO-15	Total/NA
Benzene	0.98	J	2.0	0.18	ppb v/v	10		TO-15	Total/NA
n-Heptane	0.89	J	2.0	0.17	ppb v/v	10		TO-15	Total/NA
Trichloroethene	0.65	J	2.0	0.092	ppb v/v	10		TO-15	Total/NA
methyl isobutyl ketone	4.2	J	5.0	0.34	ppb v/v	10		TO-15	Total/NA
Toluene	8.8		2.0	0.14	ppb v/v	10		TO-15	Total/NA
Tetrachloroethene	0.25	J	2.0	0.15	ppb v/v	10		TO-15	Total/NA
Ethylbenzene	1.2	J	2.0	0.15	ppb v/v	10		TO-15	Total/NA
m,p-Xylene	4.6	J	5.0	0.22	ppb v/v	10		TO-15	Total/NA
Xylene, o-	1.7	J	2.0	0.16	ppb v/v	10		TO-15	Total/NA
Xylene (total)	6.3		2.0	0.16	ppb v/v	10		TO-15	Total/NA
1,3,5-Trimethylbenzene	0.56	J	2.0	0.19	ppb v/v	10		TO-15	Total/NA
1,2,4-Trimethylbenzene	1.8	J	2.0	0.21	ppb v/v	10		TO-15	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
n-Butane	11	J	12	0.52	ug/m <sup>3</sup>	10		TO-15	Total/NA
Acetone	41	J	120	9.5	ug/m <sup>3</sup>	10		TO-15	Total/NA
Carbon disulfide	25		16	0.62	ug/m <sup>3</sup>	10		TO-15	Total/NA
Methylene Chloride	2.7	J B	17	0.80	ug/m <sup>3</sup>	10		TO-15	Total/NA
n-Hexane	3.9	J B	7.0	0.70	ug/m <sup>3</sup>	10		TO-15	Total/NA
Methyl Ethyl Ketone	12	J	15	0.74	ug/m <sup>3</sup>	10		TO-15	Total/NA
cis-1,2-Dichloroethene	5.9	J	7.9	3.3	ug/m <sup>3</sup>	10		TO-15	Total/NA
1,2-Dichloroethene, Total	5.9	J	7.9	0.91	ug/m <sup>3</sup>	10		TO-15	Total/NA
1,1,1-Trichloroethane	7.8	J	11	1.1	ug/m <sup>3</sup>	10		TO-15	Total/NA
Benzene	3.1	J	6.4	0.58	ug/m <sup>3</sup>	10		TO-15	Total/NA
n-Heptane	3.7	J	8.2	0.70	ug/m <sup>3</sup>	10		TO-15	Total/NA
Trichloroethene	3.5	J	11	0.49	ug/m <sup>3</sup>	10		TO-15	Total/NA
methyl isobutyl ketone	17	J	20	1.4	ug/m <sup>3</sup>	10		TO-15	Total/NA
Toluene	33		7.5	0.53	ug/m <sup>3</sup>	10		TO-15	Total/NA
Tetrachloroethene	1.7	J	14	1.0	ug/m <sup>3</sup>	10		TO-15	Total/NA
Ethylbenzene	5.1	J	8.7	0.65	ug/m <sup>3</sup>	10		TO-15	Total/NA
m,p-Xylene	20	J	22	0.96	ug/m <sup>3</sup>	10		TO-15	Total/NA
Xylene, o-	7.2	J	8.7	0.69	ug/m <sup>3</sup>	10		TO-15	Total/NA
Xylene (total)	27		8.7	0.69	ug/m <sup>3</sup>	10		TO-15	Total/NA
1,3,5-Trimethylbenzene	2.7	J	9.8	0.93	ug/m <sup>3</sup>	10		TO-15	Total/NA
1,2,4-Trimethylbenzene	8.7	J	9.8	1.0	ug/m <sup>3</sup>	10		TO-15	Total/NA

## Client Sample ID: SG-3

## Lab Sample ID: 200-16520-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
n-Butane	1000	E	5.0	0.22	ppb v/v	10		TO-15	Total/NA
Acetone	410	E	50	4.0	ppb v/v	10		TO-15	Total/NA
Isopropyl alcohol	26	J	50	0.76	ppb v/v	10		TO-15	Total/NA
Carbon disulfide	1.2	J	5.0	0.20	ppb v/v	10		TO-15	Total/NA
Methylene Chloride	1.1	J B	5.0	0.23	ppb v/v	10		TO-15	Total/NA
tert-Butyl alcohol	21	J	50	0.41	ppb v/v	10		TO-15	Total/NA
n-Hexane	78	B	2.0	0.20	ppb v/v	10		TO-15	Total/NA
Methyl Ethyl Ketone	17		5.0	0.25	ppb v/v	10		TO-15	Total/NA
cis-1,2-Dichloroethene	1.3	J	2.0	0.84	ppb v/v	10		TO-15	Total/NA
1,2-Dichloroethene, Total	1.3	J	2.0	0.23	ppb v/v	10		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Burlington

# Detection Summary

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

## Client Sample ID: SG-3 (Continued)

## Lab Sample ID: 200-16520-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.59	J	2.0	0.20	ppb v/v	10		TO-15	Total/NA
Cyclohexane	21		2.0	0.19	ppb v/v	10		TO-15	Total/NA
Benzene	77		2.0	0.18	ppb v/v	10		TO-15	Total/NA
n-Heptane	26		2.0	0.17	ppb v/v	10		TO-15	Total/NA
methyl isobutyl ketone	4.9	J	5.0	0.34	ppb v/v	10		TO-15	Total/NA
Toluene	12		2.0	0.14	ppb v/v	10		TO-15	Total/NA
Tetrachloroethene	0.23	J	2.0	0.15	ppb v/v	10		TO-15	Total/NA
Methyl Butyl Ketone (2-Hexanone)	2.2	J	5.0	0.40	ppb v/v	10		TO-15	Total/NA
Ethylbenzene	0.88	J	2.0	0.15	ppb v/v	10		TO-15	Total/NA
m,p-Xylene	3.6	J	5.0	0.22	ppb v/v	10		TO-15	Total/NA
Xylene, o-	1.1	J	2.0	0.16	ppb v/v	10		TO-15	Total/NA
Xylene (total)	4.7		2.0	0.16	ppb v/v	10		TO-15	Total/NA
1,3,5-Trimethylbenzene	0.51	J	2.0	0.19	ppb v/v	10		TO-15	Total/NA
1,2,4-Trimethylbenzene	1.5	J	2.0	0.21	ppb v/v	10		TO-15	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
n-Butane	2500	E	12	0.52	ug/m <sup>3</sup>	10		TO-15	Total/NA
Acetone	970	E	120	9.5	ug/m <sup>3</sup>	10		TO-15	Total/NA
Isopropyl alcohol	64	J	120	1.9	ug/m <sup>3</sup>	10		TO-15	Total/NA
Carbon disulfide	3.8	J	16	0.62	ug/m <sup>3</sup>	10		TO-15	Total/NA
Methylene Chloride	3.8	J B	17	0.80	ug/m <sup>3</sup>	10		TO-15	Total/NA
tert-Butyl alcohol	63	J	150	1.2	ug/m <sup>3</sup>	10		TO-15	Total/NA
n-Hexane	280	B	7.0	0.70	ug/m <sup>3</sup>	10		TO-15	Total/NA
Methyl Ethyl Ketone	49		15	0.74	ug/m <sup>3</sup>	10		TO-15	Total/NA
cis-1,2-Dichloroethene	5.1	J	7.9	3.3	ug/m <sup>3</sup>	10		TO-15	Total/NA
1,2-Dichloroethene, Total	5.1	J	7.9	0.91	ug/m <sup>3</sup>	10		TO-15	Total/NA
1,1,1-Trichloroethane	3.2	J	11	1.1	ug/m <sup>3</sup>	10		TO-15	Total/NA
Cyclohexane	73		6.9	0.65	ug/m <sup>3</sup>	10		TO-15	Total/NA
Benzene	250		6.4	0.58	ug/m <sup>3</sup>	10		TO-15	Total/NA
n-Heptane	110		8.2	0.70	ug/m <sup>3</sup>	10		TO-15	Total/NA
methyl isobutyl ketone	20	J	20	1.4	ug/m <sup>3</sup>	10		TO-15	Total/NA
Toluene	45		7.5	0.53	ug/m <sup>3</sup>	10		TO-15	Total/NA
Tetrachloroethene	1.5	J	14	1.0	ug/m <sup>3</sup>	10		TO-15	Total/NA
Methyl Butyl Ketone (2-Hexanone)	9.1	J	20	1.6	ug/m <sup>3</sup>	10		TO-15	Total/NA
Ethylbenzene	3.8	J	8.7	0.65	ug/m <sup>3</sup>	10		TO-15	Total/NA
m,p-Xylene	16	J	22	0.96	ug/m <sup>3</sup>	10		TO-15	Total/NA
Xylene, o-	4.9	J	8.7	0.69	ug/m <sup>3</sup>	10		TO-15	Total/NA
Xylene (total)	20		8.7	0.69	ug/m <sup>3</sup>	10		TO-15	Total/NA
1,3,5-Trimethylbenzene	2.5	J	9.8	0.93	ug/m <sup>3</sup>	10		TO-15	Total/NA
1,2,4-Trimethylbenzene	7.5	J	9.8	1.0	ug/m <sup>3</sup>	10		TO-15	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Burlington

# Client Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

## Client Sample ID: SG-1

Date Collected: 05/15/13 10:52

Date Received: 05/17/13 10:10

Sample Container: Summa Canister 1L

## Lab Sample ID: 200-16520-1

Matrix: Air

### Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	5.0	U	5.0	0.20	ppb v/v			05/22/13 15:31	10
Freon 22	5.0	U	5.0	0.23	ppb v/v			05/22/13 15:31	10
1,2-Dichlorotetrafluoroethane	2.0	U	2.0	0.20	ppb v/v			05/22/13 15:31	10
Chloromethane	5.0	U	5.0	0.34	ppb v/v			05/22/13 15:31	10
<b>n-Butane</b>	<b>7.3</b>		5.0	0.22	ppb v/v			05/22/13 15:31	10
Vinyl chloride	2.0	U	2.0	0.091	ppb v/v			05/22/13 15:31	10
1,3-Butadiene	2.0	U	2.0	0.25	ppb v/v			05/22/13 15:31	10
Bromomethane	2.0	U	2.0	0.27	ppb v/v			05/22/13 15:31	10
Chloroethane	5.0	U	5.0	0.33	ppb v/v			05/22/13 15:31	10
Bromoethene(Vinyl Bromide)	2.0	U	2.0	0.19	ppb v/v			05/22/13 15:31	10
Trichlorofluoromethane	2.0	U	2.0	0.21	ppb v/v			05/22/13 15:31	10
Freon TF	2.0	U	2.0	0.20	ppb v/v			05/22/13 15:31	10
1,1-Dichloroethene	2.0	U	2.0	0.86	ppb v/v			05/22/13 15:31	10
<b>Acetone</b>	<b>19 J</b>		50	4.0	ppb v/v			05/22/13 15:31	10
<b>Isopropyl alcohol</b>	<b>4.2 J</b>		50	0.76	ppb v/v			05/22/13 15:31	10
<b>Carbon disulfide</b>	<b>0.79 J</b>		5.0	0.20	ppb v/v			05/22/13 15:31	10
3-Chloropropene	5.0	U	5.0	0.47	ppb v/v			05/22/13 15:31	10
<b>Methylene Chloride</b>	<b>0.86 J B</b>		5.0	0.23	ppb v/v			05/22/13 15:31	10
tert-Butyl alcohol	50	U	50	0.41	ppb v/v			05/22/13 15:31	10
Methyl tert-butyl ether	2.0	U	2.0	0.15	ppb v/v			05/22/13 15:31	10
trans-1,2-Dichloroethene	2.0	U	2.0	0.23	ppb v/v			05/22/13 15:31	10
<b>n-Hexane</b>	<b>1.8 J B</b>		2.0	0.20	ppb v/v			05/22/13 15:31	10
1,1-Dichloroethane	2.0	U	2.0	0.23	ppb v/v			05/22/13 15:31	10
<b>Methyl Ethyl Ketone</b>	<b>5.5</b>		5.0	0.25	ppb v/v			05/22/13 15:31	10
<b>cis-1,2-Dichloroethene</b>	<b>1.8 J</b>		2.0	0.84	ppb v/v			05/22/13 15:31	10
<b>1,2-Dichloroethene, Total</b>	<b>1.8 J</b>		2.0	0.23	ppb v/v			05/22/13 15:31	10
Chloroform	2.0	U	2.0	0.24	ppb v/v			05/22/13 15:31	10
Tetrahydrofuran	50	U	50	0.29	ppb v/v			05/22/13 15:31	10
1,1,1-Trichloroethane	2.0	U	2.0	0.20	ppb v/v			05/22/13 15:31	10
Cyclohexane	2.0	U	2.0	0.19	ppb v/v			05/22/13 15:31	10
Carbon tetrachloride	2.0	U	2.0	0.13	ppb v/v			05/22/13 15:31	10
2,2,4-Trimethylpentane	2.0	U	2.0	0.15	ppb v/v			05/22/13 15:31	10
<b>Benzene</b>	<b>0.88 J</b>		2.0	0.18	ppb v/v			05/22/13 15:31	10
1,2-Dichloroethane	2.0	U	2.0	0.18	ppb v/v			05/22/13 15:31	10
<b>n-Heptane</b>	<b>1.3 J</b>		2.0	0.17	ppb v/v			05/22/13 15:31	10
Trichloroethene	2.0	U	2.0	0.092	ppb v/v			05/22/13 15:31	10
Methyl methacrylate	5.0	U	5.0	0.16	ppb v/v			05/22/13 15:31	10
1,2-Dichloropropane	2.0	U	2.0	0.23	ppb v/v			05/22/13 15:31	10
1,4-Dioxane	50	U	50	0.70	ppb v/v			05/22/13 15:31	10
Bromodichloromethane	2.0	U	2.0	0.12	ppb v/v			05/22/13 15:31	10
cis-1,3-Dichloropropene	2.0	U	2.0	0.13	ppb v/v			05/22/13 15:31	10
<b>methyl isobutyl ketone</b>	<b>0.65 J</b>		5.0	0.34	ppb v/v			05/22/13 15:31	10
<b>Toluene</b>	<b>6.8</b>		2.0	0.14	ppb v/v			05/22/13 15:31	10
trans-1,3-Dichloropropene	2.0	U	2.0	0.15	ppb v/v			05/22/13 15:31	10
1,1,2-Trichloroethane	2.0	U	2.0	0.16	ppb v/v			05/22/13 15:31	10
<b>Tetrachloroethene</b>	<b>0.27 J</b>		2.0	0.15	ppb v/v			05/22/13 15:31	10
Methyl Butyl Ketone (2-Hexanone)	5.0	U	5.0	0.40	ppb v/v			05/22/13 15:31	10
Dibromochloromethane	2.0	U	2.0	0.11	ppb v/v			05/22/13 15:31	10

TestAmerica Burlington

# Client Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

**Client Sample ID: SG-1**

**Lab Sample ID: 200-16520-1**

Date Collected: 05/15/13 10:52

Matrix: Air

Date Received: 05/17/13 10:10

Sample Container: Summa Canister 1L

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	2.0	U	2.0	0.14	ppb v/v			05/22/13 15:31	10
Chlorobenzene	2.0	U	2.0	0.13	ppb v/v			05/22/13 15:31	10
<b>Ethylbenzene</b>	<b>0.60</b>	<b>J</b>	2.0	0.15	ppb v/v			05/22/13 15:31	10
<b>m,p-Xylene</b>	<b>1.8</b>	<b>J</b>	5.0	0.22	ppb v/v			05/22/13 15:31	10
<b>Xylene, o-</b>	<b>0.62</b>	<b>J</b>	2.0	0.16	ppb v/v			05/22/13 15:31	10
<b>Xylene (total)</b>	<b>2.4</b>		2.0	0.16	ppb v/v			05/22/13 15:31	10
Styrene	2.0	U	2.0	0.11	ppb v/v			05/22/13 15:31	10
Bromoform	2.0	U	2.0	0.072	ppb v/v			05/22/13 15:31	10
Cumene	2.0	U	2.0	0.11	ppb v/v			05/22/13 15:31	10
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.11	ppb v/v			05/22/13 15:31	10
n-Propylbenzene	2.0	U	2.0	0.13	ppb v/v			05/22/13 15:31	10
4-Ethyltoluene	2.0	U	2.0	0.15	ppb v/v			05/22/13 15:31	10
1,3,5-Trimethylbenzene	2.0	U	2.0	0.19	ppb v/v			05/22/13 15:31	10
2-Chlorotoluene	2.0	U	2.0	0.13	ppb v/v			05/22/13 15:31	10
tert-Butylbenzene	2.0	U	2.0	0.11	ppb v/v			05/22/13 15:31	10
<b>1,2,4-Trimethylbenzene</b>	<b>0.72</b>	<b>J</b>	2.0	0.21	ppb v/v			05/22/13 15:31	10
sec-Butylbenzene	2.0	U	2.0	0.15	ppb v/v			05/22/13 15:31	10
4-Isopropyltoluene	2.0	U	2.0	0.20	ppb v/v			05/22/13 15:31	10
1,3-Dichlorobenzene	2.0	U	2.0	0.19	ppb v/v			05/22/13 15:31	10
1,4-Dichlorobenzene	2.0	U	2.0	0.18	ppb v/v			05/22/13 15:31	10
Benzyl chloride	2.0	U	2.0	0.22	ppb v/v			05/22/13 15:31	10
n-Butylbenzene	2.0	U	2.0	0.22	ppb v/v			05/22/13 15:31	10
1,2-Dichlorobenzene	2.0	U	2.0	0.26	ppb v/v			05/22/13 15:31	10
1,2,4-Trichlorobenzene	5.0	U	5.0	0.30	ppb v/v			05/22/13 15:31	10
Hexachlorobutadiene	2.0	U	2.0	0.29	ppb v/v			05/22/13 15:31	10
Naphthalene	5.0	U	5.0	0.38	ppb v/v			05/22/13 15:31	10
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	25	U	25	0.99	ug/m3			05/22/13 15:31	10
Freon 22	18	U	18	0.81	ug/m3			05/22/13 15:31	10
1,2-Dichlorotetrafluoroethane	14	U	14	1.4	ug/m3			05/22/13 15:31	10
Chloromethane	10	U	10	0.70	ug/m3			05/22/13 15:31	10
<b>n-Butane</b>	<b>17</b>		12	0.52	ug/m3			05/22/13 15:31	10
Vinyl chloride	5.1	U	5.1	0.23	ug/m3			05/22/13 15:31	10
1,3-Butadiene	4.4	U	4.4	0.55	ug/m3			05/22/13 15:31	10
Bromomethane	7.8	U	7.8	1.0	ug/m3			05/22/13 15:31	10
Chloroethane	13	U	13	0.87	ug/m3			05/22/13 15:31	10
Bromoethene(Vinyl Bromide)	8.7	U	8.7	0.83	ug/m3			05/22/13 15:31	10
Trichlorofluoromethane	11	U	11	1.2	ug/m3			05/22/13 15:31	10
Freon TF	15	U	15	1.5	ug/m3			05/22/13 15:31	10
1,1-Dichloroethene	7.9	U	7.9	3.4	ug/m3			05/22/13 15:31	10
<b>Acetone</b>	<b>46</b>	<b>J</b>	120	9.5	ug/m3			05/22/13 15:31	10
<b>Isopropyl alcohol</b>	<b>10</b>	<b>J</b>	120	1.9	ug/m3			05/22/13 15:31	10
<b>Carbon disulfide</b>	<b>2.5</b>	<b>J</b>	16	0.62	ug/m3			05/22/13 15:31	10
3-Chloropropene	16	U	16	1.5	ug/m3			05/22/13 15:31	10
<b>Methylene Chloride</b>	<b>3.0</b>	<b>J B</b>	17	0.80	ug/m3			05/22/13 15:31	10
tert-Butyl alcohol	150	U	150	1.2	ug/m3			05/22/13 15:31	10
Methyl tert-butyl ether	7.2	U	7.2	0.54	ug/m3			05/22/13 15:31	10
trans-1,2-Dichloroethene	7.9	U	7.9	0.91	ug/m3			05/22/13 15:31	10

TestAmerica Burlington

# Client Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

**Client Sample ID: SG-1**

**Lab Sample ID: 200-16520-1**

Date Collected: 05/15/13 10:52

Matrix: Air

Date Received: 05/17/13 10:10

Sample Container: Summa Canister 1L

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Hexane	6.4	J B	7.0	0.70	ug/m3			05/22/13 15:31	10
1,1-Dichloroethane	8.1	U	8.1	0.93	ug/m3			05/22/13 15:31	10
<b>Methyl Ethyl Ketone</b>	<b>16</b>		15	0.74	ug/m3			05/22/13 15:31	10
<b>cis-1,2-Dichloroethene</b>	<b>7.2</b>	<b>J</b>	7.9	3.3	ug/m3			05/22/13 15:31	10
<b>1,2-Dichloroethene, Total</b>	<b>7.2</b>	<b>J</b>	7.9	0.91	ug/m3			05/22/13 15:31	10
Chloroform	9.8	U	9.8	1.2	ug/m3			05/22/13 15:31	10
Tetrahydrofuran	150	U	150	0.86	ug/m3			05/22/13 15:31	10
1,1,1-Trichloroethane	11	U	11	1.1	ug/m3			05/22/13 15:31	10
Cyclohexane	6.9	U	6.9	0.65	ug/m3			05/22/13 15:31	10
Carbon tetrachloride	13	U	13	0.82	ug/m3			05/22/13 15:31	10
2,2,4-Trimethylpentane	9.3	U	9.3	0.70	ug/m3			05/22/13 15:31	10
<b>Benzene</b>	<b>2.8</b>	<b>J</b>	6.4	0.58	ug/m3			05/22/13 15:31	10
1,2-Dichloroethane	8.1	U	8.1	0.73	ug/m3			05/22/13 15:31	10
<b>n-Heptane</b>	<b>5.3</b>	<b>J</b>	8.2	0.70	ug/m3			05/22/13 15:31	10
Trichloroethene	11	U	11	0.49	ug/m3			05/22/13 15:31	10
Methyl methacrylate	20	U	20	0.66	ug/m3			05/22/13 15:31	10
1,2-Dichloropropane	9.2	U	9.2	1.1	ug/m3			05/22/13 15:31	10
1,4-Dioxane	180	U	180	2.5	ug/m3			05/22/13 15:31	10
Bromodichloromethane	13	U	13	0.80	ug/m3			05/22/13 15:31	10
cis-1,3-Dichloropropene	9.1	U	9.1	0.59	ug/m3			05/22/13 15:31	10
<b>methyl isobutyl ketone</b>	<b>2.6</b>	<b>J</b>	20	1.4	ug/m3			05/22/13 15:31	10
<b>Toluene</b>	<b>26</b>		7.5	0.53	ug/m3			05/22/13 15:31	10
trans-1,3-Dichloropropene	9.1	U	9.1	0.68	ug/m3			05/22/13 15:31	10
1,1,2-Trichloroethane	11	U	11	0.87	ug/m3			05/22/13 15:31	10
<b>Tetrachloroethene</b>	<b>1.8</b>	<b>J</b>	14	1.0	ug/m3			05/22/13 15:31	10
Methyl Butyl Ketone (2-Hexanone)	20	U	20	1.6	ug/m3			05/22/13 15:31	10
Dibromochloromethane	17	U	17	0.94	ug/m3			05/22/13 15:31	10
1,2-Dibromoethane	15	U	15	1.1	ug/m3			05/22/13 15:31	10
Chlorobenzene	9.2	U	9.2	0.60	ug/m3			05/22/13 15:31	10
<b>Ethylbenzene</b>	<b>2.6</b>	<b>J</b>	8.7	0.65	ug/m3			05/22/13 15:31	10
<b>m,p-Xylene</b>	<b>7.8</b>	<b>J</b>	22	0.96	ug/m3			05/22/13 15:31	10
<b>Xylene, o-</b>	<b>2.7</b>	<b>J</b>	8.7	0.69	ug/m3			05/22/13 15:31	10
<b>Xylene (total)</b>	<b>10</b>		8.7	0.69	ug/m3			05/22/13 15:31	10
Styrene	8.5	U	8.5	0.47	ug/m3			05/22/13 15:31	10
Bromoform	21	U	21	0.74	ug/m3			05/22/13 15:31	10
Cumene	9.8	U	9.8	0.54	ug/m3			05/22/13 15:31	10
1,1,2,2-Tetrachloroethane	14	U	14	0.76	ug/m3			05/22/13 15:31	10
n-Propylbenzene	9.8	U	9.8	0.64	ug/m3			05/22/13 15:31	10
4-Ethyltoluene	9.8	U	9.8	0.74	ug/m3			05/22/13 15:31	10
1,3,5-Trimethylbenzene	9.8	U	9.8	0.93	ug/m3			05/22/13 15:31	10
2-Chlorotoluene	10	U	10	0.67	ug/m3			05/22/13 15:31	10
tert-Butylbenzene	11	U	11	0.60	ug/m3			05/22/13 15:31	10
<b>1,2,4-Trimethylbenzene</b>	<b>3.5</b>	<b>J</b>	9.8	1.0	ug/m3			05/22/13 15:31	10
sec-Butylbenzene	11	U	11	0.82	ug/m3			05/22/13 15:31	10
4-Isopropyltoluene	11	U	11	1.1	ug/m3			05/22/13 15:31	10
1,3-Dichlorobenzene	12	U	12	1.1	ug/m3			05/22/13 15:31	10
1,4-Dichlorobenzene	12	U	12	1.1	ug/m3			05/22/13 15:31	10
Benzyl chloride	10	U	10	1.1	ug/m3			05/22/13 15:31	10

TestAmerica Burlington

# Client Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

## Client Sample ID: SG-1

Date Collected: 05/15/13 10:52

Date Received: 05/17/13 10:10

Sample Container: Summa Canister 1L

## Lab Sample ID: 200-16520-1

Matrix: Air

### Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	11	U	11	1.2	ug/m3			05/22/13 15:31	10
1,2-Dichlorobenzene	12	U	12	1.6	ug/m3			05/22/13 15:31	10
1,2,4-Trichlorobenzene	37	U	37	2.2	ug/m3			05/22/13 15:31	10
Hexachlorobutadiene	21	U	21	3.1	ug/m3			05/22/13 15:31	10
Naphthalene	26	U	26	2.0	ug/m3			05/22/13 15:31	10

## Client Sample ID: SG-2

Date Collected: 05/15/13 11:43

Date Received: 05/17/13 10:10

Sample Container: Summa Canister 1L

## Lab Sample ID: 200-16520-2

Matrix: Air

### Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	5.0	U	5.0	0.20	ppb v/v			05/22/13 16:21	10
Freon 22	5.0	U	5.0	0.23	ppb v/v			05/22/13 16:21	10
1,2-Dichlorotetrafluoroethane	2.0	U	2.0	0.20	ppb v/v			05/22/13 16:21	10
Chloromethane	5.0	U	5.0	0.34	ppb v/v			05/22/13 16:21	10
<b>n-Butane</b>	<b>4.6 J</b>		5.0	0.22	ppb v/v			05/22/13 16:21	10
Vinyl chloride	2.0	U	2.0	0.091	ppb v/v			05/22/13 16:21	10
1,3-Butadiene	2.0	U	2.0	0.25	ppb v/v			05/22/13 16:21	10
Bromomethane	2.0	U	2.0	0.27	ppb v/v			05/22/13 16:21	10
Chloroethane	5.0	U	5.0	0.33	ppb v/v			05/22/13 16:21	10
Bromoethene(Vinyl Bromide)	2.0	U	2.0	0.19	ppb v/v			05/22/13 16:21	10
Trichlorofluoromethane	2.0	U	2.0	0.21	ppb v/v			05/22/13 16:21	10
Freon TF	2.0	U	2.0	0.20	ppb v/v			05/22/13 16:21	10
1,1-Dichloroethene	2.0	U	2.0	0.86	ppb v/v			05/22/13 16:21	10
<b>Acetone</b>	<b>17 J</b>		50	4.0	ppb v/v			05/22/13 16:21	10
Isopropyl alcohol	50	U	50	0.76	ppb v/v			05/22/13 16:21	10
<b>Carbon disulfide</b>	<b>8.1</b>		5.0	0.20	ppb v/v			05/22/13 16:21	10
3-Chloropropene	5.0	U	5.0	0.47	ppb v/v			05/22/13 16:21	10
<b>Methylene Chloride</b>	<b>0.77 JB</b>		5.0	0.23	ppb v/v			05/22/13 16:21	10
tert-Butyl alcohol	50	U	50	0.41	ppb v/v			05/22/13 16:21	10
Methyl tert-butyl ether	2.0	U	2.0	0.15	ppb v/v			05/22/13 16:21	10
trans-1,2-Dichloroethene	2.0	U	2.0	0.23	ppb v/v			05/22/13 16:21	10
<b>n-Hexane</b>	<b>1.1 JB</b>		2.0	0.20	ppb v/v			05/22/13 16:21	10
1,1-Dichloroethane	2.0	U	2.0	0.23	ppb v/v			05/22/13 16:21	10
<b>Methyl Ethyl Ketone</b>	<b>4.2 J</b>		5.0	0.25	ppb v/v			05/22/13 16:21	10
<b>cis-1,2-Dichloroethene</b>	<b>1.5 J</b>		2.0	0.84	ppb v/v			05/22/13 16:21	10
<b>1,2-Dichloroethene, Total</b>	<b>1.5 J</b>		2.0	0.23	ppb v/v			05/22/13 16:21	10
Chloroform	2.0	U	2.0	0.24	ppb v/v			05/22/13 16:21	10
Tetrahydrofuran	50	U	50	0.29	ppb v/v			05/22/13 16:21	10
<b>1,1,1-Trichloroethane</b>	<b>1.4 J</b>		2.0	0.20	ppb v/v			05/22/13 16:21	10
Cyclohexane	2.0	U	2.0	0.19	ppb v/v			05/22/13 16:21	10
Carbon tetrachloride	2.0	U	2.0	0.13	ppb v/v			05/22/13 16:21	10
2,2,4-Trimethylpentane	2.0	U	2.0	0.15	ppb v/v			05/22/13 16:21	10
<b>Benzene</b>	<b>0.98 J</b>		2.0	0.18	ppb v/v			05/22/13 16:21	10
1,2-Dichloroethane	2.0	U	2.0	0.18	ppb v/v			05/22/13 16:21	10
<b>n-Heptane</b>	<b>0.89 J</b>		2.0	0.17	ppb v/v			05/22/13 16:21	10
<b>Trichloroethene</b>	<b>0.65 J</b>		2.0	0.092	ppb v/v			05/22/13 16:21	10

TestAmerica Burlington

# Client Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

**Client Sample ID: SG-2**

**Lab Sample ID: 200-16520-2**

Date Collected: 05/15/13 11:43

Matrix: Air

Date Received: 05/17/13 10:10

Sample Container: Summa Canister 1L

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl methacrylate	5.0	U	5.0	0.16	ppb v/v			05/22/13 16:21	10
1,2-Dichloropropane	2.0	U	2.0	0.23	ppb v/v			05/22/13 16:21	10
1,4-Dioxane	50	U	50	0.70	ppb v/v			05/22/13 16:21	10
Bromodichloromethane	2.0	U	2.0	0.12	ppb v/v			05/22/13 16:21	10
cis-1,3-Dichloropropene	2.0	U	2.0	0.13	ppb v/v			05/22/13 16:21	10
<b>methyl isobutyl ketone</b>	<b>4.2</b>	<b>J</b>	5.0	0.34	ppb v/v			05/22/13 16:21	10
<b>Toluene</b>	<b>8.8</b>		2.0	0.14	ppb v/v			05/22/13 16:21	10
trans-1,3-Dichloropropene	2.0	U	2.0	0.15	ppb v/v			05/22/13 16:21	10
1,1,2-Trichloroethane	2.0	U	2.0	0.16	ppb v/v			05/22/13 16:21	10
<b>Tetrachloroethene</b>	<b>0.25</b>	<b>J</b>	2.0	0.15	ppb v/v			05/22/13 16:21	10
Methyl Butyl Ketone (2-Hexanone)	5.0	U	5.0	0.40	ppb v/v			05/22/13 16:21	10
Dibromochloromethane	2.0	U	2.0	0.11	ppb v/v			05/22/13 16:21	10
1,2-Dibromoethane	2.0	U	2.0	0.14	ppb v/v			05/22/13 16:21	10
Chlorobenzene	2.0	U	2.0	0.13	ppb v/v			05/22/13 16:21	10
<b>Ethylbenzene</b>	<b>1.2</b>	<b>J</b>	2.0	0.15	ppb v/v			05/22/13 16:21	10
<b>m,p-Xylene</b>	<b>4.6</b>	<b>J</b>	5.0	0.22	ppb v/v			05/22/13 16:21	10
<b>Xylene, o-</b>	<b>1.7</b>	<b>J</b>	2.0	0.16	ppb v/v			05/22/13 16:21	10
<b>Xylene (total)</b>	<b>6.3</b>		2.0	0.16	ppb v/v			05/22/13 16:21	10
Styrene	2.0	U	2.0	0.11	ppb v/v			05/22/13 16:21	10
Bromoform	2.0	U	2.0	0.072	ppb v/v			05/22/13 16:21	10
Cumene	2.0	U	2.0	0.11	ppb v/v			05/22/13 16:21	10
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.11	ppb v/v			05/22/13 16:21	10
n-Propylbenzene	2.0	U	2.0	0.13	ppb v/v			05/22/13 16:21	10
4-Ethyltoluene	2.0	U	2.0	0.15	ppb v/v			05/22/13 16:21	10
<b>1,3,5-Trimethylbenzene</b>	<b>0.56</b>	<b>J</b>	2.0	0.19	ppb v/v			05/22/13 16:21	10
2-Chlorotoluene	2.0	U	2.0	0.13	ppb v/v			05/22/13 16:21	10
tert-Butylbenzene	2.0	U	2.0	0.11	ppb v/v			05/22/13 16:21	10
<b>1,2,4-Trimethylbenzene</b>	<b>1.8</b>	<b>J</b>	2.0	0.21	ppb v/v			05/22/13 16:21	10
sec-Butylbenzene	2.0	U	2.0	0.15	ppb v/v			05/22/13 16:21	10
4-Isopropyltoluene	2.0	U	2.0	0.20	ppb v/v			05/22/13 16:21	10
1,3-Dichlorobenzene	2.0	U	2.0	0.19	ppb v/v			05/22/13 16:21	10
1,4-Dichlorobenzene	2.0	U	2.0	0.18	ppb v/v			05/22/13 16:21	10
Benzyl chloride	2.0	U	2.0	0.22	ppb v/v			05/22/13 16:21	10
n-Butylbenzene	2.0	U	2.0	0.22	ppb v/v			05/22/13 16:21	10
1,2-Dichlorobenzene	2.0	U	2.0	0.26	ppb v/v			05/22/13 16:21	10
1,2,4-Trichlorobenzene	5.0	U	5.0	0.30	ppb v/v			05/22/13 16:21	10
Hexachlorobutadiene	2.0	U	2.0	0.29	ppb v/v			05/22/13 16:21	10
Naphthalene	5.0	U	5.0	0.38	ppb v/v			05/22/13 16:21	10
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	25	U	25	0.99	ug/m3			05/22/13 16:21	10
Freon 22	18	U	18	0.81	ug/m3			05/22/13 16:21	10
1,2-Dichlorotetrafluoroethane	14	U	14	1.4	ug/m3			05/22/13 16:21	10
Chloromethane	10	U	10	0.70	ug/m3			05/22/13 16:21	10
<b>n-Butane</b>	<b>11</b>	<b>J</b>	12	0.52	ug/m3			05/22/13 16:21	10
Vinyl chloride	5.1	U	5.1	0.23	ug/m3			05/22/13 16:21	10
1,3-Butadiene	4.4	U	4.4	0.55	ug/m3			05/22/13 16:21	10
Bromomethane	7.8	U	7.8	1.0	ug/m3			05/22/13 16:21	10
Chloroethane	13	U	13	0.87	ug/m3			05/22/13 16:21	10

TestAmerica Burlington

# Client Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

**Client Sample ID: SG-2**

**Lab Sample ID: 200-16520-2**

**Matrix: Air**

Date Collected: 05/15/13 11:43

Date Received: 05/17/13 10:10

Sample Container: Summa Canister 1L

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoethene(Vinyl Bromide)	8.7	U	8.7	0.83	ug/m3			05/22/13 16:21	10
Trichlorofluoromethane	11	U	11	1.2	ug/m3			05/22/13 16:21	10
Freon TF	15	U	15	1.5	ug/m3			05/22/13 16:21	10
1,1-Dichloroethene	7.9	U	7.9	3.4	ug/m3			05/22/13 16:21	10
<b>Acetone</b>	<b>41</b>	<b>J</b>	120	9.5	ug/m3			05/22/13 16:21	10
Isopropyl alcohol	120	U	120	1.9	ug/m3			05/22/13 16:21	10
<b>Carbon disulfide</b>	<b>25</b>		16	0.62	ug/m3			05/22/13 16:21	10
3-Chloropropene	16	U	16	1.5	ug/m3			05/22/13 16:21	10
<b>Methylene Chloride</b>	<b>2.7</b>	<b>J B</b>	17	0.80	ug/m3			05/22/13 16:21	10
tert-Butyl alcohol	150	U	150	1.2	ug/m3			05/22/13 16:21	10
Methyl tert-butyl ether	7.2	U	7.2	0.54	ug/m3			05/22/13 16:21	10
trans-1,2-Dichloroethene	7.9	U	7.9	0.91	ug/m3			05/22/13 16:21	10
<b>n-Hexane</b>	<b>3.9</b>	<b>J B</b>	7.0	0.70	ug/m3			05/22/13 16:21	10
1,1-Dichloroethane	8.1	U	8.1	0.93	ug/m3			05/22/13 16:21	10
<b>Methyl Ethyl Ketone</b>	<b>12</b>	<b>J</b>	15	0.74	ug/m3			05/22/13 16:21	10
<b>cis-1,2-Dichloroethene</b>	<b>5.9</b>	<b>J</b>	7.9	3.3	ug/m3			05/22/13 16:21	10
<b>1,2-Dichloroethene, Total</b>	<b>5.9</b>	<b>J</b>	7.9	0.91	ug/m3			05/22/13 16:21	10
Chloroform	9.8	U	9.8	1.2	ug/m3			05/22/13 16:21	10
Tetrahydrofuran	150	U	150	0.86	ug/m3			05/22/13 16:21	10
<b>1,1,1-Trichloroethane</b>	<b>7.8</b>	<b>J</b>	11	1.1	ug/m3			05/22/13 16:21	10
Cyclohexane	6.9	U	6.9	0.65	ug/m3			05/22/13 16:21	10
Carbon tetrachloride	13	U	13	0.82	ug/m3			05/22/13 16:21	10
2,2,4-Trimethylpentane	9.3	U	9.3	0.70	ug/m3			05/22/13 16:21	10
<b>Benzene</b>	<b>3.1</b>	<b>J</b>	6.4	0.58	ug/m3			05/22/13 16:21	10
1,2-Dichloroethane	8.1	U	8.1	0.73	ug/m3			05/22/13 16:21	10
<b>n-Heptane</b>	<b>3.7</b>	<b>J</b>	8.2	0.70	ug/m3			05/22/13 16:21	10
<b>Trichloroethene</b>	<b>3.5</b>	<b>J</b>	11	0.49	ug/m3			05/22/13 16:21	10
Methyl methacrylate	20	U	20	0.66	ug/m3			05/22/13 16:21	10
1,2-Dichloropropane	9.2	U	9.2	1.1	ug/m3			05/22/13 16:21	10
1,4-Dioxane	180	U	180	2.5	ug/m3			05/22/13 16:21	10
Bromodichloromethane	13	U	13	0.80	ug/m3			05/22/13 16:21	10
cis-1,3-Dichloropropene	9.1	U	9.1	0.59	ug/m3			05/22/13 16:21	10
<b>methyl isobutyl ketone</b>	<b>17</b>	<b>J</b>	20	1.4	ug/m3			05/22/13 16:21	10
<b>Toluene</b>	<b>33</b>		7.5	0.53	ug/m3			05/22/13 16:21	10
trans-1,3-Dichloropropene	9.1	U	9.1	0.68	ug/m3			05/22/13 16:21	10
1,1,2-Trichloroethane	11	U	11	0.87	ug/m3			05/22/13 16:21	10
<b>Tetrachloroethene</b>	<b>1.7</b>	<b>J</b>	14	1.0	ug/m3			05/22/13 16:21	10
Methyl Butyl Ketone (2-Hexanone)	20	U	20	1.6	ug/m3			05/22/13 16:21	10
Dibromochloromethane	17	U	17	0.94	ug/m3			05/22/13 16:21	10
1,2-Dibromoethane	15	U	15	1.1	ug/m3			05/22/13 16:21	10
Chlorobenzene	9.2	U	9.2	0.60	ug/m3			05/22/13 16:21	10
<b>Ethylbenzene</b>	<b>5.1</b>	<b>J</b>	8.7	0.65	ug/m3			05/22/13 16:21	10
<b>m,p-Xylene</b>	<b>20</b>	<b>J</b>	22	0.96	ug/m3			05/22/13 16:21	10
<b>Xylene, o-</b>	<b>7.2</b>	<b>J</b>	8.7	0.69	ug/m3			05/22/13 16:21	10
<b>Xylene (total)</b>	<b>27</b>		8.7	0.69	ug/m3			05/22/13 16:21	10
Styrene	8.5	U	8.5	0.47	ug/m3			05/22/13 16:21	10
Bromoform	21	U	21	0.74	ug/m3			05/22/13 16:21	10
Cumene	9.8	U	9.8	0.54	ug/m3			05/22/13 16:21	10

TestAmerica Burlington

# Client Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

## Client Sample ID: SG-2

Date Collected: 05/15/13 11:43

Date Received: 05/17/13 10:10

Sample Container: Summa Canister 1L

## Lab Sample ID: 200-16520-2

Matrix: Air

### Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	14	U	14	0.76	ug/m3			05/22/13 16:21	10
n-Propylbenzene	9.8	U	9.8	0.64	ug/m3			05/22/13 16:21	10
4-Ethyltoluene	9.8	U	9.8	0.74	ug/m3			05/22/13 16:21	10
<b>1,3,5-Trimethylbenzene</b>	<b>2.7 J</b>		9.8	0.93	ug/m3			05/22/13 16:21	10
2-Chlorotoluene	10	U	10	0.67	ug/m3			05/22/13 16:21	10
tert-Butylbenzene	11	U	11	0.60	ug/m3			05/22/13 16:21	10
<b>1,2,4-Trimethylbenzene</b>	<b>8.7 J</b>		9.8	1.0	ug/m3			05/22/13 16:21	10
sec-Butylbenzene	11	U	11	0.82	ug/m3			05/22/13 16:21	10
4-Isopropyltoluene	11	U	11	1.1	ug/m3			05/22/13 16:21	10
1,3-Dichlorobenzene	12	U	12	1.1	ug/m3			05/22/13 16:21	10
1,4-Dichlorobenzene	12	U	12	1.1	ug/m3			05/22/13 16:21	10
Benzyl chloride	10	U	10	1.1	ug/m3			05/22/13 16:21	10
n-Butylbenzene	11	U	11	1.2	ug/m3			05/22/13 16:21	10
1,2-Dichlorobenzene	12	U	12	1.6	ug/m3			05/22/13 16:21	10
1,2,4-Trichlorobenzene	37	U	37	2.2	ug/m3			05/22/13 16:21	10
Hexachlorobutadiene	21	U	21	3.1	ug/m3			05/22/13 16:21	10
Naphthalene	26	U	26	2.0	ug/m3			05/22/13 16:21	10

## Client Sample ID: SG-3

Date Collected: 05/15/13 12:15

Date Received: 05/17/13 10:10

Sample Container: Summa Canister 1L

## Lab Sample ID: 200-16520-3

Matrix: Air

### Method: TO-15 - Volatile Organic Compounds in Ambient Air

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	5.0	U	5.0	0.20	ppb v/v			05/22/13 17:11	10
Freon 22	5.0	U	5.0	0.23	ppb v/v			05/22/13 17:11	10
1,2-Dichlorotetrafluoroethane	2.0	U	2.0	0.20	ppb v/v			05/22/13 17:11	10
Chloromethane	5.0	U	5.0	0.34	ppb v/v			05/22/13 17:11	10
<b>n-Butane</b>	<b>1000 E</b>		5.0	0.22	ppb v/v			05/22/13 17:11	10
Vinyl chloride	2.0	U	2.0	0.091	ppb v/v			05/22/13 17:11	10
1,3-Butadiene	2.0	U	2.0	0.25	ppb v/v			05/22/13 17:11	10
Bromomethane	2.0	U	2.0	0.27	ppb v/v			05/22/13 17:11	10
Chloroethane	5.0	U	5.0	0.33	ppb v/v			05/22/13 17:11	10
Bromoethene(Vinyl Bromide)	2.0	U	2.0	0.19	ppb v/v			05/22/13 17:11	10
Trichlorofluoromethane	2.0	U	2.0	0.21	ppb v/v			05/22/13 17:11	10
Freon TF	2.0	U	2.0	0.20	ppb v/v			05/22/13 17:11	10
1,1-Dichloroethene	2.0	U	2.0	0.86	ppb v/v			05/22/13 17:11	10
<b>Acetone</b>	<b>410 E</b>		50	4.0	ppb v/v			05/22/13 17:11	10
Isopropyl alcohol	26	J	50	0.76	ppb v/v			05/22/13 17:11	10
Carbon disulfide	1.2	J	5.0	0.20	ppb v/v			05/22/13 17:11	10
3-Chloropropene	5.0	U	5.0	0.47	ppb v/v			05/22/13 17:11	10
<b>Methylene Chloride</b>	<b>1.1 JB</b>		5.0	0.23	ppb v/v			05/22/13 17:11	10
<b>tert-Butyl alcohol</b>	<b>21 J</b>		50	0.41	ppb v/v			05/22/13 17:11	10
Methyl tert-butyl ether	2.0	U	2.0	0.15	ppb v/v			05/22/13 17:11	10
trans-1,2-Dichloroethene	2.0	U	2.0	0.23	ppb v/v			05/22/13 17:11	10
<b>n-Hexane</b>	<b>78 B</b>		2.0	0.20	ppb v/v			05/22/13 17:11	10
1,1-Dichloroethane	2.0	U	2.0	0.23	ppb v/v			05/22/13 17:11	10
<b>Methyl Ethyl Ketone</b>	<b>17</b>		5.0	0.25	ppb v/v			05/22/13 17:11	10

TestAmerica Burlington

# Client Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

**Client Sample ID: SG-3**

**Lab Sample ID: 200-16520-3**

Matrix: Air

Date Collected: 05/15/13 12:15

Date Received: 05/17/13 10:10

Sample Container: Summa Canister 1L

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	1.3	J	2.0	0.84	ppb v/v			05/22/13 17:11	10
1,2-Dichloroethene, Total	1.3	J	2.0	0.23	ppb v/v			05/22/13 17:11	10
Chloroform	2.0	U	2.0	0.24	ppb v/v			05/22/13 17:11	10
Tetrahydrofuran	50	U	50	0.29	ppb v/v			05/22/13 17:11	10
1,1,1-Trichloroethane	0.59	J	2.0	0.20	ppb v/v			05/22/13 17:11	10
Cyclohexane	21		2.0	0.19	ppb v/v			05/22/13 17:11	10
Carbon tetrachloride	2.0	U	2.0	0.13	ppb v/v			05/22/13 17:11	10
2,2,4-Trimethylpentane	2.0	U	2.0	0.15	ppb v/v			05/22/13 17:11	10
Benzene	77		2.0	0.18	ppb v/v			05/22/13 17:11	10
1,2-Dichloroethane	2.0	U	2.0	0.18	ppb v/v			05/22/13 17:11	10
n-Heptane	26		2.0	0.17	ppb v/v			05/22/13 17:11	10
Trichloroethene	2.0	U	2.0	0.092	ppb v/v			05/22/13 17:11	10
Methyl methacrylate	5.0	U	5.0	0.16	ppb v/v			05/22/13 17:11	10
1,2-Dichloropropane	2.0	U	2.0	0.23	ppb v/v			05/22/13 17:11	10
1,4-Dioxane	50	U	50	0.70	ppb v/v			05/22/13 17:11	10
Bromodichlormethane	2.0	U	2.0	0.12	ppb v/v			05/22/13 17:11	10
cis-1,3-Dichloropropene	2.0	U	2.0	0.13	ppb v/v			05/22/13 17:11	10
methyl isobutyl ketone	4.9	J	5.0	0.34	ppb v/v			05/22/13 17:11	10
Toluene	12		2.0	0.14	ppb v/v			05/22/13 17:11	10
trans-1,3-Dichloropropene	2.0	U	2.0	0.15	ppb v/v			05/22/13 17:11	10
1,1,2-Trichloroethane	2.0	U	2.0	0.16	ppb v/v			05/22/13 17:11	10
Tetrachloroethene	0.23	J	2.0	0.15	ppb v/v			05/22/13 17:11	10
Methyl Butyl Ketone (2-Hexanone)	2.2	J	5.0	0.40	ppb v/v			05/22/13 17:11	10
Dibromochlormethane	2.0	U	2.0	0.11	ppb v/v			05/22/13 17:11	10
1,2-Dibromoethane	2.0	U	2.0	0.14	ppb v/v			05/22/13 17:11	10
Chlorobenzene	2.0	U	2.0	0.13	ppb v/v			05/22/13 17:11	10
Ethylbenzene	0.88	J	2.0	0.15	ppb v/v			05/22/13 17:11	10
m,p-Xylene	3.6	J	5.0	0.22	ppb v/v			05/22/13 17:11	10
Xylene, o-	1.1	J	2.0	0.16	ppb v/v			05/22/13 17:11	10
Xylene (total)	4.7		2.0	0.16	ppb v/v			05/22/13 17:11	10
Styrene	2.0	U	2.0	0.11	ppb v/v			05/22/13 17:11	10
Bromoform	2.0	U	2.0	0.072	ppb v/v			05/22/13 17:11	10
Cumene	2.0	U	2.0	0.11	ppb v/v			05/22/13 17:11	10
1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.11	ppb v/v			05/22/13 17:11	10
n-Propylbenzene	2.0	U	2.0	0.13	ppb v/v			05/22/13 17:11	10
4-Ethyltoluene	2.0	U	2.0	0.15	ppb v/v			05/22/13 17:11	10
1,3,5-Trimethylbenzene	0.51	J	2.0	0.19	ppb v/v			05/22/13 17:11	10
2-Chlorotoluene	2.0	U	2.0	0.13	ppb v/v			05/22/13 17:11	10
tert-Butylbenzene	2.0	U	2.0	0.11	ppb v/v			05/22/13 17:11	10
1,2,4-Trimethylbenzene	1.5	J	2.0	0.21	ppb v/v			05/22/13 17:11	10
sec-Butylbenzene	2.0	U	2.0	0.15	ppb v/v			05/22/13 17:11	10
4-Isopropyltoluene	2.0	U	2.0	0.20	ppb v/v			05/22/13 17:11	10
1,3-Dichlorobenzene	2.0	U	2.0	0.19	ppb v/v			05/22/13 17:11	10
1,4-Dichlorobenzene	2.0	U	2.0	0.18	ppb v/v			05/22/13 17:11	10
Benzyl chloride	2.0	U	2.0	0.22	ppb v/v			05/22/13 17:11	10
n-Butylbenzene	2.0	U	2.0	0.22	ppb v/v			05/22/13 17:11	10
1,2-Dichlorobenzene	2.0	U	2.0	0.26	ppb v/v			05/22/13 17:11	10
1,2,4-Trichlorobenzene	5.0	U	5.0	0.30	ppb v/v			05/22/13 17:11	10

TestAmerica Burlington

# Client Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

**Client Sample ID: SG-3**

**Lab Sample ID: 200-16520-3**

Matrix: Air

Date Collected: 05/15/13 12:15

Date Received: 05/17/13 10:10

Sample Container: Summa Canister 1L

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	2.0	U	2.0	0.29	ppb v/v			05/22/13 17:11	10
Naphthalene	5.0	U	5.0	0.38	ppb v/v			05/22/13 17:11	10
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	25	U	25	0.99	ug/m3			05/22/13 17:11	10
Freon 22	18	U	18	0.81	ug/m3			05/22/13 17:11	10
1,2-Dichlortetrafluoroethane	14	U	14	1.4	ug/m3			05/22/13 17:11	10
Chloromethane	10	U	10	0.70	ug/m3			05/22/13 17:11	10
<b>n-Butane</b>	<b>2500</b>	<b>E</b>	12	0.52	ug/m3			05/22/13 17:11	10
Vinyl chloride	5.1	U	5.1	0.23	ug/m3			05/22/13 17:11	10
1,3-Butadiene	4.4	U	4.4	0.55	ug/m3			05/22/13 17:11	10
Bromomethane	7.8	U	7.8	1.0	ug/m3			05/22/13 17:11	10
Chloroethane	13	U	13	0.87	ug/m3			05/22/13 17:11	10
Bromoethene(Vinyl Bromide)	8.7	U	8.7	0.83	ug/m3			05/22/13 17:11	10
Trichlorofluoromethane	11	U	11	1.2	ug/m3			05/22/13 17:11	10
Freon TF	15	U	15	1.5	ug/m3			05/22/13 17:11	10
1,1-Dichloroethene	7.9	U	7.9	3.4	ug/m3			05/22/13 17:11	10
<b>Acetone</b>	<b>970</b>	<b>E</b>	120	9.5	ug/m3			05/22/13 17:11	10
<b>Isopropyl alcohol</b>	<b>64</b>	<b>J</b>	120	1.9	ug/m3			05/22/13 17:11	10
<b>Carbon disulfide</b>	<b>3.8</b>	<b>J</b>	16	0.62	ug/m3			05/22/13 17:11	10
3-Chloropropene	16	U	16	1.5	ug/m3			05/22/13 17:11	10
<b>Methylene Chloride</b>	<b>3.8</b>	<b>J B</b>	17	0.80	ug/m3			05/22/13 17:11	10
<b>tert-Butyl alcohol</b>	<b>63</b>	<b>J</b>	150	1.2	ug/m3			05/22/13 17:11	10
Methyl tert-butyl ether	7.2	U	7.2	0.54	ug/m3			05/22/13 17:11	10
trans-1,2-Dichloroethene	7.9	U	7.9	0.91	ug/m3			05/22/13 17:11	10
<b>n-Hexane</b>	<b>280</b>	<b>B</b>	7.0	0.70	ug/m3			05/22/13 17:11	10
1,1-Dichloroethane	8.1	U	8.1	0.93	ug/m3			05/22/13 17:11	10
<b>Methyl Ethyl Ketone</b>	<b>49</b>		15	0.74	ug/m3			05/22/13 17:11	10
<b>cis-1,2-Dichloroethene</b>	<b>5.1</b>	<b>J</b>	7.9	3.3	ug/m3			05/22/13 17:11	10
<b>1,2-Dichloroethene, Total</b>	<b>5.1</b>	<b>J</b>	7.9	0.91	ug/m3			05/22/13 17:11	10
Chloroform	9.8	U	9.8	1.2	ug/m3			05/22/13 17:11	10
Tetrahydrofuran	150	U	150	0.86	ug/m3			05/22/13 17:11	10
<b>1,1,1-Trichloroethane</b>	<b>3.2</b>	<b>J</b>	11	1.1	ug/m3			05/22/13 17:11	10
<b>Cyclohexane</b>	<b>73</b>		6.9	0.65	ug/m3			05/22/13 17:11	10
Carbon tetrachloride	13	U	13	0.82	ug/m3			05/22/13 17:11	10
2,2,4-Trimethylpentane	9.3	U	9.3	0.70	ug/m3			05/22/13 17:11	10
<b>Benzene</b>	<b>250</b>		6.4	0.58	ug/m3			05/22/13 17:11	10
1,2-Dichloroethane	8.1	U	8.1	0.73	ug/m3			05/22/13 17:11	10
<b>n-Heptane</b>	<b>110</b>		8.2	0.70	ug/m3			05/22/13 17:11	10
Trichloroethene	11	U	11	0.49	ug/m3			05/22/13 17:11	10
Methyl methacrylate	20	U	20	0.66	ug/m3			05/22/13 17:11	10
1,2-Dichloropropane	9.2	U	9.2	1.1	ug/m3			05/22/13 17:11	10
1,4-Dioxane	180	U	180	2.5	ug/m3			05/22/13 17:11	10
Bromodichloromethane	13	U	13	0.80	ug/m3			05/22/13 17:11	10
cis-1,3-Dichloropropene	9.1	U	9.1	0.59	ug/m3			05/22/13 17:11	10
<b>methyl isobutyl ketone</b>	<b>20</b>	<b>J</b>	20	1.4	ug/m3			05/22/13 17:11	10
<b>Toluene</b>	<b>45</b>		7.5	0.53	ug/m3			05/22/13 17:11	10
trans-1,3-Dichloropropene	9.1	U	9.1	0.68	ug/m3			05/22/13 17:11	10
1,1,2-Trichloroethane	11	U	11	0.87	ug/m3			05/22/13 17:11	10

TestAmerica Burlington

# Client Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

**Client Sample ID: SG-3**

**Lab Sample ID: 200-16520-3**

Date Collected: 05/15/13 12:15

Matrix: Air

Date Received: 05/17/13 10:10

Sample Container: Summa Canister 1L

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	1.5	J	14	1.0	ug/m <sup>3</sup>			05/22/13 17:11	10
Methyl Butyl Ketone (2-Hexanone)	9.1	J	20	1.6	ug/m <sup>3</sup>			05/22/13 17:11	10
Dibromochloromethane	17	U	17	0.94	ug/m <sup>3</sup>			05/22/13 17:11	10
1,2-Dibromoethane	15	U	15	1.1	ug/m <sup>3</sup>			05/22/13 17:11	10
Chlorobenzene	9.2	U	9.2	0.60	ug/m <sup>3</sup>			05/22/13 17:11	10
Ethylbenzene	3.8	J	8.7	0.65	ug/m <sup>3</sup>			05/22/13 17:11	10
m,p-Xylene	16	J	22	0.96	ug/m <sup>3</sup>			05/22/13 17:11	10
Xylene, o-	4.9	J	8.7	0.69	ug/m <sup>3</sup>			05/22/13 17:11	10
Xylene (total)	20		8.7	0.69	ug/m <sup>3</sup>			05/22/13 17:11	10
Styrene	8.5	U	8.5	0.47	ug/m <sup>3</sup>			05/22/13 17:11	10
Bromoform	21	U	21	0.74	ug/m <sup>3</sup>			05/22/13 17:11	10
Cumene	9.8	U	9.8	0.54	ug/m <sup>3</sup>			05/22/13 17:11	10
1,1,2,2-Tetrachloroethane	14	U	14	0.76	ug/m <sup>3</sup>			05/22/13 17:11	10
n-Propylbenzene	9.8	U	9.8	0.64	ug/m <sup>3</sup>			05/22/13 17:11	10
4-Ethyltoluene	9.8	U	9.8	0.74	ug/m <sup>3</sup>			05/22/13 17:11	10
1,3,5-Trimethylbenzene	2.5	J	9.8	0.93	ug/m <sup>3</sup>			05/22/13 17:11	10
2-Chlorotoluene	10	U	10	0.67	ug/m <sup>3</sup>			05/22/13 17:11	10
tert-Butylbenzene	11	U	11	0.60	ug/m <sup>3</sup>			05/22/13 17:11	10
1,2,4-Trimethylbenzene	7.5	J	9.8	1.0	ug/m <sup>3</sup>			05/22/13 17:11	10
sec-Butylbenzene	11	U	11	0.82	ug/m <sup>3</sup>			05/22/13 17:11	10
4-Isopropyltoluene	11	U	11	1.1	ug/m <sup>3</sup>			05/22/13 17:11	10
1,3-Dichlorobenzene	12	U	12	1.1	ug/m <sup>3</sup>			05/22/13 17:11	10
1,4-Dichlorobenzene	12	U	12	1.1	ug/m <sup>3</sup>			05/22/13 17:11	10
Benzyl chloride	10	U	10	1.1	ug/m <sup>3</sup>			05/22/13 17:11	10
n-Butylbenzene	11	U	11	1.2	ug/m <sup>3</sup>			05/22/13 17:11	10
1,2-Dichlorobenzene	12	U	12	1.6	ug/m <sup>3</sup>			05/22/13 17:11	10
1,2,4-Trichlorobenzene	37	U	37	2.2	ug/m <sup>3</sup>			05/22/13 17:11	10
Hexachlorobutadiene	21	U	21	3.1	ug/m <sup>3</sup>			05/22/13 17:11	10
Naphthalene	26	U	26	2.0	ug/m <sup>3</sup>			05/22/13 17:11	10

# QC Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air

**Lab Sample ID: MB 200-55927/4**

**Matrix: Air**

**Analysis Batch: 55927**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Dichlorodifluoromethane	0.50	U	0.50	0.020	ppb v/v			05/22/13 13:51	1
Freon 22	0.50	U	0.50	0.023	ppb v/v			05/22/13 13:51	1
1,2-Dichlorotetrafluoroethane	0.20	U	0.20	0.020	ppb v/v			05/22/13 13:51	1
Chloromethane	0.50	U	0.50	0.034	ppb v/v			05/22/13 13:51	1
n-Butane	0.50	U	0.50	0.022	ppb v/v			05/22/13 13:51	1
Vinyl chloride	0.20	U	0.20	0.0091	ppb v/v			05/22/13 13:51	1
1,3-Butadiene	0.20	U	0.20	0.025	ppb v/v			05/22/13 13:51	1
Bromomethane	0.20	U	0.20	0.027	ppb v/v			05/22/13 13:51	1
Chloroethane	0.50	U	0.50	0.033	ppb v/v			05/22/13 13:51	1
Bromoethene(Vinyl Bromide)	0.20	U	0.20	0.019	ppb v/v			05/22/13 13:51	1
Trichlorofluoromethane	0.20	U	0.20	0.021	ppb v/v			05/22/13 13:51	1
Freon TF	0.20	U	0.20	0.020	ppb v/v			05/22/13 13:51	1
1,1-Dichloroethene	0.20	U	0.20	0.086	ppb v/v			05/22/13 13:51	1
Acetone	5.0	U	5.0	0.40	ppb v/v			05/22/13 13:51	1
Isopropyl alcohol	5.0	U	5.0	0.076	ppb v/v			05/22/13 13:51	1
Carbon disulfide	0.50	U	0.50	0.020	ppb v/v			05/22/13 13:51	1
3-Chloropropene	0.50	U	0.50	0.047	ppb v/v			05/22/13 13:51	1
Methylene Chloride	0.0568	J	0.50	0.023	ppb v/v			05/22/13 13:51	1
tert-Butyl alcohol	5.0	U	5.0	0.041	ppb v/v			05/22/13 13:51	1
Methyl tert-butyl ether	0.20	U	0.20	0.015	ppb v/v			05/22/13 13:51	1
trans-1,2-Dichloroethene	0.20	U	0.20	0.023	ppb v/v			05/22/13 13:51	1
n-Hexane	0.0343	J	0.20	0.020	ppb v/v			05/22/13 13:51	1
1,1-Dichloroethane	0.20	U	0.20	0.023	ppb v/v			05/22/13 13:51	1
Methyl Ethyl Ketone	0.50	U	0.50	0.025	ppb v/v			05/22/13 13:51	1
cis-1,2-Dichloroethene	0.20	U	0.20	0.084	ppb v/v			05/22/13 13:51	1
1,2-Dichloroethene, Total	0.20	U	0.20	0.023	ppb v/v			05/22/13 13:51	1
Chloroform	0.20	U	0.20	0.024	ppb v/v			05/22/13 13:51	1
Tetrahydrofuran	5.0	U	5.0	0.029	ppb v/v			05/22/13 13:51	1
1,1,1-Trichloroethane	0.20	U	0.20	0.020	ppb v/v			05/22/13 13:51	1
Cyclohexane	0.20	U	0.20	0.019	ppb v/v			05/22/13 13:51	1
Carbon tetrachloride	0.20	U	0.20	0.013	ppb v/v			05/22/13 13:51	1
2,2,4-Trimethylpentane	0.20	U	0.20	0.015	ppb v/v			05/22/13 13:51	1
Benzene	0.20	U	0.20	0.018	ppb v/v			05/22/13 13:51	1
1,2-Dichloroethane	0.20	U	0.20	0.018	ppb v/v			05/22/13 13:51	1
n-Heptane	0.20	U	0.20	0.017	ppb v/v			05/22/13 13:51	1
Trichloroethene	0.20	U	0.20	0.0092	ppb v/v			05/22/13 13:51	1
Methyl methacrylate	0.50	U	0.50	0.016	ppb v/v			05/22/13 13:51	1
1,2-Dichloropropane	0.20	U	0.20	0.023	ppb v/v			05/22/13 13:51	1
1,4-Dioxane	5.0	U	5.0	0.070	ppb v/v			05/22/13 13:51	1
Bromodichloromethane	0.20	U	0.20	0.012	ppb v/v			05/22/13 13:51	1
cis-1,3-Dichloropropene	0.20	U	0.20	0.013	ppb v/v			05/22/13 13:51	1
methyl isobutyl ketone	0.50	U	0.50	0.034	ppb v/v			05/22/13 13:51	1
Toluene	0.20	U	0.20	0.014	ppb v/v			05/22/13 13:51	1
trans-1,3-Dichloropropene	0.20	U	0.20	0.015	ppb v/v			05/22/13 13:51	1
1,1,2-Trichloroethane	0.20	U	0.20	0.016	ppb v/v			05/22/13 13:51	1
Tetrachloroethene	0.20	U	0.20	0.015	ppb v/v			05/22/13 13:51	1
Methyl Butyl Ketone (2-Hexanone)	0.50	U	0.50	0.040	ppb v/v			05/22/13 13:51	1
Dibromochloromethane	0.20	U	0.20	0.011	ppb v/v			05/22/13 13:51	1

TestAmerica Burlington

# QC Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 200-55927/4

Client Sample ID: Method Blank  
Prep Type: Total/NA

Matrix: Air

Analysis Batch: 55927

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	0.20	U	0.20	U	0.20	0.014	ppb v/v			05/22/13 13:51	1
Chlorobenzene	0.20	U	0.20	U	0.20	0.013	ppb v/v			05/22/13 13:51	1
Ethylbenzene	0.20	U	0.20	U	0.20	0.015	ppb v/v			05/22/13 13:51	1
m,p-Xylene	0.50	U	0.50	U	0.50	0.022	ppb v/v			05/22/13 13:51	1
Xylene, o-	0.20	U	0.20	U	0.20	0.016	ppb v/v			05/22/13 13:51	1
Xylene (total)	0.20	U	0.20	U	0.20	0.016	ppb v/v			05/22/13 13:51	1
Styrene	0.20	U	0.20	U	0.20	0.011	ppb v/v			05/22/13 13:51	1
Bromoform	0.20	U	0.20	U	0.20	0.0072	ppb v/v			05/22/13 13:51	1
Cumene	0.20	U	0.20	U	0.20	0.011	ppb v/v			05/22/13 13:51	1
1,1,2,2-Tetrachloroethane	0.20	U	0.20	U	0.20	0.011	ppb v/v			05/22/13 13:51	1
n-Propylbenzene	0.20	U	0.20	U	0.20	0.013	ppb v/v			05/22/13 13:51	1
4-Ethyltoluene	0.20	U	0.20	U	0.20	0.015	ppb v/v			05/22/13 13:51	1
1,3,5-Trimethylbenzene	0.20	U	0.20	U	0.20	0.019	ppb v/v			05/22/13 13:51	1
2-Chlorotoluene	0.20	U	0.20	U	0.20	0.013	ppb v/v			05/22/13 13:51	1
tert-Butylbenzene	0.20	U	0.20	U	0.20	0.011	ppb v/v			05/22/13 13:51	1
1,2,4-Trimethylbenzene	0.20	U	0.20	U	0.20	0.021	ppb v/v			05/22/13 13:51	1
sec-Butylbenzene	0.20	U	0.20	U	0.20	0.015	ppb v/v			05/22/13 13:51	1
4-Isopropyltoluene	0.20	U	0.20	U	0.20	0.020	ppb v/v			05/22/13 13:51	1
1,3-Dichlorobenzene	0.20	U	0.20	U	0.20	0.019	ppb v/v			05/22/13 13:51	1
1,4-Dichlorobenzene	0.20	U	0.20	U	0.20	0.018	ppb v/v			05/22/13 13:51	1
Benzyl chloride	0.20	U	0.20	U	0.20	0.022	ppb v/v			05/22/13 13:51	1
n-Butylbenzene	0.20	U	0.20	U	0.20	0.022	ppb v/v			05/22/13 13:51	1
1,2-Dichlorobenzene	0.20	U	0.20	U	0.20	0.026	ppb v/v			05/22/13 13:51	1
1,2,4-Trichlorobenzene	0.50	U	0.50	U	0.50	0.030	ppb v/v			05/22/13 13:51	1
Hexachlorobutadiene	0.20	U	0.20	U	0.20	0.029	ppb v/v			05/22/13 13:51	1
Naphthalene	0.50	U	0.50	U	0.50	0.038	ppb v/v			05/22/13 13:51	1

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	2.5	U	2.5	U	2.5	0.099	ug/m3			05/22/13 13:51	1
Freon 22	1.8	U	1.8	U	1.8	0.081	ug/m3			05/22/13 13:51	1
1,2-Dichlorotetrafluoroethane	1.4	U	1.4	U	1.4	0.14	ug/m3			05/22/13 13:51	1
Chloromethane	1.0	U	1.0	U	1.0	0.070	ug/m3			05/22/13 13:51	1
n-Butane	1.2	U	1.2	U	1.2	0.052	ug/m3			05/22/13 13:51	1
Vinyl chloride	0.51	U	0.51	U	0.51	0.023	ug/m3			05/22/13 13:51	1
1,3-Butadiene	0.44	U	0.44	U	0.44	0.055	ug/m3			05/22/13 13:51	1
Bromomethane	0.78	U	0.78	U	0.78	0.10	ug/m3			05/22/13 13:51	1
Chloroethane	1.3	U	1.3	U	1.3	0.087	ug/m3			05/22/13 13:51	1
Bromoethene(Vinyl Bromide)	0.87	U	0.87	U	0.87	0.083	ug/m3			05/22/13 13:51	1
Trichlorofluoromethane	1.1	U	1.1	U	1.1	0.12	ug/m3			05/22/13 13:51	1
Freon TF	1.5	U	1.5	U	1.5	0.15	ug/m3			05/22/13 13:51	1
1,1-Dichloroethene	0.79	U	0.79	U	0.79	0.34	ug/m3			05/22/13 13:51	1
Acetone	12	U	12	U	12	0.95	ug/m3			05/22/13 13:51	1
Isopropyl alcohol	12	U	12	U	12	0.19	ug/m3			05/22/13 13:51	1
Carbon disulfide	1.6	U	1.6	U	1.6	0.062	ug/m3			05/22/13 13:51	1
3-Chloropropene	1.6	U	1.6	U	1.6	0.15	ug/m3			05/22/13 13:51	1
Methylene Chloride	0.197	J			1.7	0.080	ug/m3			05/22/13 13:51	1
tert-Butyl alcohol	15	U	15	U	15	0.12	ug/m3			05/22/13 13:51	1
Methyl tert-butyl ether	0.72	U	0.72	U	0.72	0.054	ug/m3			05/22/13 13:51	1

TestAmerica Burlington

# QC Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: MB 200-55927/4

Client Sample ID: Method Blank  
Prep Type: Total/NA

Matrix: Air

Analysis Batch: 55927

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	0.79	U	0.79	0.091	ug/m3			05/22/13 13:51	1
n-Hexane	0.121	J	0.70	0.070	ug/m3			05/22/13 13:51	1
1,1-Dichloroethane	0.81	U	0.81	0.093	ug/m3			05/22/13 13:51	1
Methyl Ethyl Ketone	1.5	U	1.5	0.074	ug/m3			05/22/13 13:51	1
cis-1,2-Dichloroethene	0.79	U	0.79	0.33	ug/m3			05/22/13 13:51	1
1,2-Dichloroethene, Total	0.79	U	0.79	0.091	ug/m3			05/22/13 13:51	1
Chloroform	0.98	U	0.98	0.12	ug/m3			05/22/13 13:51	1
Tetrahydrofuran	15	U	15	0.086	ug/m3			05/22/13 13:51	1
1,1,1-Trichloroethane	1.1	U	1.1	0.11	ug/m3			05/22/13 13:51	1
Cyclohexane	0.69	U	0.69	0.065	ug/m3			05/22/13 13:51	1
Carbon tetrachloride	1.3	U	1.3	0.082	ug/m3			05/22/13 13:51	1
2,2,4-Trimethylpentane	0.93	U	0.93	0.070	ug/m3			05/22/13 13:51	1
Benzene	0.64	U	0.64	0.058	ug/m3			05/22/13 13:51	1
1,2-Dichloroethane	0.81	U	0.81	0.073	ug/m3			05/22/13 13:51	1
n-Heptane	0.82	U	0.82	0.070	ug/m3			05/22/13 13:51	1
Trichloroethylene	1.1	U	1.1	0.049	ug/m3			05/22/13 13:51	1
Methyl methacrylate	2.0	U	2.0	0.066	ug/m3			05/22/13 13:51	1
1,2-Dichloropropane	0.92	U	0.92	0.11	ug/m3			05/22/13 13:51	1
1,4-Dioxane	18	U	18	0.25	ug/m3			05/22/13 13:51	1
Bromodichloromethane	1.3	U	1.3	0.080	ug/m3			05/22/13 13:51	1
cis-1,3-Dichloropropene	0.91	U	0.91	0.059	ug/m3			05/22/13 13:51	1
methyl isobutyl ketone	2.0	U	2.0	0.14	ug/m3			05/22/13 13:51	1
Toluene	0.75	U	0.75	0.053	ug/m3			05/22/13 13:51	1
trans-1,3-Dichloropropene	0.91	U	0.91	0.068	ug/m3			05/22/13 13:51	1
1,1,2-Trichloroethane	1.1	U	1.1	0.087	ug/m3			05/22/13 13:51	1
Tetrachloroethylene	1.4	U	1.4	0.10	ug/m3			05/22/13 13:51	1
Methyl Butyl Ketone (2-Hexanone)	2.0	U	2.0	0.16	ug/m3			05/22/13 13:51	1
Dibromochloromethane	1.7	U	1.7	0.094	ug/m3			05/22/13 13:51	1
1,2-Dibromoethane	1.5	U	1.5	0.11	ug/m3			05/22/13 13:51	1
Chlorobenzene	0.92	U	0.92	0.060	ug/m3			05/22/13 13:51	1
Ethylbenzene	0.87	U	0.87	0.065	ug/m3			05/22/13 13:51	1
m,p-Xylene	2.2	U	2.2	0.096	ug/m3			05/22/13 13:51	1
Xylene, o-	0.87	U	0.87	0.069	ug/m3			05/22/13 13:51	1
Xylene (total)	0.87	U	0.87	0.069	ug/m3			05/22/13 13:51	1
Styrene	0.85	U	0.85	0.047	ug/m3			05/22/13 13:51	1
Bromoform	2.1	U	2.1	0.074	ug/m3			05/22/13 13:51	1
Cumene	0.98	U	0.98	0.054	ug/m3			05/22/13 13:51	1
1,1,2,2-Tetrachloroethane	1.4	U	1.4	0.076	ug/m3			05/22/13 13:51	1
n-Propylbenzene	0.98	U	0.98	0.064	ug/m3			05/22/13 13:51	1
4-Ethyltoluene	0.98	U	0.98	0.074	ug/m3			05/22/13 13:51	1
1,3,5-Trimethylbenzene	0.98	U	0.98	0.093	ug/m3			05/22/13 13:51	1
2-Chlorotoluene	1.0	U	1.0	0.067	ug/m3			05/22/13 13:51	1
tert-Butylbenzene	1.1	U	1.1	0.060	ug/m3			05/22/13 13:51	1
1,2,4-Trimethylbenzene	0.98	U	0.98	0.10	ug/m3			05/22/13 13:51	1
sec-Butylbenzene	1.1	U	1.1	0.082	ug/m3			05/22/13 13:51	1
4-Isopropyltoluene	1.1	U	1.1	0.11	ug/m3			05/22/13 13:51	1
1,3-Dichlorobenzene	1.2	U	1.2	0.11	ug/m3			05/22/13 13:51	1
1,4-Dichlorobenzene	1.2	U	1.2	0.11	ug/m3			05/22/13 13:51	1

TestAmerica Burlington

# QC Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: MB 200-55927/4**

**Matrix: Air**

**Analysis Batch: 55927**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl chloride			1.0	U	1.0	0.11	ug/m3			05/22/13 13:51	1
n-Butylbenzene			1.1	U	1.1	0.12	ug/m3			05/22/13 13:51	1
1,2-Dichlorobenzene			1.2	U	1.2	0.16	ug/m3			05/22/13 13:51	1
1,2,4-Trichlorobenzene			3.7	U	3.7	0.22	ug/m3			05/22/13 13:51	1
Hexachlorobutadiene			2.1	U	2.1	0.31	ug/m3			05/22/13 13:51	1
Naphthalene			2.6	U	2.6	0.20	ug/m3			05/22/13 13:51	1

**Lab Sample ID: LCS 200-55927/3**

**Matrix: Air**

**Analysis Batch: 55927**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
Dichlorodifluoromethane	10.0	10.7		ppb v/v		107	70 - 130
Freon 22	10.0	9.86		ppb v/v		99	70 - 130
1,2-Dichlorotetrafluoroethane	10.0	10.4		ppb v/v		104	70 - 130
Chloromethane	10.0	9.72		ppb v/v		97	70 - 130
n-Butane	10.0	9.21		ppb v/v		92	70 - 130
Vinyl chloride	10.0	9.83		ppb v/v		98	70 - 130
1,3-Butadiene	10.0	9.99		ppb v/v		100	70 - 130
Bromomethane	10.0	9.95		ppb v/v		100	70 - 130
Chloroethane	10.0	9.40		ppb v/v		94	70 - 130
Bromoethene(Vinyl Bromide)	10.0	10.6		ppb v/v		106	70 - 130
Trichlorofluoromethane	10.0	10.8		ppb v/v		108	70 - 130
Freon TF	10.0	11.2		ppb v/v		112	70 - 130
1,1-Dichloroethene	10.0	11.2		ppb v/v		112	70 - 130
Acetone	10.0	12.6		ppb v/v		126	70 - 130
Isopropyl alcohol	10.0	9.91		ppb v/v		99	70 - 130
Carbon disulfide	10.0	10.3		ppb v/v		103	70 - 130
3-Chloropropene	10.0	9.60		ppb v/v		96	70 - 130
Methylene Chloride	10.0	10.6		ppb v/v		106	70 - 130
tert-Butyl alcohol	10.0	10.3		ppb v/v		103	70 - 130
Methyl tert-butyl ether	10.0	10.4		ppb v/v		104	70 - 130
trans-1,2-Dichloroethene	10.0	9.97		ppb v/v		100	70 - 130
n-Hexane	10.0	9.84		ppb v/v		98	70 - 130
1,1-Dichloroethane	10.0	9.58		ppb v/v		96	70 - 130
Methyl Ethyl Ketone	10.0	9.34		ppb v/v		93	70 - 130
cis-1,2-Dichloroethene	10.0	10.6		ppb v/v		106	70 - 130
Chloroform	10.0	10.5		ppb v/v		105	70 - 130
Tetrahydrofuran	10.0	10.4		ppb v/v		104	70 - 130
1,1,1-Trichloroethane	10.0	9.97		ppb v/v		100	70 - 130
Cyclohexane	10.0	9.59		ppb v/v		96	70 - 130
Carbon tetrachloride	10.0	9.94		ppb v/v		99	70 - 130
2,2,4-Trimethylpentane	10.0	9.36		ppb v/v		94	70 - 130
Benzene	10.0	9.56		ppb v/v		96	70 - 130
1,2-Dichloroethane	10.0	9.75		ppb v/v		97	70 - 130
n-Heptane	10.0	9.09		ppb v/v		91	70 - 130
Trichloroethene	10.0	10.1		ppb v/v		101	70 - 130
Methyl methacrylate	10.0	10.1		ppb v/v		101	70 - 130

TestAmerica Burlington

# QC Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 200-55927/3

Matrix: Air

Analysis Batch: 55927

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	5
	Added	Result	Qualifier					
1,2-Dichloropropane	10.0	9.90		ppb v/v		99	70 - 130	6
1,4-Dioxane	10.0	10.5		ppb v/v		105	70 - 130	7
Bromodichloromethane	10.0	10.8		ppb v/v		108	70 - 130	8
cis-1,3-Dichloropropene	10.0	10.4		ppb v/v		104	70 - 130	9
methyl isobutyl ketone	10.0	9.96		ppb v/v		100	70 - 130	10
Toluene	10.0	9.66		ppb v/v		97	70 - 130	11
trans-1,3-Dichloropropene	10.0	10.6		ppb v/v		106	70 - 130	12
1,1,2-Trichloroethane	10.0	9.35		ppb v/v		94	70 - 130	13
Tetrachloroethene	10.0	9.52		ppb v/v		95	70 - 130	14
Methyl Butyl Ketone (2-Hexanone)	10.0	10.9		ppb v/v		109	70 - 130	1
Dibromochloromethane	10.0	10.8		ppb v/v		108	70 - 130	2
1,2-Dibromoethane	10.0	10.1		ppb v/v		101	70 - 130	3
Chlorobenzene	10.0	9.86		ppb v/v		99	70 - 130	4
Ethylbenzene	10.0	9.86		ppb v/v		99	70 - 130	5
m,p-Xylene	20.0	19.7		ppb v/v		98	70 - 130	6
Xylene, o-	10.0	9.66		ppb v/v		97	70 - 130	7
Styrene	10.0	9.46		ppb v/v		95	70 - 130	8
Bromoform	10.0	10.9		ppb v/v		109	70 - 130	9
Cumene	10.0	9.90		ppb v/v		99	70 - 130	10
1,1,2,2-Tetrachloroethane	10.0	9.49		ppb v/v		95	70 - 130	11
n-Propylbenzene	10.0	10.2		ppb v/v		102	70 - 130	12
4-Ethyltoluene	10.0	10.4		ppb v/v		104	70 - 130	13
1,3,5-Trimethylbenzene	10.0	9.59		ppb v/v		96	70 - 130	14
2-Chlorotoluene	10.0	10.1		ppb v/v		101	70 - 130	1
tert-Butylbenzene	10.0	9.79		ppb v/v		98	70 - 130	2
1,2,4-Trimethylbenzene	10.0	9.50		ppb v/v		95	70 - 130	3
sec-Butylbenzene	10.0	9.76		ppb v/v		98	70 - 130	4
4-Isopropyltoluene	10.0	9.82		ppb v/v		98	70 - 130	5
1,3-Dichlorobenzene	10.0	10.1		ppb v/v		101	70 - 130	6
1,4-Dichlorobenzene	10.0	10.2		ppb v/v		102	70 - 130	7
Benzyl chloride	10.0	10.7		ppb v/v		107	70 - 130	8
n-Butylbenzene	10.0	10.0		ppb v/v		100	70 - 130	9
1,2-Dichlorobenzene	10.0	9.43		ppb v/v		94	70 - 130	10
1,2,4-Trichlorobenzene	10.0	8.05		ppb v/v		81	70 - 130	11
Hexachlorobutadiene	10.0	8.43		ppb v/v		84	70 - 130	12
Naphthalene	10.0	7.68		ppb v/v		77	70 - 130	13
Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	14
	Added	Result	Qualifier					
Dichlorodifluoromethane	49	53.0		ug/m3		107	70 - 130	1
Freon 22	35	34.9		ug/m3		99	70 - 130	2
1,2-Dichlorotetrafluoroethane	70	72.9		ug/m3		104	70 - 130	3
Chloromethane	21	20.1		ug/m3		97	70 - 130	4
n-Butane	24	21.9		ug/m3		92	70 - 130	5
Vinyl chloride	26	25.1		ug/m3		98	70 - 130	6
1,3-Butadiene	22	22.1		ug/m3		100	70 - 130	7
Bromomethane	39	38.6		ug/m3		100	70 - 130	8
Chloroethane	26	24.8		ug/m3		94	70 - 130	9

TestAmerica Burlington

# QC Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCS 200-55927/3**

**Matrix: Air**

**Analysis Batch: 55927**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike	LCS		Unit	D	%Rec	%Rec.
	Added	Result	Qualifier				
Bromoethene(Vinyl Bromide)	44	46.3		ug/m3	106	70 - 130	
Trichlorofluoromethane	56	60.7		ug/m3	108	70 - 130	
Freon TF	77	85.8		ug/m3	112	70 - 130	
1,1-Dichloroethene	40	44.5		ug/m3	112	70 - 130	
Acetone	24	29.9		ug/m3	126	70 - 130	
Isopropyl alcohol	25	24.4		ug/m3	99	70 - 130	
Carbon disulfide	31	32.1		ug/m3	103	70 - 130	
3-Chloropropene	31	30.1		ug/m3	96	70 - 130	
Methylene Chloride	35	36.9		ug/m3	106	70 - 130	
tert-Butyl alcohol	30	31.3		ug/m3	103	70 - 130	
Methyl tert-butyl ether	36	37.6		ug/m3	104	70 - 130	
trans-1,2-Dichloroethene	40	39.5		ug/m3	100	70 - 130	
n-Hexane	35	34.7		ug/m3	98	70 - 130	
1,1-Dichloroethane	40	38.8		ug/m3	96	70 - 130	
Methyl Ethyl Ketone	29	27.5		ug/m3	93	70 - 130	
cis-1,2-Dichloroethene	40	41.9		ug/m3	106	70 - 130	
Chloroform	49	51.5		ug/m3	105	70 - 130	
Tetrahydrofuran	29	30.6		ug/m3	104	70 - 130	
1,1,1-Trichloroethane	55	54.4		ug/m3	100	70 - 130	
Cyclohexane	34	33.0		ug/m3	96	70 - 130	
Carbon tetrachloride	63	62.5		ug/m3	99	70 - 130	
2,2,4-Trimethylpentane	47	43.7		ug/m3	94	70 - 130	
Benzene	32	30.5		ug/m3	96	70 - 130	
1,2-Dichloroethane	40	39.4		ug/m3	97	70 - 130	
n-Heptane	41	37.2		ug/m3	91	70 - 130	
Trichloroethene	54	54.2		ug/m3	101	70 - 130	
Methyl methacrylate	41	41.3		ug/m3	101	70 - 130	
1,2-Dichloropropane	46	45.7		ug/m3	99	70 - 130	
1,4-Dioxane	36	37.8		ug/m3	105	70 - 130	
Bromodichloromethane	67	72.3		ug/m3	108	70 - 130	
cis-1,3-Dichloropropene	45	47.2		ug/m3	104	70 - 130	
methyl isobutyl ketone	41	40.8		ug/m3	100	70 - 130	
Toluene	38	36.4		ug/m3	97	70 - 130	
trans-1,3-Dichloropropene	45	48.0		ug/m3	106	70 - 130	
1,1,2-Trichloroethane	55	51.0		ug/m3	94	70 - 130	
Tetrachloroethene	68	64.5		ug/m3	95	70 - 130	
Methyl Butyl Ketone (2-Hexanone)	41	44.5		ug/m3	109	70 - 130	
Dibromochloromethane	85	91.8		ug/m3	108	70 - 130	
1,2-Dibromoethane	77	77.6		ug/m3	101	70 - 130	
Chlorobenzene	46	45.3		ug/m3	99	70 - 130	
Ethylbenzene	43	42.8		ug/m3	99	70 - 130	
m,p-Xylene	87	85.5		ug/m3	98	70 - 130	
Xylene, o-	43	42.0		ug/m3	97	70 - 130	
Styrene	43	40.3		ug/m3	95	70 - 130	
Bromoform	100	112		ug/m3	109	70 - 130	
Cumene	49	48.6		ug/m3	99	70 - 130	
1,1,2,2-Tetrachloroethane	69	65.2		ug/m3	95	70 - 130	

TestAmerica Burlington

# QC Sample Results

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

Lab Sample ID: LCS 200-55927/3

Matrix: Air

Analysis Batch: 55927

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
n-Propylbenzene	49	50.0		ug/m3		102	70 - 130
4-Ethyltoluene	49	51.1		ug/m3		104	70 - 130
1,3,5-Trimethylbenzene	49	47.2		ug/m3		96	70 - 130
2-Chlorotoluene	52	52.4		ug/m3		101	70 - 130
tert-Butylbenzene	55	53.8		ug/m3		98	70 - 130
1,2,4-Trimethylbenzene	49	46.7		ug/m3		95	70 - 130
sec-Butylbenzene	55	53.6		ug/m3		98	70 - 130
4-Isopropyltoluene	55	53.9		ug/m3		98	70 - 130
1,3-Dichlorobenzene	60	60.6		ug/m3		101	70 - 130
1,4-Dichlorobenzene	60	61.3		ug/m3		102	70 - 130
Benzyl chloride	52	55.3		ug/m3		107	70 - 130
n-Butylbenzene	55	55.0		ug/m3		100	70 - 130
1,2-Dichlorobenzene	60	56.7		ug/m3		94	70 - 130
1,2,4-Trichlorobenzene	74	59.8		ug/m3		81	70 - 130
Hexachlorobutadiene	110	89.9		ug/m3		84	70 - 130
Naphthalene	52	40.2		ug/m3		77	70 - 130

## QC Association Summary

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

### Air - GC/MS VOA

Analysis Batch: 55927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
200-16520-1	SG-1	Total/NA	Air	TO-15	5
200-16520-2	SG-2	Total/NA	Air	TO-15	6
200-16520-3	SG-3	Total/NA	Air	TO-15	7
LCS 200-55927/3	Lab Control Sample	Total/NA	Air	TO-15	8
MB 200-55927/4	Method Blank	Total/NA	Air	TO-15	9

# Lab Chronicle

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

**Client Sample ID: SG-1**

Date Collected: 05/15/13 10:52

Date Received: 05/17/13 10:10

**Lab Sample ID: 200-16520-1**

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		10	55927	05/22/13 15:31	PAD	TAL BUR

**Client Sample ID: SG-2**

Date Collected: 05/15/13 11:43

Date Received: 05/17/13 10:10

**Lab Sample ID: 200-16520-2**

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		10	55927	05/22/13 16:21	PAD	TAL BUR

**Client Sample ID: SG-3**

Date Collected: 05/15/13 12:15

Date Received: 05/17/13 10:10

**Lab Sample ID: 200-16520-3**

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO-15		10	55927	05/22/13 17:11	PAD	TAL BUR

## Laboratory References:

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

## Certification Summary

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

### Laboratory: TestAmerica Burlington

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-13
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-13-15
Florida	NELAP	4	E87467	06-30-13
L-A-B	DoD ELAP		L2336	10-26-13
Louisiana	NELAP	6	176292	06-30-13
Minnesota	NELAP	5	050-999-436	12-31-13
New Hampshire	NELAP	1	2006	12-18-13
New Jersey	NELAP	2	VT972	06-30-13
New York	NELAP	2	10391	04-01-14
Pennsylvania	NELAP	3	68-00489	04-30-14
USDA	Federal		P330-11-00093	02-17-14
Vermont	State Program	1	VT-4000	12-31-13
Virginia	NELAP	3	460209	12-14-13

## Method Summary

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

Method	Method Description	Protocol	Laboratory
TO-15	Volatile Organic Compounds in Ambient Air	EPA	TAL BUR

**Protocol References:**

EPA = US Environmental Protection Agency

**Laboratory References:**

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

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## Sample Summary

Client: CDM Smith, Inc.  
Project/Site: Cedartown

TestAmerica Job ID: 200-16520-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
200-16520-1	SG-1	Air	05/15/13 10:52	05/17/13 10:10
200-16520-2	SG-2	Air	05/15/13 11:43	05/17/13 10:10
200-16520-3	SG-3	Air	05/15/13 12:15	05/17/13 10:10

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TestAmerica Burlington

**TestAmerica Burlington**  
330 Community Drive

Suite 11

South Burlington, VT 05403  
Telephone 802-660-1990 fax 802-660-1919

## Canister Samples Chain of Custody Record

TestAmerica Analytical Testing Corp. assumes no liability with respect to the collection and shipment of these samples.

Client Contact Information		Project Manager: Andrew Rommel		Samples Collected By: Daniel Forbes		of COCs		
Company: CDM Smith	Phone: 404-374-8728	Email: daniel.forbes@cdmsmith.com	Site Contact: Daniel Forbes	TA Contact:				
Address: 3115 Northside Parkway NW Suite 300	City/State/Zip: Atlanta, GA 30327	Site ID: 94C						
Phone: 404-770-1400	FAX:							
Project Name: Cedartown	Analysis Turnaround Time							
Site: Cedartown, GA	Standard (Specify) <u>5 Day</u>							
PO#	Rush (Specify)							
Sample Identification		Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID
S6 - 1	5-15-13	1050	1052	-28.5	-5	4675	3583	✓
S6 - 2	5-15-13	1140	1143	-29.0	-5	4675	4959	✓
S6 - 3	5-15-13	1212	1215	-29.0	-5	4675	4654	✓
Temperature (Fahrenheit)								
Interior	Ambient							
Start								
Stop								
Pressure (inches of Hg)								
Interior	Ambient							
Start								
Stop								

**Special Instructions/QC Requirements & Comments:**

Samples Shipped by: Daniel Forbes Date/Time: 5/15/13 / 1630 Samples Received by: Heidi Pohlman Received by: \_\_\_\_\_

Samples Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Received by: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Received by: \_\_\_\_\_

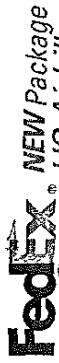


200-16520 COC

**Shipper Name:** \_\_\_\_\_

Opened by: Condition:

Condition



**NEW Package**  
Express US Airbill

FedEx Tracking Number

From 0200

To 0200

1 From 05/10/13 Date 5-10-13

Sender's Name Daniel Forbes Phone 919 452-2648

Company CDM Smith

Address 5400 Glenwood Avenue 300 Dept/Room/Extension

City Raleigh State NC Zip 27612

2 Your Internal Billing Reference

3 To Recipients Test Address Burlington Phone 802 640-1910

4 Next Business Day

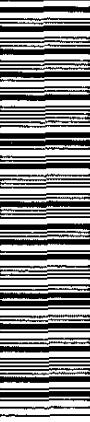
5 Packaging FedEx Envelope\*  FedEx Pak\*  FedEx Box  FedEx Tube  Other

6 Special Handling and Delivery Signature Options

7 Payment Bill to: Sender  Recipient  Third Party  Credit Card  Cash/Check  Credit Card Auth.

Total Packages 10 lbs. Total Weight 10 lbs. Enter FedEx Acct. No. or Credit Card No. below: Credit Card Acct. No.

8022 5083 5023



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fedex.com 1800GoFedEx 1800.463.3339

Packages up to 150 lbs.  
For packages over 150 lbs. see the new  
FedEx Express Freight US Airbill.

2 or 3 Business Days

AM

PM

Saturday Delivery NOT Available

FedEx First Overnight:  
Express business shipment delivery to select locations. FedEx shipments will be delivered on Monday unless Saturday delivery is selected.

FedEx Priority Overnight:  
Not available on Sunday. FedEx shipments will be delivered on Monday unless Saturday delivery is selected.

FedEx Standard Overnight:  
Not available on Sunday. FedEx delivery will be delivered on Saturday unless Saturday delivery is selected.

FedEx Express Saver:  
Not available on Saturday unless Saturday delivery is selected.

Indirect Signature  
Indirect signature is available at recipient's address, someone at neighboring address may sign or delivery for recipient at alternate day or time.

Direct Signature  
Someone at recipient's address may sign for delivery fee applies.

Dry Ice 15 lbs.  Cargo Aircraft Only

Credit Card Auth.

644

Tariff liability is limited to US\$100 unless you declare a higher value. See the current FedEx Service Guide for details.

Deal

## Login Sample Receipt Checklist

Client: CDM Smith, Inc.

Job Number: 200-16520-1

**Login Number: 16520**

**List Source: TestAmerica Burlington**

**List Number: 1**

**Creator: Poucher, Stephanie A**

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.	6
The cooler's custody seal, if present, is intact.	True	603756	7
Sample custody seals, if present, are intact.	True		8
The cooler or samples do not appear to have been compromised or tampered with.	True		9
Samples were received on ice.	N/A	Thermal preservation not required.	10
Cooler Temperature is acceptable.	True		11
Cooler Temperature is recorded.	True		12
COC is present.	True		13
COC is filled out in ink and legible.	True		14
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 containers received 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		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True		
Multiphasic samples are not present.	N/A		
Samples do not require splitting or compositing.	N/A		
Residual Chlorine Checked.	N/A		

## Appendix E

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### VISL Calculations

## OSWER VAPOR INTRUSION ASSESSMENT

Vapor Intrusion Screening Level (VISL) Calculator Version 2.0, November 2012 RSLs

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Residential	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-05	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (°C)	Tow	19.4	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for groundwater target concentrations

CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk via Vapor Intrusion from Soil Source?		Target Indoor Air Conc. @ TCR = 10E-06 or THQ = 1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 10E-06 or THQ = 1	Target Ground Water Conc. @ TCR = 10E-06 or THQ = 1	Is Target Ground Water Conc. < MCL?	Temperature for Groundwater Vapor Conc.	Lower Explosive Limit**	LEL Source	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator	Target Indoor Air Conc. for Carcinogens @ TCR = 10E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 1
		Cvp > Cia,target/Fs?	Cvp > Cia,target/AFgw?															
		Yes/No	Yes/No															
x 75-34-3	Dichloroethane, 1,1-	Yes	Yes	1.5E+01	C	1.5E+02	8.4E+01	--	19.4	5.4	N							
x 75-35-4	Dichloroethylene, 1,1-	Yes	Yes	2.1E+02	NC	2.1E+03	2.4E+02	No (7)	19.4	6.5	N							
x 540-59-0	Dichloroethylene, 1,2- (Mixed Isomers)	No	Inhal. Tox. Info	No	Inhal. Tox. Info	--	--	--	19.4		M							
x 156-59-2	Dichloroethylene, 1,2-cis-	No	Inhal. Tox. Info	No	Inhal. Tox. Info	--	--	--	No (70)	19.4	9.7	M						
x 156-60-5	Dichloroethylene, 1,2-trans-	Yes	Yes	6.3E+01	NC	6.3E+02	4.7E+02	No (100)	19.4	9.7	M							
x 71-55-6	Trichloroethylene, 1,1,1-	Yes	Yes	5.2E+03	NC	5.2E+04	9.5E+03	No (200)	19.4	7.5	N							
x 79-01-6	Trichloroethylene	Yes	Yes	2.1E+00	NC	2.1E+00	6.8E+00	No (5)	19.4	8	N							
x 75-01-4	Vinyl Chloride	Yes	Yes	1.6E+00	C	1.6E+01	1.7E+00	Yes (2)	19.4	3.6	N							

Notes:

x (1) Inhalation Pathway Exposure Parameters (RME):

	Units	Residential		Commercial		
	Symbol	Value	Symbol	Symbol	Value	
x Exposure Scenario	ATc_R	70	ATc_C	70	ATc	70
x Averaging time for carcinogens	ATnc_R	30	ATnc_C	25	ATnc	30
x Averaging time for non-carcinogens	(yrs)					
x Exposure duration	ED_R	30	ED_C	25	ED	30
x Exposure frequency	EF_R	350	EF_C	250	EF	350
x Exposure time	ET_R	24	ET_C	8	ET	24

x (2) Generic Attenuation Factors:

	Residential		Commercial	
	Symbol	Value	Symbol	Value
x Source Medium of Vapors	AFgw_R	0.001	AFgw_C	0.001
x Groundwater	( - )			
x Sub-Slab and Exterior Soil Gas	AFss_R	0.1	AFss_C	0.1

x (3) Formulas:

x Cia, target = MIN (Cia,c; Cia,nc)  
x Cia,c (ug/m³) = TCR x ATc x (365 days/yr) / (24 hrs/day) / (ED x EF x ET x IUR)  
x Cia,nc (ug/m³) = THQ x ATnc x (365 days/yr) x (24 hrs/day) x RIC x (1000 ug/mg) / (ED x EF x ET)

x (4) Special Case Chemicals:

	Residential		Commercial	
	Symbol	Value	Symbol	Value
x Trichloroethylene	mIURCE_R	1.00E-06	mIURCE_C	0.00E+00
x	IURCE_R	3.10E-06	IURCE_C	4.10E-06

x Mutagenic Chemicals

The exposure durations and age-dependent adjustment factors for mutagenic-mode-of-action are listed in the table below:

Note: This section applies to trichloroethylene and other mutagenic chemicals, but not to vinyl chloride.	Age Cohort	Exposure Duration (years)	Age-dependent adjustment factor
	0 - 2 years	2	10
	2 - 6 years	4	3
	6 - 16 years	10	3
	16 - 30 years	14	1

x Mutagenic-mode-of-action (MMAO) adjustment factor

76

This factor is used in the equations for mutagenic chemicals.

x Vinyl Chloride

See the Navigation Guide equation for Cia,c for vinyl chloride.

x Notation:

- x NVT = Not sufficiently volatile and/or toxic to pose inhalation risk in selected exposure scenario for the indicated medium
- x C = Carcinogenic
- x NC = Non-carcinogenic
- x I = IRIS: EPA Integrated Risk Information System (IRIS). Available online at: <http://www.epa.gov/iris/subst/index.html>
- x P = PPRTV: EPA Provisional Peer Reviewed Toxicity Values (PPRTV's). Available online at: <http://hprrt.crcn.gov/pprtv.shtml>
- x A = Agency for Toxic Substances and Disease Registry (ATSDR) Minimum Risk Levels (MRLs). Available online at: <http://www.atsdr.cdc.gov/mrls/index.html>
- x CA = California Environmental Protection Agency/Office of Environmental Health Hazard Assessment. Available online at: <http://oehha.ca.gov/heast/heast.html>
- x H = HEAST: EPA Superfund Health Effects Assessment Summary Tables (HEAST) database. Available online at: <http://epa-heast.ornl.gov/heast.html>
- x S = See RSL User Guide, Section 5
- x X = PPRTV Appendix
- x E = The Engineering ToolBox. Available online at [http://www.engineeringtoolbox.com/explosive-concentration-limits-d\\_423.html](http://www.engineeringtoolbox.com/explosive-concentration-limits-d_423.html)
- x N = Centers for Disease Control and Prevention (CDC) National Institute for Occupational Safety and Health (NIOSH). Pocket Guide to Chemical Hazards. Available online at: <http://www.cdc.gov/niosh/npg/npg.htm>
- x M = Chemical-specific MSDS
- x Mut = Chemical acts according to the mutagenic-mode-of-action, special exposure parameters apply (see footnote (4) above).
- x VC = Special exposure equation for vinyl chloride applies (see Navigation Guide for equation).
- x CCE = Special mutagenic and non-mutagenic IURs for trichloroethylene apply (see footnote (4) above).
- x Yellow highlighting indicates site-specific parameters that may be edited by the user.
- x Blue highlighting indicates exposure factors that are based on Risk Assessment Guidance for Superfund (RAGS) or EPA vapor intrusion guidance, which generally should not be changed.

x \*\*Lower explosive limit is the minimum concentration of the compound in air (% by volume) that is needed for the gas to ignite and explode.

## OSWER VAPOR INTRUSION ASSESSMENT

Groundwater Concentration to Indoor Air Concentration (GWC-IAC) Calculator Version 2.0, November 2012 RSLs

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Residential	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-05	Enter target risk for carcinogens (for comparison to the calculated VI carcinogenic risk in column F)
Target Hazard Quotient for Non-Carcinogens	THQ	1	Enter target hazard quotient for non-carcinogens (for comparison to the calculated VI hazard in column G)
Average Groundwater Temperature (°C)	Taw	19.4	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for groundwater target concentrations

CAS	Chemical Name	Site Groundwater Concentration (ug/L)	Calculated Indoor Air Concentration (ug/m³)	VI Carcinogenic Risk		VI Hazard	Inhalation Unit Risk	IUR Source*	Reference Concentration (mg/m³)	RFC Source*	Mutagenic Indicator
				CR	HQ						
				IUR (ug/m³)¹	CA						
x 75-34-3	Dichloroethane, 1,1-	5.0E+00	9.06E-01	6.0E-07	No RIC		1.60E-06	CA	2.00E-01	I	
x 75-35-4	Dichloroethylene, 1,1-	1.6E+01	1.39E+01	No IUR	6.7E-02						
x 540-59-0	Dichloroethylene, 1,2- (Mixed Isomers)	3.3E+02	4.26E+01	No IUR	No RIC						
x 156-59-2	Dichloroethylene, 1,2-cis	3.2E+02	4.18E+01	No IUR	No RIC						
x 156-60-5	Dichloroethylene, 1,2-trans	2.3E+01	3.04E+00	No IUR	4.9E-02				6.00E-02	P	
x 71-55-6	Trichloroethane, 1,1-	8.6E+01	4.70E+01	No IUR	9.0E-03				5.00E+00	I	
x 79-01-6	Trichloroethylene	4.9E+02	1.50E+02	<b>6.4E-04</b>	<b>7.2E+01</b>				4.10E-06	I	Mut
x 75-01-4	Vinyl Chloride	3.4E+00	3.30E+00	<b>2.0E-05</b>	3.2E-02				4.40E-06	I	VC

x Notes:

(1) Inhalation Pathway Exposure Parameters (RME):	Units	Residential		Commercial		Selected (based on scenario)	
		Symbol	Value	Symbol	Value	Symbol	Value
Exposure Scenario							
Averaging time for carcinogens	(yrs)	ATc_R_GW	70	ATc_C_GW	70	ATc_GW	70
Averaging time for non-carcinogens	(yrs)	ATnc_R_GW	30	ATnc_C_GW	25	ATnc_GW	30
Exposure duration	(yrs)	ED_R_GW	30	ED_C_GW	25	ED_GW	30
Exposure frequency	(days/yr)	EF_R_GW	350	EF_C_GW	250	EF_GW	350
Exposure time	(hr/day)	ET_R_GW	24	ET_C_GW	8	ET_GW	24
(2) Generic Attenuation Factors:		Residential		Commercial		Selected (based on scenario)	
		Symbol	Value	Symbol	Value	Symbol	Value
Source Medium of Vapors							
Groundwater	( - )	AFgw_R_GW	0.001	AFgw_C_GW	0.001	AFgw_GW	0.001
Sub-Slab and Exterior Soil Gas	( - )	AFss_R_GW	0.1	AFss_C_GW	0.1	AFss_GW	0.1
(3) Formulas		Residential		Commercial		Selected (based on scenario)	
		Symbol	Value	Symbol	Value	Symbol	Value
Cia, target = MIN( Cia,c; Cia,nc)							
Cia,c (ug/m³) = TCR x ATc x (365 days/yr) x (24 hrs/day) / (ED x EF x ET x IUR)							
Cia,nc (ug/m³) = THQ x ATnc x (365 days/yr) x (24 hrs/day) x RFC x (1000 ug/mg) / (ED x EF x ET)							
(4) Special Case Chemicals		Residential		Commercial		Selected (based on scenario)	
		Symbol	Value	Symbol	Value	Symbol	Value
Trichloroethylene		mIURTCE_R_GW	1.00E-06	IURTCE_C_GW	0.00E+00	mIURTCE_GW	1.00E-06
		IURTCE_R_GW	3.10E-06	IURTCE_C_GW	4.10E-06	IURTCE_GW	3.10E-06

x Mutagenic Chemicals The exposure durations and age-dependent adjustment factors for mutagenic-mode-of-action are listed in the table below:

Note: This section applies to trichloroethylene and other mutagenic chemicals, but not to vinyl chloride.	Age Cohort	Exposure Duration	Age-dependent adjustment factor
	0 - 2 years	2	10
	2 - 6 years	4	3
	6 - 16 years	10	3
	16 - 30 years	14	1

x Mutagenic-mode-of-action (MMOA) adjustment factor 76 This factor is used in the equations for mutagenic chemicals.

x Vinyl Chloride See the Navigation Guide equation for Cia,c for vinyl chloride.

## x Notation:

x I = IRIS: EPA Integrated Risk Information System (IRIS). Available online at: <http://www.epa.gov/iris/subst/index.html>x P = PPRTV: EPA Provisional Peer Reviewed Toxicity Values (PPRTVs). Available online at: <http://hprrtv.ornl.gov/pprtv.shtml>x A = Agency for Toxic Substances and Disease Registry (ATSDR) Minimum Risk Levels (MRLs). Available online at: <http://www.atsdr.cdc.gov/mrls/index.html>x CA = California Environmental Protection Agency/Office of Environmental Health Hazard Assessment assessments. Available online at: <http://www.oehha.ca.gov/risk/ChemicalDB/index.asp>x H = HEAST: EPA Superfund Health Effects Assessment Summary Tables (HEAST) database. Available online at: <http://epa-heast.ornl.gov/heast.shtml>

x S = See RSL User Guide, Section 5

x X = PPRTV Appendix

x Mut = Chemical acts according to the mutagenic-mode-of-action, special exposure parameters apply (see footnote (4) above).

x VC = Special exposure equation for vinyl chloride applies (see Navigation Guide for equation).

x TCE = Special mutagenic and non-mutagenic IURs for trichloroethylene apply (see footnote (4) above).

x Yellow highlighting indicates site-specific parameters that may be edited by the user.

x Blue highlighting indicates exposure factors that are based on Risk Assessment Guidance for Superfund (RAGS) or EPA vapor intrusion guidance, which generally should not be changed.

x Pink highlighting indicates VI carcinogenic risk greater than the target risk for carcinogens (TCR) or VI Hazard greater than or equal to the target hazard quotient for non-carcinogens (THQ).

