Landmark Collegiate Acquisitions LLC/Proposed Mixed-Use Development Site
Auburn, Alabama
ADEM VCP Site #: 461-081-140

Fact Sheet

A Voluntary Cleanup Program (VCP) Cleanup Plan has been found to be technically adequate by the Alabama Department of Environmental Management for the Landmark Collegiate Acquisitions, LLC/Proposed Mixed-Use Development site. Landmark Collegiate Acquisitions, LLC, is the prospective purchaser of the 12 parcel site located in Auburn, Alabama. This fact sheet has been prepared to briefly advise the public of the principal legal and policy issues of the VCP.

I. VCP PROCESS

The VCP provides a mechanism for the implementation of a cleanup program that encourages applicants to voluntarily assess, remediate, and reuse rural and urban areas of actual or perceived contamination. The program does not relieve any "responsible person" of the liability for administrative, civil, or criminal fines or penalties which are otherwise authorized by law and imposed as a result of the illegal or unpermitted disposal of solid waste, hazardous waste, hazardous constituents, hazardous substances, petroleum products, and/or pollutants to the land, air, or waters of the State on an identified property. The program is designed to expedite the voluntary cleanup process and has been designed for entry at any stage of the cleanup process as long as all applicable criteria have been met up to the point of entry.

II. PROCEDURES FOR REACHING A FINAL DECISION

The Alabama Department of Environmental Management (ADEM) is proposing to issue Landmark Collegiate Acquisitions, LLC, a final decision for the site remediation.

ADEM Admin Code R. 335-15-6-.02 requires that the public be given a 30-day comment period from the date of the notice. The comment period will begin on December 13, 2016, which is the date of publication of the public notice in major local newspaper(s) of general circulation, and will end on January 12, 2017.

All persons wishing to comment on any of the conditions of the VCP Remediation should submit their comments in writing to the Alabama Department of Environmental Management, Permits and Services Division, 1400 Coliseum Blvd. (Zip 36110). P.O. Box 301463 (Zip 36130-1463) Montgomery, Alabama, ATTENTION: Mr. Russell Kelly. Written comments on the VCP activities should

be submitted to the Alabama Department of Environmental Management and be received by 5:00 p.m. on January 12, 2017.

ADEM will consider all written comments received during the comment period while making a final decision on this issue. When the Department makes its final decision, notice will be given to the applicant and each person who has submitted written comments or requested notice of the final decision.

III. FACILITY DESIGN

Terracon Consultants, Inc., has completed site investigation activities under the VCP at the Landmark Collegiate Acquisitions, LLC/Proposed Mixed-Use Development site located at the Northeast Corner of East Glenn Avenue and North Gay Street, Auburn, Lee County, Alabama. The approximately 3.8-acre site consists of 12 parcels which contains multiple commercial buildings and residential structures. Associated parking and landscaped areas are also present at the site. From 1967 until 1986, one of the on-site parcels was utilized as a gas station (former War Eagle Fina). Another on-site parcel was utilized as an auto repair facility from approximately 1949 to 1967. An adjacent parcel to the northwest was utilized as a filling station from at least 1928 to 1949. As part of the assessment plan, five soil borings and five permanent monitoring wells were installed to evaluate historical onsite and offsite impacts at the site. Groundwater has been impacted at the southwestern portion of the site from the migration of petroleum constituents as a result of a petroleum release from an offsite source adjacent to the west of the site. The cleanup plan proposes to place an environmental covenant with both engineering and institutional controls on the site to address the elevated concentrations of metals and petroleum constituents in onsite soils and groundwater. It is believed that these controls will eliminate or minimize any potential exposures associated with future use and/or development.

IV. TECHNICAL CONTACT

Anna M. Ennis, Project Manager
Redevelopment Section
Industrial Hazardous Waste Branch
Land Division
Alabama Department of Environmental Management
1400 Coliseum Boulevard (Zip 36110)
P.O. Box 301463 (Zip 36130-1463)
Montgomery, Alabama
(334) 271-7932

Voluntary Property Assessment Plan and Report

Proposed Mixed-use Development

Northeast Corner of East Glenn Avenue and North Gay Street

Auburn, Lee County, Alabama

August 9, 2016

Terracon Project No. E1167114

Prepared for:

Alabama Department of Environmental Management
and
Landmark Collegiate Acquisitions, LLC
Athens, Georgia

Prepared by:

Terracon Consultants, Inc.
Birmingham, Alabama

terracon.com

Terracon

Environmental ■ Facilities ■ Geotechnical ■ Materials

August 9, 2016

Terracon

Alabama Department of Environmental Management
Redevelopment Section, Land Division
Post Office Box 301463
Montgomery, Alabama 36130-1463

Attention: Ms. Anna Ennis, Project Manager

Re: **Voluntary Property Assessment Plan and Report**
Proposed Mixed-use Development
Northeast Corner of East Glenn Avenue and North Gay Street
Auburn, Lee County, Alabama
VCP Site No. 461-081-140
Project No. E1167114

Dear Ms. Ennis:

On behalf of Landmark Collegiate Acquisitions, LLC, Terracon Consultants, Inc. (Terracon) has prepared this Voluntary Property Assessment Plan and Report for the above-referenced site per the Alabama Land Recycling and Economic Redevelopment Act (ALRERA) and in accordance with Alabama Department of Management (ADEM) Administrative Code R. 335-15-4-.03 *Voluntary Property Assessment Plans*. Enclosed is a check for $20,010 to cover the ADEM fees associated with reviewing the Assessment Plan and Cleanup Plan.

If you have any questions or comments regarding this Plan, please contact us at the number listed below.

Sincerely,
Terracon Consultants, Inc.

Trey G. Noland, P.G.
Group Manager

Frank M. Nowicki.
Senior Project Professional

cc: Mr. Andrew Young, Landmark Collegiate Acquisitions, LLC
Mr. Todd Silliman, Dentons (electronic)

Attachments

August 9, 2016

Terracon

Landmark Collegiate Acquisitions, LLC
455 Epps Bridge Road
Athens, Georgia 30606

Attn: Mr. Andrew Young
P: (706) 543-1910

Re: **Voluntary Property Assessment Plan and Report**
Proposed Mixed-use Development
Northeast Corner of East Glenn Avenue and North Gay Street
Auburn, Lee County, Alabama
VCP Site No. 461-081-140
Project No. E1167114

Dear Mr. Young:

Terracon Consultants, Inc. (Terracon) has submitted a copy of the enclosed Voluntary Cleanup Program Assessment Plan and Report to the Alabama Department of Environmental Management (ADEM). This submittal was completed in accordance with our proposal dated March 8, 2016. Terracon has prepared this report for the above-referenced site per the Alabama Land Recycling and Economic Redevelopment Act (ALRERA) and in accordance with ADEM Administrative Code R. 335-15-4-.03 *Voluntary Property Assessment Plans*.

We appreciate the opportunity to be of service to you on this project. If there are any questions regarding this report or if we may be of further assistance, please do not hesitate to contact us.

Sincerely,
Terracon Consultants, Inc.

Trey G. Noland, P.G.
Group Manager

Frank M. Nowicki
Senior Project Professional

cc: Ms. Anna Ennis, Redevelopment Section, Land Division
Mr. Todd Silliman, Dentons (electronic)

Attachments

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Exhibit 1 Topographic Vicinity Map
Exhibit 2 Soil Boring/Monitoring Well Location Diagram
Exhibit 3 Aerial Photograph with Adjoining Properties
Exhibit 4 Potentiometric Surface Map - January 29, 2016
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APPENDICES

Appendix A Soil Boring Logs
Appendix B Monitoring Well Sampling Records
Appendix C ESC Lab Sciences Laboratory Analytical Reports
Appendix D Nov. 2015 Groundwater Monitoring Report; UST Incident No. 11-01-02
Appendix E Ground Penetrating Radar Survey Report
Appendix F Alabama Risk-Based Corrective Action Evaluation
Appendix G Intrinsic Soil Properties
Appendix H Slug Test Results

Voluntary Property Assessment Plan and Report
Proposed Mixed-use Development
Northeast Corner of East Glenn Avenue and North Gay Street
Auburn, Alabama
VCP Site No. 461-081-140
Terracon Project No. E1167114
August 9, 2016

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) has prepared the following Voluntary Cleanup Program (VCP) Assessment Plan and Report for the above-referenced facility. This Plan has been prepared based on the Alabama Land Recycling and Economic Recovery Act (ALRERA) VCP Application dated April 1, 2016. The investigation followed guidelines outlined in ADEM Administrative Code R. 335-15-4-.03 *Voluntary Property Assessment Plans*.

1.1 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. Terracon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies or other third parties supplying information used in the preparation of the report. These services were performed in accordance with the scope of work agreed with our client, as reflected in our proposal and were not restricted by ASTM E1903-97.

1.2 Additional Scope Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during the assessments discussed herein. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations or exploratory services; the data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

1.3 Reliance

This report has been prepared for the exclusive use of Landmark Collegiate Acquisitions, LLC (client). Any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of

Landmark Collegiate Acquisitions, LLC and Terracon. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, report(s), and Terracon's terms and conditions. The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to the client and all relying parties unless otherwise agreed in writing.

1.4 Objectives and Scope of Work

The objective of this assessment was to conduct a Limited Site Investigation (LSI), a ground-penetrating radar (GPR) survey, and one additional groundwater monitoring event to determine if the site has been impacted by historical on- and off-site activities. Data obtained during these assessments will be utilized to evaluate exposure risks and determine appropriate remedial alternatives for the property.

2.0 SITE LOCATION AND DESCRIPTION

2.1 Site Location and Description

The site is depicted in the northeast ¼ of Section 30, Township 19 North, Range 26 East of the USGS 7.5-minute topographic quadrangle *Auburn, Alabama,* dated 1971 (rev. 1983), which is included as Exhibit 1. The central portion of the site is situated at approximately 32.609689°N latitude and 85.479155°W longitude.

The 3.8-acre site is comprised of 12 parcels containing multiple commercial buildings, residential structures, and associated landscaped and parking areas. A diagram of the site, including the boring/monitoring well locations installed during the LSI, is included as Exhibit 2.

2.2 Site Background

A review of historical documents indicated that one of the on-site parcels (206 North Gay Street) was utilized as a gas station (former War Eagle Fina) from at least 1967 until approximately 1986 and an additional on-site parcel (230 North Gay Street) was utilized as an auto repair facility from at least 1949 until approximately 1967. Additionally, historical documents indicated that an adjacent off-site parcel to the northwest (236 North Gay Street) was utilized as a filling station from at least 1928 until approximately 1949.

A review of environmental reports available on the Alabama Department of Environmental Management (ADEM) e-File website indicated that a release of petroleum constituents occurred at the Circle K gas station adjacent to the west of the site and that remediation is ongoing for the release (ADEM UST Incident No. 11-01-02) at the Circle K. As such, it was recommended that

a LSI be conducted in order to obtain soil and groundwater data to determine whether constituents formerly utilized on and off site have adversely affected the property.

3.0 SITE CHARACTERIZATION

3.1 Surrounding Population

A surrounding area land use survey was conducted in the immediate vicinity of the site and is provided as Exhibit 3. The site is located in a mixed commercial and residential area. Visual observations of adjoining properties (from site boundaries) are summarized below.

Adjoining Properties

Direction	Description
North	Railroad ROW followed by multi-family residences
East	Multi-family residences
South	East Glenn Avenue followed by commercial facilities including Shell Gas Station
West	North Gay Street followed by commercial facilities including Circle K Gas Station

3.2 Sensitive Receptor/Water Well Inventory

Terracon conducted a survey of published literature to identify sensitive receptors, public water supply wells, springs, surface water bodies, and surface water intakes within a 1-mile radius of the site. The survey, detailed in the following subsections, utilized the following resources:

- Inspection of the USGS 7.5-minute Topographic Quadrangle *Auburn, Alabama,* for well fields and wells and

- A review of Water Resources Investigations Report (WRIR) 88-4083, *"Geohydrology and Susceptibility of Major Aquifers to Surface Contamination in Alabama; Area 5"* that provides an inventory of public water supply wells throughout a seven county area, which includes Lee County.

3.2.1 Water Well Survey

Based on the water well inventory, no public water supply wells are located within one mile of the site. Additionally, no private water supply wells were identified within a 1,000-ft radius of the site.

3.2.2 Surface Water

The nearest surface water body is an unnamed tributary of Chewacla Creek, which is located approximately 0.5 miles east-southeast of the site.

3.2.3 Sensitive Receptors

During site reconnaissance and from aerial photographs, Terracon documented the surrounding land use and potential sensitive receptors in the site area within 1,000 feet and included land use type and areas or populations of potential concern including hospitals, nursing homes, day care facilities, schools, etc. As stated in Section 3.1, the site is adjoined by commercial and multi-family residential developments.

Based on the data collected during the assessment, there are no sensitive on-site or off-site receptors that are likely to be impacted or potentially impacted by the constituents of concern (COCs) detected in soil and groundwater beneath the site.

3.3 Underground Utility Survey

Terracon contacted Alabama One Call prior to conducting intrusive activities at the site. Additionally, a Land Title Survey completed in 2015 was provided to Terracon by the property owner. The survey was utilized to create the Soil Boring/Monitoring Well Location Diagram (Exhibit 2), which displays underground utilities in the vicinity of the site.

3.4 Regional and Site Hydrogeology

According to the USGS *Geohydrology and Susceptibility of Major Aquifers to Surface Contamination in Alabama; Area 5*, dated 1989, the site is within the area of recharge and susceptibility to surface contamination for the Igneous and Metamorphic aquifer.

Groundwater was encountered in each of the borings advanced on site during the January 2016 LSI. Refer to Section 4.1 below for information related to well installation and construction. After the borings were converted to monitoring wells and allowed to equilibrate, depth to groundwater measurements were recorded with a water level indicator.

Groundwater was measured at depths ranging between 11.25 feet below top of casing (ft-btoc; MW-4) and 16.33 ft-btoc (MW-2) during the January 29, 2016 LSI. Groundwater was measured at depths ranging from 11.49 ft-btoc (MW-4) and 17.55 ft-btoc (MW-2) during the May 26, 2016 groundwater monitoring event. Water table elevation data is presented on Table 1. Potentiometric surface maps for January 29, 2016 and May 26, 2016 are included as Exhibits 4 and 5, respectively. Groundwater flow beneath the site is generally to the east-southeast towards an unnamed tributary of Chewacla Creek.

3.5 Site Geology and Soils

According to the Geological Survey of Alabama, Geologic Map of Alabama, Map 220, the site is underlain by the Manchester Schist of Precambrian to Paleozoic age. The Manchester Schist consists of interlayered muscovite-quartz schist and quartzite, locally containing garnet, sillimanite and graphite.

According to the United States Department of Agriculture Natural Resources Conservation Service (NRCS) Web Soil Survey, the soils underlying the site consist of the Marvyn-Urban land complex. Marvyn soils consist of well-drained loamy marine deposits derived from sedimentary rock. Urban land comprises areas covered by high-density residential, industrial, and commercial facilities that have been altered by cutting and filling, shaping and grading, excavating, blasting, compacting, or covering with concrete or asphalt to achieve large areas that are nearly level to avoid flooding or wetness problems or to increase load support capacity.

During this assessment, the soil type encountered was primarily sandy clay and clayey sand. Weathered, micaceous schist was encountered at termination depths in borings SB-1 through SB-3. Boring logs are included as Appendix A and boring locations are illustrated on Exhibit 2.

4.0 FIELD INVESTIGATION STRATEGY

Terracon conducted the fieldwork under a safety plan developed for this project. Work was performed using United States Environmental Protection Agency (EPA) Level D work attire consisting of hard hats, safety glasses, protective gloves, and protective boots. Terracon contacted the Alabama One-Call service and requested location markings for utilities that the service was responsible for before commencing intrusive activities at the site.

4.1 Limited Site Investigation

On January 27-28, 2016, Terracon advanced five soil borings (SB-1 through SB-5) using direct-push technology (DPT) and hollow-stem auger (HSA) drilling methods. The borings were advanced at the locations shown on Exhibit 2 and described below.

- SB-1 was advanced in the northwestern portion of the property near the location of a former off-site filling station;
- SB-2 was advanced in the eastern portion of the property;
- SB-3 and SB-4 were advanced in the southern portion of the property on the parcel that formerly contained the War Eagle Fina gas station; and

- SB-5 was advanced in the central portion of the property near the location of a former auto repair facility.

Oversight of advancement of these borings was conducted by a Terracon geologist, Ms Meghan DiGiorgio. Soil samples were collected continuously at five-foot intervals to document lithology, color, and relative moisture content (Appendix A).

Surficial soil samples were collected at each boring location from the upper 1-foot of recoverable soil (or from just below the pavement), placed in laboratory-provided containers, and submitted under chain-of-custody to ESC Lab Sciences (ESC) in Mt. Juliet, Tennessee for analysis of Resource Conservation and Recovery Act (RCRA) metals per EPA Methods 6010B and 7471A. For the purpose of this report, surficial soil refers to samples collected from depths of 0 to 18 inches below grade. Due to the thickness of the pavement and gravel base, surficial soil samples could not be obtained from 0 to 12 inches below grade; however, the samples represent the upper 1-foot of recoverable soil at each location.

Soil samples were collected from the borings in continuous five-foot intervals. A representative portion of the sample interval was placed in resealable plastic bags for volatile organic vapor headspace screening a photoionization detector (PID; see Section 5.1 below). The soil sample that exhibited the highest PID reading was submitted to the laboratory for analysis. In the event that all PID readings were equivalent, the soil sample from immediately above the water table was submitted to the laboratory. The selected subsurface soil samples were submitted under chain-of-custody to ESC Lab Sciences (ESC) in Mt. Juliet, Tennessee for analysis of volatile organic compounds (VOCs) per EPA Method 8260B, and polycyclic aromatic compounds (PAHs) per EPA Method 8270C-SIM.

Following the collection of soil samples, soil borings SB-1 through SB-5 were converted to two-inch permanent Type II monitoring wells (designated MW-1 through MW-5) to facilitate the collection of groundwater samples. The monitoring wells were constructed with 10 feet of two-inch diameter, 0.0010-inch machine slotted PVC well screen with a threaded bottom cap, and two-inch diameter, threaded, flush-joint PVC riser pipe to the surface. A pre-sieved 20/40 silica sand pack was installed within the well annulus from the bottom of the well to two feet above the top of the well screen. A two-foot bentonite seal was installed above the sand pack. The monitoring wells were grouted from the top of the bentonite seal to the surface and completed with a locking well cap set in a two-foot by two-foot flush-mount concrete pad with a nine-inch manhole for access. Following monitoring well installation, the top of casing elevations for each well were surveyed and monitoring wells were developed in general accordance with the *Alabama Environmental Investigation and Remediation Guidance* (AEIRG; March 2002).

On January 29, 2016, Terracon personnel collected groundwater samples from all monitoring wells using dedicated, disposable bailers. Prior to groundwater sample collection, each monitoring well was purged of at least three well volumes and depth to groundwater and total

well depth measurements were collected. Intrinsic groundwater parameters including temperature, specific conductance, pH, dissolved oxygen, and oxygen-reduction potential were recorded for each monitoring well. Monitoring well measurements and intrinsic groundwater parameters are recorded on the Monitoring Well Sampling Records included in Appendix B. The groundwater samples were dispensed into labeled, laboratory-prepared containers and then transferred to a cooler containing ice. The samples were shipped under chain-of-custody to ESC for analysis of VOCs per EPA Method 8260B, PAHs per EPA Method 8270C-SIM, and dissolved lead per EPA Method 6010.

Non-dedicated sampling equipment was cleaned using an Alconox® detergent wash and potable water rinse prior to commencement of the project and between collection of each sample.

4.2 Ground-Penetrating Radar Survey

Terracon contracted with Ground Penetrating Radar Systems, Inc. (GPRS) of Toledo, Ohio to perform a GPR survey at the site on February 18, 2016. The survey area included accessible areas of the parcel located at 206 North Gay Street (current Checkers restaurant). The GPR survey was conducted to determine the potential presence of USTs connected to the former War Eagle Fina gas station that occupied this parcel from at least 1967 until approximately 1986.

The geophysical exploration was performed using a GPR system consisting of a cart-mounted, 400 megahertz (MHz) antenna. A GPR antenna emits electromagnetic pulses into the ground and measures the time it takes for the pulse to return to the receiver. This time varies based on the material composition and can indicate changes between layers, such as between natural soil and metal/concrete. Results of the GPR survey are discussed in Section 5.6 of this report.

4.3 May 2016 Groundwater Monitoring Event

On May 26, 2016, Terracon personnel collected an additional round of groundwater samples from all monitoring wells using dedicated, disposable bailers. Prior to groundwater sample collection, each monitoring well was purged of at least three well volumes and depth to groundwater and total well depth measurements were collected. Intrinsic groundwater parameters including temperature, specific conductance, pH, dissolved oxygen, and oxygen-reduction potential were recorded for each monitoring well. Monitoring well measurements and intrinsic groundwater parameters are recorded on the Monitoring Well Sampling Records included in Appendix B. The groundwater samples were dispensed into labeled, laboratory-prepared containers and then transferred to a cooler containing ice. The samples were shipped under chain-of-custody to ESC for analysis of VOCs per EPA Method 8260B, PAHs per EPA Method 8270C-SIM, and dissolved lead per EPA Method 6010.

Non-dedicated sampling equipment was cleaned using an Alconox® detergent wash and potable water rinse prior to commencement of the project and between collection of each sample

5.0 RESULTS OF THE INVESTIGATION

5.1 Field Screening

During the January 2016 LSI, soil samples were field screened for volatile organic vapors with a PID. The headspace screening samples were heated for at least 20 minutes to allow volatile organics in the soil to release vapor into the bag. The amount of volatile organic vapor in the headspace was then measured with the PID. The PID results are summarized on the boring logs in Appendix A. PID readings ranged from 0.0 parts per million (ppm; SB-5, all intervals) to 0.6 ppm (SB-3, 15-20 ft bgs). The subsurface soil sample that exhibited the highest PID reading was submitted to the laboratory. In the event that all PID readings were equivalent, the soil sample from immediately above the water table was submitted to the laboratory.

5.2 Soil Sample Results

The laboratory results from analysis of the soil samples were compared to EPA Regional Screening Levels (RSLs; dated May 2016) for residential soil. RSLs corresponding to a hazard quotient (HQ) of 0.1 were utilized. For constituents with concentrations above laboratory detection limits and without an established RSL, the ADEM Preliminary Screening Values (PSVs) for residential soil were utilized. The results of the comparison of the soil sample analytical data to the RSLs/PSVs are discussed in the sections below. Summaries of the soil sample analytical results are presented on Table 2 and Table 3. Complete laboratory analytical reports are included in Appendix C.

5.2.1 Surficial Soil

Surficial soil samples were collected at each boring location from the upper 1-foot of recoverable soil (or from just below the pavement) and analyzed for RCRA metals per EPA Methods 6010B and 7471A. Six of the eight RCRA metals were detected in surficial soil samples submitted for analysis including arsenic, barium, cadmium, chromium, lead, and mercury. Of the detected metals, arsenic, chromium and lead exceeded their applicable screening levels in one or more boring. The surficial soil sample collected from SB-3 exhibited total chromium concentrations above the ADEM PSV for total chromium and was further analyzed for hexavalent chromium (chromium VI). The detected concentration of chromium VI in this sample exceeded the EPA RSL for residential soil. A summary of detected RCRA metals in soil is included in the table below and on Table 2. Detected RCRA metals that exceeded the EPA RSL for residential soil are spatially displayed on Exhibit 6. Complete analytical results are included in Appendix C.

Detected RCRA Metals in Surficial Soil

Constituent	SB-1	SB-2	SB-3	SB-4	SB-5	Screening Level*
Arsenic	**3.65**	--	**8.93**	--	**3.55**	**0.68**
Barium	**56.5**	**22.7**	**31.8**	**12.7**	**8.57**	**1500**
Cadmium	**0.866**	--	--	--	--	**7.1**
Chromium	**12.4**	**4.2**	**73.1**	**16.1**	**26**	**30^**
Chromium VI	NA	NA	**2.27**	NA	NA	**0.3**
Lead	**401**	**5.64**	**16.2**	**21.7**	**8.45**	**400**
Mercury	**0.113**	**0.0306**	**0.227**	**0.0404**	--	**1.1**

All concentrations are in milligrams per kilogram (mg/kg; parts per million); -- Not detected; NA – not analyzed; **Bold** – concentration exceeds applicable screening level; *Represents EPA RSL for residential soil (May 2016, HQ=0.1) unless otherwise noted; ^No EPA RSL available, level represents ADEM PSV for residential soil.

Arsenic concentrations in surficial soil ranged from below detection limit (SB-2 and SB-4) to 8.93 milligrams per kilogram (mg/kg; SB-3). The EPA RSL for arsenic in residential soil is 0.68 mg/kg; however, published information from the United States Geological Survey (USGS; Gustavsson, N., et. al., "Geochemical Landscapes of the Conterminous United States – New Map Presentations for 22 Elements." USGS Professional Paper 1648. November 2001) indicates that normal background concentrations for arsenic in this region range up to 10 mg/kg. None of the soil samples at the site exhibited arsenic concentrations above 10 mg/kg. As such, it is the opinion of Terracon that arsenic concentrations in soil at the site are attributable to variations in background levels and not a result of past on-site activities.

Total chromium was detected at a concentration above the ADEM PSV for residential soil in the surficial soil sample collected from SB-3. Chromium VI in residential soil has an EPA RSL of 0.3 mg/kg and trivalent chromium (chromium III) has an EPA RSL of 12,000 mg/kg. The sample exhibiting a total chromium concentration above the ADEM PSV was further analyzed for chromium VI. Analytical results indicated that chromium VI is present in surficial soil at this location at a concentration above the EPA RSL for residential soil. As the concentration of chromium in the sample collected from SB-3 considerably exceeds the concentration of chromium in other samples collected on site, elevated chromium in soil at this location may be attributable to historical on-site operations.

Lead was detected at a concentration (401 mg/kg) slightly above the EPA RSL for residential soil (400 mg/kg) in the surficial soil sample collected from SB-1. As the concentration of lead in the sample collected from SB-1 considerably exceeds the concentration of lead in other samples collected on site, elevated lead in soil at this location may be attributable to historical on-site operations.

5.2.2 Subsurface Soil

Subsurface soil samples collected during the January 2016 LSI were submitted for laboratory analysis of VOCs per EPA Method 8260B and PAHs per EPA Method 8270C-SIM. No VOC or

PAH constituents were detected in any subsurface soil sample collected during this assessment.

5.3 Groundwater Sample Results

The laboratory results from analysis of the groundwater samples collected during the January 2016 LSI and the May 2016 groundwater monitoring event were compared to EPA RSLs for tapwater (May 2016; HQ=0.1). For constituents with established EPA Maximum Contaminant Levels (MCLs) for tapwater, the analytical results were compared to the MCL in lieu of the RSL. For constituents with concentrations above laboratory detection limits and without an established RSL or MCL, the ADEM PSVs for groundwater were utilized. The results of the comparison of the groundwater sample analytical data to the RSLs/MCLs/PSVs are presented below and on Table 4. Complete laboratory analytical reports are included in Appendix C.

Summary of Detected Constituents in Groundwater, January 29, 2016

Constituent	MW-1	MW-2	MW-3	MW-4	MW-5	Screening Level*
VOCs						
Di-isopropyl ether	--	--	0.00211	0.00753	--	**0.15**
MTBE	--	--	0.00475	0.00219	--	**0.014**
PAHs						
Acenaphthene	--	--	0.00291	--	--	**0.053**
Anthracene	--	--	0.0000729	--	--	**0.18**
Fluoranthene	--	--	0.000131	--	--	**0.08**
Fluorene	--	--	0.00213	--	--	**0.029**
1-Methylnaphthalene	--	--	0.000296	--	--	**0.0011**
Phenanthrene	--	0.000111	0.000536	--	0.000317	**0.0469**
Pyrene	--	--	0.000058	--	--	**0.012**

All concentrations are in milligrams per liter (mg/l; parts per million); *Represents EPA RSL for tapwater (May 2016, HQ=0.1); -- Not detected

Summary of Detected Constituents in Groundwater, May 26, 2016

Constituent	MW-1	MW-2	MW-3	MW-4	MW-5	Screening Level*
VOCs						
Di-isopropyl ether	--	--	--	0.00128	--	**0.15**
PAHs						
Acenaphthene	--	--	0.0000668	--	--	**0.053**

All concentrations are in milligrams per liter (mg/l; parts per million); *Represents EPA RSL for tapwater (May 2016, HQ=0.1); -- Not detected

5.3.1 VOCs

Two VOC constituents were detected in groundwater samples submitted for analysis during the January 2016 groundwater monitoring event including di-isopropyl ether and methyl-tert-butyl-ether (MTBE) in monitoring wells MW-3 and MW-4. One VOC constituent (di-isopropyl ether)

was detected in the groundwater sample collected from monitoring well MW-4 during the May 2016 groundwater monitoring event. No VOC constituent exceeded applicable screening levels during either event.

5.3.2 PAHs

Seven PAH constituents (acenaphthene anthracene, fluoranthene, fluorine, 1-methylnaphthalene, phenanthrene, and pyrene) were detected above laboratory detection limits in groundwater samples collected during the January 2016 groundwater sampling event. One constituent (acenaphthene) was detected in the groundwater sample collected from monitoring well MW-3 during the May 2016 groundwater sampling event. No PAH constituent was detected at levels above applicable screening levels during either event.

5.3.3 Dissolved Lead

Dissolved lead was not detected in any groundwater sample collected during either groundwater sampling event.

5.4 On-Site Impacts from Off-Site Release of Petroleum Constituents

A documented release of petroleum constituents has occurred on the adjacent property to the west and upgradient of the site (Circle K Store No. 6682). The release on the Circle K property is being addressed under the Alabama Underground Storage Tank Trust Fund (UST Incident No. 11-01-02). Two monitoring wells were installed in the southwestern portion of the subject site in 2012 to determine the eastern extent of petroleum contamination from the Circle K release. A review of documents available on the ADEM e-File website indicates that the most recent analytical results for the two wells installed on the subject site are from October 2015. The Groundwater Monitoring Report for the October 2015 sampling event is included as Appendix D. Results of the October 2015 sampling event indicated that several VOC constituents are present in groundwater beneath the site at concentrations above applicable screening levels including benzene (0.128 mg/l), ethylbenzene (0.849 mg/l), and naphthalene (0.262 mg/l). Although these constituents were not detected in the groundwater monitoring wells installed in the southwestern area of the site during the January 2016 LSI (MW-3 and MW-4), based on historical detections in monitoring wells MW-11 and MW-12 (see Figures 4A through 5B, Appendix D), these constituents are known to be present in groundwater beneath the site.

5.5 Preliminary Vapor Intrusion Screening

The highest detected concentrations of VOCs in on-site groundwater from the January 2016 LSI, the May 2016 groundwater monitoring event, and the previous four groundwater sampling events related to UST Incident No. 11-01-02 were compared to the target groundwater Vapor

Intrusion Screening Levels (VISLs) calculated using the EPA VISL Calculator (Version 3.4). The VISL evaluation utilized both a residential and commercial scenario and results were compared against a carcinogenic risk of 1 x 10^{-6}, and a hazard quotient of 0.1, which are more conservative risk values than those utilized in the Alabama Risk-Based Corrective Action program. Inhalation toxicity data is not available for PAH constituents acenapthene, anthracene, fluoranthene, fluorene, 1-methylnaphthalene, phenanthrene, and pyrene. These PAH constituents are not listed on the VISL calculator and were not further considered in the preliminary vapor intrusion screening. The results of the comparisons are displayed in the table below.

Vapor Intrusion Screening Assessment

Constituent	Representative Groundwater Concentration*	Sampling Location and Date	Target Groundwater Concentration Residential^	Target Groundwater Concentration Commercial^
Benzene	**0.34**	MW-11**; October 2014	0.0016	**0.0069**
Disopropyl Ether	0.00753	MW-4; January 2016	0.7	**2.9**
Ethylbenzene	**1.4**	MW-11**; October 2014	0.0035	**0.015**
MTBE	0.0115	MW-12**; October 2015	0.45	**2.0**
Naphthalene	**0.262**	MW-11**; October 2015	0.0046	**0.02**
Toluene	1.4	MW-11**; October 2014	1.9	**8.1**
Xylenes	**4.3**	MW-11**; October 2014	0.038	**0.16**

All concentrations are in milligrams per liter (mg/l; parts per million); *Represents highest concentration detected during Jan 2016 LSI, May 2016 GWM event, and previous four investigations for UST Incident No. 11-01-02; ^Represents value calculated utilizing EPA VISL calculator (Version 3.4); **Bold** – concentration exceeds VISL, commercial scenario; **Monitoring well installed by others

Concentrations of benzene, ethylbenzene, naphthalene, and xylenes reported in groundwater samples collected from monitoring well MW-11 during recent monitoring activities for UST Incident No. 11-01-02 exceed the Target Groundwater Concentrations calculated for these constituents using the EPA VISL calculator. The use of groundwater VISLs for volatile organic constituents does not consider bio-attenuation in the vadose zone, the depth to groundwater, or strata separating the impacted groundwater from the structure or proposed structure. The VISL calculator is a preliminary screening tool only and may over-estimate the actual risk of vapor intrusion at the site. Additionally, the distance to subsurface contamination detected at the site ranges between 10.66 ft-bgs (MW-11; Oct. 2014) and 17.55 ft-bgs (MW-2; May 2016), which is greater than the vertical separation distance (6 ft-bgs) utilized to screen-out potential petroleum vapor intrusion as recommended in the EPA *Technical Guide for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites*, June 2015. Although representative groundwater concentrations exceed the Target Groundwater Concentrations calculated using the EPA VISL calculator, based on the depth to contamination at the site, vapor intrusion does not appear to be an applicable exposure route at the facility.

5.6 Ground-Penetrating Radar Survey Results

A GPR survey was performed at the former War Eagle Fina location (current Checkers restaurant) to detect anomalies in the subsurface that could indicate the presence of USTs. No anomalies were detected during the GPR survey that indicated the presence of USTs in the areas investigated. A letter report from GPRS documenting the results of the GPR survey is included as Appendix E.

GPR, like all geophysical methods, can be affected by on-site conditions such as, but not limited to, ground coverings, soil types, soil moisture, material makeup of the anomalies, and groundwater table depth. The total depth of penetration of the radio waves is also largely dependent on the above-mentioned factors. The presence or absence of objects indicated by the GPR should be confirmed through excavation or direct exploration. As with all geophysical methods, GPR results provide a level of confidence but should not be considered precise or absolute.

6.0 ALABAMA RISK-BASED CORRECTIVE ACTION EVALUATION

Given that COCs exceed applicable screening levels at the site and in order to determine an appropriate cleanup plan moving forward, Terracon conducted an Alabama Risk-Based Corrective Action (ARBCA) Evaluation utilizing data obtained during previous site investigations discussed in Section 5.0 above. Details and results of the ARBCA Evaluation are outlined below. A copy of the ARBCA Evaluation is included as Appendix F of this document.

6.1 Exposure Assessment

6.1.1 Sources and Release Mechanisms

Based on previous investigations described above, no specific release is known to have occurred on the site. Portions of the site formerly contained a gas station and auto repair facility, and the adjacent site to the northwest formerly contained a filling station. These former facilities represent potential sources for elevated concentrations of lead and hexavalent chromium detected in surficial soil in SB-1 and SB-3. Additionally, a documented release of petroleum constituents occurred at the Circle K gas station adjacent to the west of the site with remediation currently ongoing (ADEM UST Incident No. 11-01-02). This off-site release represents the likely source of petroleum constituents detected in groundwater in the southern portion of the site. Levels of arsenic detected in surficial soil are consistent with background levels as discussed in Section 5.2.1 above. However, as the levels detected in surficial soil at the site exceed the applicable screening level, arsenic will be incorporated into the risk assessment in order to calculate the cumulative exposure risk at the site.

6.1.2 Transport Media

It is likely that the transport media for petroleum contaminant migration is via off-site subsurface soil to groundwater. Further potential on-site contaminant migration would be from groundwater to soil vapor to indoor air. Routes of exposure are discussed in greater detail in Section 6.1.4.

6.1.3 Receptors

During site reconnaissance and from aerial photographs, Terracon documented the surrounding land use and potential sensitive receptors within 1,000 feet of the site including areas or populations of potential concern such as hospitals, nursing homes, day care facilities, schools, etc. Based on the data collected during the assessment, Terracon did not identify sensitive receptors that are likely to be impacted or potentially impacted by the COCs detected at the site.

The human receptors to be considered as part of this risk assessment are the on-site resident child, resident adult, commercial worker, trespasser, and construction worker. This site was entered into the ALRERA VCP as a “non-responsible party” and, as such, off-site exposure to receptors was not evaluated in the ARBCA evaluation.

6.1.4 Routes of Exposure

Potential on-site exposure routes include pathways for surficial soil, soil up to the depth of construction, and groundwater. The potential exposure routes for contaminants in the affected media for the resident adult, resident child, trespasser, and commercial worker consist of dermal contact (surficial soil), ingestion (surficial soil), outdoor inhalation of soil particulates (surficial soil), and indoor inhalation of vapors (groundwater). The potential exposure routes for contaminants in the affected media for the construction worker consist of dermal contact, ingestion, and outdoor inhalation of soil particulates (soil up to the depth of construction).

As stated in Section 3.4.1 of the ARBCA Guidance Manual, outdoor inhalation of vapors was not evaluated due to the extreme dilution of outside air and the fact that sunlight degrades the majority of VOCs.

Ingestion of groundwater is not considered a valid route of exposure at the site as there are no groundwater wells on the site. Additionally, as described in Section 7.2 below, an environmental covenant prohibiting the potable use of groundwater on the site will be filed as part of proposed corrective action at the site.

6.1.5 Site Conceptual Exposure Model

The site conceptual exposure model (SCEM) for current and future land use conditions is graphically presented in the Risk Assessment and Management Group, Inc. (RAM) model output and represents the complete pathways described in Section 6.1.4 above. The SCEM is presented on Page 5 of Appendix F for the Risk Management-2 (RM-2) evaluation.

6.1.6 Groundwater Resource Protection

Potable water supply wells are not located on the site, and use of groundwater for potable purposes will be prohibited under proposed land use controls for the subject property. Additionally, in accordance with ADEM Administrative Code R. 335-15-4-.04 (2) Content, *Voluntary Cleanup-Work Plans,* this Voluntary Cleanup Plan evaluated only potential on-site exposure routes and impacts. As such, groundwater resource protection was not considered as part of this risk assessment.

6.1.7 Surface Water and Stream Protection

Surface water bodies are not located within 500 feet of the site. There are no known or expected impacts to surface water and streams. As such, surface water and stream protection were not evaluated as part of this risk assessment.

6.1.8 Ecological Exposure

Evidence of wetlands or sensitive ecological habitats were not observed on site. Consequently, the risk assessment focuses on potential human exposure.

6.2 Risk Management-1 (RM-1) Evaluation

Site-specific fate and transport data has been collected for the site. As such, an RM-2 Evaluation was performed as described in Section 6.3 below.

6.3 Risk Management-2 (RM-2) Evaluation

An RM-2 evaluation was completed for the site using the ARBCA Computational Software Version 2.1 developed by RAM, and the information and equations provided in the ARBCA Guidance Manual. RAM model data input and results of the risks are included in Appendix F.

6.3.1 Selection of Constituents of Concern

In order to determine which constituents detected at the site would be carried forward as constituents of concern (COCs) in the risk assessment, analytical data for constituents detected on site during the January 2016 LSI, the May 2016 groundwater monitoring event, and the previous four groundwater monitoring events associated with UST Incident No. 11-01-02 were compared to applicable screening levels as described in Sections 5.2 through 5.4 above. Those constituents that exceeded applicable screening levels in the affected media were carried forward as COCs in the risk assessment and include:

- Arsenic
- Benzene
- Chromium VI
- Ethylbenzene
- Lead
- Naphthalene
- Toluene

6.3.2 Representative Concentrations

To be consistent with the models used and the assumptions made in this exposure assessment, the maximum concentrations of COCs detected in soil during the January 2016 LSI and in groundwater during the past two years of monitoring at the site (January 2016 LSI, May 2016 groundwater monitoring event, and groundwater monitoring events associated with UST Incident No. 11-01-02) were utilized as the representative concentrations in the ARBCA Evaluation for those media. Soil and groundwater analytical data for the January 2016 LSI and the May 2016 groundwater monitoring event are presented in Tables 2-4. Complete analytical reports for these events are included in Appendix C. Soil and groundwater analytical data for UST Incident No. 11-01-02 are included in Table 2 of Appendix D.

<u>Surficial and Soil up to the Depth of Construction</u>
The concentrations in surficial soil and soil up to the depth of construction that were used to evaluate the risks to the resident, commercial worker, trespasser, and construction worker are summarized in the table below.

Although no VOC or PAH COCs were detected in subsurface soil, subsurface soil samples were not analyzed for RCRA metals. As such, concentrations of RCRA metals detected in surficial soil were assumed to be present in soil up to the depth of construction for the purpose of evaluating the risk to the construction worker. This is a conservative approach as the COCs detected in soil at the site would have been introduced at the surface and would be expected to be present at greater concentrations in surficial soil than at depth.

Representative Concentrations of COCs in Surficial Soil and Soil up to Depth of Construction

Analyte	Representative Concentration	Sample ID	Investigation	Screening Level*
Arsenic	**8.93**	SB-3 (0-1.5 FT)	LSI	**0.68**
Chromium VI	**2.27**	SB-3 (0-1.5 FT)	LSI	**0.3**
Lead	**401**	SB-1 (0-1.5 FT)	LSI	**400**

* Represents EPA RSL for residential soil (May 2016; HQ = 0.1); All units in milligrams per kilogram (mg/kg); Results in **bold** exceed the screening level.

Groundwater

The groundwater concentrations used to evaluate the risks to a commercial worker, trespasser, and construction worker are summarized in the table below.

Representative Concentrations of COCs in Groundwater

Analyte	Representative Concentration	Sample ID	Investigation	Screening Level*
Benzene	**0.34**	MW-11**	UST Incident No. 11-01-02; Oct 2014	**0.005**
Ethylbenzene	**1.2**	MW-11**	UST Incident No. 11-01-02; Oct 2014	**0.7**
Naphthalene	**0.262**	MW-11**	UST Incident No. 11-01-02; Oct 2015	**0.00017**
Toluene	**1.4**	MW-11**	UST Incident No. 11-01-02; Oct 2014	**1**

* Represents EPA RSL or MCL for tapwater (May 2016; HQ = 0.1); All units in milligrams per liter (mg/l); Results in **bold** exceed the screening level; **Monitoring well installed by others

6.3.3 Toxicological Properties

Default toxicological values were used for the RM-1 evaluation. For outdated toxicological properties or toxicological properties not provided in the RAM software, values were obtained from sources in the order listed in Section 3.7.2 of the ARBCA Guidance Manual. Inhalation values (SFi and RfDi) were calculated by utilizing the conversion equations provided in Section 3.7.2 of the ARBCA Guidance Manual.

6.3.4 Physical and Chemical Properties

Default physical and chemical properties were used for the RM-2 evaluation.

6.3.5 Exposure Factors

Default exposure factors were utilized in the RM-2 evaluation.

6.3.6 Fate and Transport Parameters

Site-specific fate and transport parameters were utilized in the RM-2 Evaluation. Default values were used for parameters not described herein and are shown in Appendix F. The length of the soil source parallel to wind direction was estimated based on COCs detected in surficial soil at concentrations above applicable screening levels (9,350 cm). The lower depth of the surficial soil zone was set at 45.72 cm as described in Section 4.1. The thickness of the capillary fringe was estimated based on published data regarding average capillary fringe thicknesses in fine sands (50 cm)[1]. The dimensions of the groundwater source area was estimated based on the greatest extent of groundwater contamination above screening levels encountered during previous groundwater monitoring events conducted at the site, including events conducted under UST Incident No. 11-01-02 (approximately 5,950 cm x 1,490 cm). Average depth to water at the site was based on groundwater elevations recorded during the January 29, 2016 and May 26, 2016 monitoring events (13.86 ft; 422.45 cm). The groundwater infiltration rate was estimated at 10% of average annual rainfall for Auburn, Alabama (13.37 cm). Additional fate and transport parameters utilized in the RM-2 Evaluation are discussed below.

Intrinsic Soil Parameters

One undisturbed soil sample (Shelby tube) was collected to obtain intrinsic soil parameters necessary to complete the RM-2 Evaluation. The results of the laboratory analyses are summarized in the table below. The soil properties laboratory reports are included in Appendix G.

Intrinsic Soil Parameters

Sample ID	Dry Bulk Density	Water Content	Total Porosity	FOC
SB-2	1.768 g/cm^3	0.13	0.35 cm^3/cm^3-soil	0.00290 g-C/g-soil

g – grams; cm^3 – cubic centimeters; C – carbon; FOC – Fractional organic content

A soil sample was submitted to ESC for analysis of fractional organic carbon (FOC). Results indicated that FOC was 0.00290 grams of carbon per gram of soil. Intrinsic soil parameters in the saturated zone were assumed to be equivalent to those collected in the vadose zone.

Slug Tests

Aquifer "slug" tests were performed on shallow Type II monitoring wells MW-3 and MW-5 on May 26, 2016. A pressure transducer and In-Situ™ Inc. data logger were used to record water level measurements and to allow computer-assisted interpretation of the results. Each test was conducted by positioning the pressure transducer approximately one foot from the bottom of the wells. "Slug-out" tests were performed on MW-3 and MW-5 by quickly evacuating the

[1] Fetter, C.W. "Applied Hydrogeology." New Jersey: Prentice Hall, 1994. The fine sand classification was based on the Particle Size Distribution Chart for the undisturbed soil sample collected from the site in January 2016 (Appendix G).

monitoring well and allowing the well to recharge. Following evacuation of the well, the changes in water level versus elapsed time were recorded.

The data collected during these aquifer tests were analyzed by AQTESOLV™ software using the Bouwer and Rice methodology. The use of this method provides point values for the hydraulic conductivity of the water-bearing zone. Output for the slug test performed on MW-3 and MW-5 are included as Appendix H.

Hydraulic conductivity (K) for the MW-3 "slug-out" test was calculated to be 1.1813 x 10^{-4} ft/min. Hydraulic conductivity (K) for the MW-5 "slug out" test was calculated to be 3.582 x 10^{-4} ft/min. The average hydraulic conductivity for the site was calculated to be 2.70 x 10^{-4} ft/min.

The hydraulic gradient for the shallow groundwater at the site was calculated to be approximately 0.025 ft/ft, based on the water table elevations measured at the site on May 26, 2016 (MW-5 to MW-2). Based on the calculated hydraulic conductivity and the measured groundwater gradient, the shallow groundwater flow velocity (Darcy Velocity) for the site is calculated as follows:

Equation:	V	=	K	x	dh/dl
Where:	V	=	Groundwater Flow (Darcy) Velocity		
	K	=	Hydraulic Conductivity		
	dh/dl	=	Groundwater Gradient		

$V = (2.70 \times 10^{-4}\ \text{ft/min})(0.025) = 6.75 \times 10^{-6}\ \text{ft/min} =$ **3.55 ft/year.**

6.3.7 Models and Equations

The models and equations recommended in Appendix B of the most recent edition of the ARBCA Guidance Manual and incorporated into the RAM ARBCA Computational Software were used for the RM-2 evaluation. These include the Domenico Model and the Johnson and Ettinger Model.

6.3.8 Cumulative Risk Evaluation

The cumulative risks calculated by the RAM software are summarized in the tables below. The RAM model output for the risks evaluation is included in Appendix F.

Individual Excess Lifetime Cancer Risk

Receptor	Sum of IELCR*
Resident Child	**2.06×10^{-5}**
Resident Adult	**1.69×10^{-5}**
Commercial Worker	5.73×10^{-6}
Trespasser	**6.47×10^{-5}**
Construction Worker	2.77×10^{-6}

IELCR – Individual Excess Lifetime Cancer Risk; *Allowable IELCR is 1×10^{-5}; **Bold** – exceeds allowable risk

Hazard Index

Receptor	Sum of HI*
Resident Child	0.618
Resident Adult	0.123
Commercial Worker	0.0403
Trespasser	**1.28**
Construction Worker	0.508

HI – Hazard Index; *Allowable HI is 1.0; **Bold** – exceeds allowable risk

The cumulative risks are above the allowable risk for the Individual Excess Lifetime Cancer Risk (IELCR) for carcinogens for the resident child, resident adult, and trespasser receptors. The IELCR is below the allowable risk for the commercial worker and construction worker receptors. The IELCR is the sum of the risks of each complete pathway as calculated and provided in Appendix F.

The Hazard Index (HI) for non-carcinogenic effects for the resident child, resident adult, commercial worker, and construction worker were each below the allowable risk of 1.0. The HI for the trespasser exceeded the allowable risk. The HI is the sum of the Hazard Quotient (HQ) for each complete pathway as calculated and provided in Appendix F.

A review of the cumulative IELCR for the resident receptors reveals that the allowable risks were exceeded specifically due to the presence of arsenic in surficial soil. The pathway of concern for arsenic exposure to the resident receptors is ingestion of soil.

A review of the cumulative IELCR for the trespasser reveals that the allowable risk was exceeded specifically due to the presence of arsenic and chromium VI in surficial soil. A review of the HI for the trespasser reveals that the allowable risk was exceeded specifically due to the presence of arsenic in surficial soil. The pathway of concern for chromium VI exposure to the trespasser is ingestion of soil. The pathways of concern for arsenic exposure to the trespasser are ingestion of soil and outdoor inhalation of soil particulates.

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

As part of the LSI, five soil borings (SB-1 through SB-5) and five permanent two-inch monitoring wells (MW-1 through MW-5) were installed to evaluate potential impacts to the site from historical on- and off-site activities. Based on the analytical results and field observations from the January 2016 LSI and the May 2016 groundwater monitoring, the following points summarize Terracon's findings:

- Surficial soil samples were collected from each boring location from the upper 1-foot of recoverable soil and analyzed for RCRA metals per EPA Methods 6010B and 7471A. The only metals detected at concentrations above applicable screening levels in the surficial soil samples submitted for analysis were arsenic, chromium, and lead. Concentrations of arsenic detected at the site are comparable with published background concentrations, and it is the opinion of Terracon that arsenic concentrations in soil at the site are attributable to variations in background levels and not a result of past on-site activities. The chromium and lead concentrations in surficial soil at the locations of borings SB-3 and SB-1, respectively, exceed residential screening levels and may be attributable to historical on-site operations.

- No VOC or PAH constituents were detected above the laboratory detection limit in the soil samples collected from any of the borings advanced during this investigation.

- Shallow groundwater flow was calculated to be to the east-southeast towards an unnamed tributary of Chewacla Creek.

- Two VOC constituents and seven PAH constituents were detected in groundwater samples submitted for analysis during the January 2016 LSI; however, no VOC or PAH constituent exceeded applicable screening levels.

- One VOC constituent and one PAH constituent were detected in groundwater samples submitted for analysis during the May 2016 groundwater monitoring event; however, no VOC or PAH constituent exceeded applicable screening levels.

- Dissolved lead was not detected in any groundwater sample collected during the January 2016 LSI or the May 2016 groundwater monitoring event;

- The highest concentrations of VOCs detected in on-site groundwater during the January 2016 LSI, the May 2016 groundwater monitoring event, and in the previous four groundwater monitoring events related to UST Incident No. 11-01-02 were compared to Target Groundwater Concentrations calculated utilizing the EPA VISL Calculator

(Version 3.4). Concentrations of benzene, ethylbenzene, naphthalene, and xylenes reported in groundwater samples collected from on-site monitoring well MW-11 during previous investigations exceeded the VISL calculated for those constituents. VOCs detected during the January 2016 LSI and the May 2016 groundwater monitoring event were not present at concentrations above the calculated VISLs.

- The distance to subsurface contamination detected at the site ranges between 10.66 ft-bgs (MW-11; Oct. 2014) and 17.55 ft-bgs (MW-2; May 2016), which is greater than the vertical separation distance (6 ft-bgs) utilized to screen-out potential petroleum vapor intrusion as recommended in the EPA Technical Guide for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites, June 2015.

- A GPR survey was performed at the site to detect anomalies in the subsurface that could indicate the presence of USTs. No anomalies were detected during the GPR survey.

- The cumulative risks are above the allowable risk of 1×10^{-5} for the Individual Excess Lifetime Cancer Risk (IELCR) for carcinogens for the resident child, resident adult, and trespasser receptors.

- The Hazard Index (HI) for non-carcinogenic effects for the trespasser exceeded the allowable risk of 1.0.

7.2 Recommendations

In order to be consistent with the assumptions presented in the SCEM, to mitigate potential risks that may arise from the presence of COCs in subsurface soil and groundwater, and because COCs above screening levels are to remain in soil and groundwater at the site, Terracon recommends the implementation of institutional and engineering controls at the site as outlined below:

- As certain COCs will remain on site at concentrations above screening levels and in order to prevent on-site exposure to these COCs, Terracon recommends recording an environmental covenant with appropriate deed restrictions. Proposed deed restrictions for the site are as follows:

    - The use of groundwater for potable or irrigation purposes shall be prohibited without prior approval of ADEM.
    - Access to site soils contaminated above applicable screening levels shall be restricted through the implementation of paving or capping with a minimum of one foot of clean fill in landscaped areas.

- Any development involving construction of occupied, enclosed sub-grade space(s) on the site will require re-evaluation of the vapor intrusion pathway specific to the structure(s).
- Construction of ground-level residential housing units on Lee County Parcel 43-09-09-30-1-001-094.000 shall be prohibited without prior approval of ADEM.

- In order to prevent exposure to COCs in soils for potential receptors, the final development plan for the site will restrict access to surficial soils that are contaminated above applicable screening levels. This will be achieved with the use of impervious surfaces or, in landscaped areas, covering contaminated soils with a minimum of one foot of clean fill material.

The above recommendations have been developed with the ultimate end use of the property in mind. The site plan calls for redevelopment as a mixed-use, multi-family residential property. Given the proposed future use of the site, the above recommendations will mitigate potential for realistic exposure of future residents and other receptors to the COCs currently in groundwater and soil beneath the site. Mitigating the current and realistic exposure pathway to future on-site receptors will result in an overall environmental benefit to the surrounding community.

If the recommendations herein meet the requirements of ADEM, Terracon will submit a draft environmental covenant to the Department for approval. Following approval, the environmental covenant will be recorded with the Lee County Judge of Probate. A Certification of Compliance detailing the activities outlined above will be submitted to the Department within 30 days of project completion and will include a copy of the filed environmental covenant. Upon implementation of the recommendations above, Terracon requests that ADEM consider issuing a Conditional Letter of Concurrence for the site.

TABLES

Table 1
Water Table Elevation Data
Limited Site Investigation
Northeast Corner of East Glenn Ave & North Gay St
Auburn, Lee County, Alabama

Well ID	Date	Top of Casing Elevation (ft amsl)	Depth To Water (ft btoc)	Groundwater Elevation (ft amsl)	Well Depth (ft btoc)
MW-1	01/29/16	709.02	12.93	696.09	20.01
MW-2	01/29/16	705.78	16.33	689.45	27.69
MW-3	01/29/16	705.74	11.79	693.95	22.69
MW-4	01/29/16	705.00	11.25	693.75	20.11
MW-5	01/29/16	709.67	15.61	694.06	25.40

ft btoc - feet below top of casing
ft amsl - feet above mean sea level

Table 2
Surficial Soil Sample Analytical Results
Voluntary Property Assessment Plan and Report
Northeast Corner of East Glenn Ave & North Gay St
Auburn, Lee County, Alabama

Laboratory ID	**L814859-01**	**L814859-03**	**L814859-05**	**L814859-07**	**L814859-09**	**EPA RSL**
Location ID	**SB-1 0-1.5FT**	**SB-2 0-1.5FT**	**SB-3 0-1.5FT**	**SB-4 0-1.5FT**	**SB-5 0-1.5FT**	
Date Collected	**01/27/2016**	**01/27/2016**	**01/27/2016**	**01/27/2016**	**01/27/2016**	
Analyte	**Result**	**Result**	**Result**	**Result**	**Result**	
Arsenic	**3.65**	<2.2	**8.92**	<2.25	**3.55**	**0.68**
Barium	**56.5**	**22.7**	**31.8**	**12.7**	**8.57**	**1500**
Cadmium	**0.866**	<0.55	<0.644	<0.562	<0.585	**7.1**
Chromium	**12.4**	**4.2**	**73.1**	**16.1**	**26**	**30***
Chromium VI	NA	NA	**2.27**	NA	NA	**0.3**
Lead	**401**	**5.64**	**16.2**	**21.7**	**8.44**	**400**
Selenium	<2.25	<2.2	<2.58	<2.25	<2.34	**39**
Silver	<1.12	<1.1	<1.29	<1.12	<1.17	**39**
Mercury	**0.113**	**0.0306**	**0.226**	**0.0404**	<0.0234	**1.1**

Data presented in milligrams per kilogram (parts per million).
EPA RSL - Environmental Protection Agency Regional Screening Level for Residential Soil (May 2016, HQ=0.1, TCR=1E-06)
*ADEM PSV - Alabama Department of Environmental Management Preliminary Screening Value for Residential Soil (April 2008)
Bold - exceeds lab detection limit;
Highlighted values exceed or is equal to a regulatory value.
NA- Not Analyzed

Table 3
Subsurface Soil Sample Analytical Results
Voluntary Property Assessment Plan and Report
Northeast Corner of East Glenn Ave & North Gay St
Auburn, Lee County, Alabama

Laboratory ID	**L814859-02**	**L814859-04**	**L814859-06**	**L814859-08**	**L814859-10**	
Sample ID	**SB-1-2 1.5-5FT**	**SB-2 15-20FT**	**SB-3 15-20FT**	**SB-4 10-15FT**	**SB-5-5 15-20FT**	
Date Collected	**01/27/2016**	**01/27/2016**	**01/27/2016**	**01/27/2016**	**01/27/2016**	
Volatile Organic Compounds (VOCs)						**EPA RSL Residential Soil**
Acetone	<0.271	<0.301	<0.303	<0.295	<0.291	**6100**
Acrylonitrile	<0.0543	<0.0601	<0.0605	<0.0589	<0.0582	**0.25**
Benzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**1.2**
Bromobenzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**29**
Bromodichloromethane	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**0.29**
Bromoform	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**19**
Bromomethane	<0.0271	<0.0301	<0.0303	<0.0295	<0.0291	**0.68**
N-Butylbenzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**390**
Sec-Butylbenzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**780**
Tert-Butylbenzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**780**
Carbon Tetrachloride	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**0.65**
Chlorobenzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**28**
Chlorodibromomethane	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**8.3**
Chloroethane	<0.0271	<0.0301	<0.0303	<0.0295	<0.0291	**1400**
2-Chloroethyl Vinyl Ether	<0.271	<0.301	<0.303	<0.295	<0.291	**NL**
Chloroform	<0.0271	<0.0301	<0.0303	<0.0295	<0.0291	**0.32**
Chloromethane	<0.0136	<0.015	<0.0151	<0.0147	<0.0145	**11**
2-Chlorotoluene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**160**
4-Chlorotoluene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**160**
1,2-Dibromo-3-Chloropropane	<0.0271	<0.0301	<0.0303	<0.0295	<0.0291	**0.0053**
1,2-Dibromoethane	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**0.036**
Dibromomethane	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**2.4**
1,2-Dichlorobenzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**180**
1,3-Dichlorobenzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**NL**
1,4-Dichlorobenzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**2.6**
Dichlorodifluoromethane	<0.0271	<0.0301	<0.0303	<0.0295	<0.0291	**8.7**
1,1-Dichloroethane	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**3.6**
1,2-Dichloroethane	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**0.46**
1,1-Dichloroethene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**23**
Cis-1,2-Dichloroethene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**16**
Trans-1,2-Dichloroethene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**160**
1,2-Dichloropropane	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**1**
1,1-Dichloropropene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**NL**
1,3-Dichloropropane	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**160**
Cis-1,3-Dichloropropene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**NL**
Trans-1,3-Dichloropropene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**NL**
2,2-Dichloropropane	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**NL**
Di-Isopropyl Ether	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**220**
Ethylbenzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**5.8**
Hexachloro-1,3-Butadiene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**1.2**
Isopropylbenzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**190**
P-Isopropyltoluene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**NL**
2-Butanone (Mek)	<0.0543	<0.0601	<0.0605	<0.0589	<0.0582	**2700**
Methylene Chloride	<0.0271	<0.0301	<0.0303	<0.0295	<0.0291	**35**
4-Methyl-2-Pentanone (Mibk)	<0.0543	<0.0601	<0.0605	<0.0589	<0.0582	**3300**
Methyl Tert-Butyl Ether	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**47**
Naphthalene	<0.0271	<0.0301	<0.0303	<0.0295	<0.0291	**3.8**
N-Propylbenzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**380**
Styrene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**600**
1,1,1,2-Tetrachloroethane	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**2**
1,1,2,2-Tetrachloroethane	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**0.60**
1,1,2-Trichlorotrifluoroethane	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**4000**
Tetrachloroethene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**8.1**
Toluene	<0.0271	<0.0301	<0.0303	<0.0295	<0.0291	**490**

Table 3
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Voluntary Property Assessment Plan and Report
Northeast Corner of East Glenn Ave & North Gay St
Auburn, Lee County, Alabama

Laboratory ID	**L814859-02**	**L814859-04**	**L814859-06**	**L814859-08**	**L814859-10**	
Sample ID	**SB-1-2 1.5-5FT**	**SB-2 15-20FT**	**SB-3 15-20FT**	**SB-4 10-15FT**	**SB-5-5 15-20FT**	
Date Collected	**01/27/2016**	**01/27/2016**	**01/27/2016**	**01/27/2016**	**01/27/2016**	
Volatile Organic Compounds (VOCs)						**EPA RSL Residential Soil**
1,2,3-Trichlorobenzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**6.3**
1,2,4-Trichlorobenzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**5.8**
1,1,1-Trichloroethane	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**810**
1,1,2-Trichloroethane	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**0.15**
Trichloroethene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**0.41**
Trichlorofluoromethane	<0.0271	<0.0301	<0.0303	<0.0295	<0.0291	**2300**
1,2,3-Trichloropropane	<0.0136	<0.015	<0.0151	<0.0147	<0.0145	**0.0051**
1,2,4-Trimethylbenzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**5.8**
1,2,3-Trimethylbenzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**4.9**
1,3,5-Trimethylbenzene	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**78**
Vinyl Chloride	<0.00543	<0.00601	<0.00605	<0.00589	<0.00582	**0.059**
Xylenes, Total	<0.0163	<0.018	<0.0182	<0.0177	<0.0175	**58**
Polynuclear Aromatic Hydrocarbons (PAHs)						
Anthracene	<0.0326	<0.00721	<0.00726	<0.00707	<0.00698	**1800**
Acenaphthene	<0.0326	<0.00721	<0.00726	<0.00707	<0.00698	**360**
Acenaphthylene	<0.0326	<0.00721	<0.00726	<0.00707	<0.00698	**NL**
Benzo(A)Anthracene	<0.0326	<0.00721	<0.00726	<0.00707	<0.00698	**0.16**
Benzo(A)Pyrene	<0.0326	<0.00721	<0.00726	<0.00707	<0.00698	**0.016**
Benzo(B)Fluoranthene	<0.0326	<0.00721	<0.00726	<0.00707	<0.00698	**0.16**
Benzo(G,H,I)Perylene	<0.0326	<0.00721	<0.00726	<0.00707	<0.00698	**NL**
Benzo(K)Fluoranthene	<0.0326	<0.00721	<0.00726	<0.00707	<0.00698	**1.6**
2-Chloronaphthalene	<0.109	<0.024	<0.0242	<0.0236	<0.0233	**480**
Chrysene	<0.0326	<0.00721	<0.00726	<0.00707	<0.00698	**16**
Dibenz(A,H)Anthracene	<0.0326	<0.00721	<0.00726	<0.00707	<0.00698	**0.016**
Fluoranthene	<0.0326	<0.00721	<0.00726	<0.00707	<0.00698	**240**
Fluorene	<0.0326	<0.00721	<0.00726	<0.00707	<0.00698	**240**
Indeno(1,2,3-Cd)Pyrene	<0.0326	<0.00721	<0.00726	<0.00707	<0.00698	**0.16**
Naphthalene	<0.109	<0.024	<0.0242	<0.0236	<0.0233	**3.8**
Phenanthrene	<0.0326	<0.00721	<0.00726	<0.00707	<0.00698	**NL**
Pyrene	<0.0326	<0.00721	<0.00726	<0.00707	<0.00698	**180**
1-Methylnaphthalene	<0.109	<0.024	<0.0242	<0.0236	<0.0233	**18**
2-Methylnaphthalene	<0.109	<0.024	<0.0242	<0.0236	<0.0233	**24**

Data presented in milligrams per kilogram (parts per million).
EPA RSL - Environmental Protection Agency Regional Screening Level for Residential Soil (May 2016, HQ=0.1, TCR=1E-06)
NL - Not Listed

Table 4
Groundwater Sample Analytical Results
Voluntary Property Assessment Plan and Report
Northeast Corner of East Glenn Ave & North Gay St
Auburn, Lee County, Alabama

Sample ID	Collection Date		Lead,Dissolved	Acetone	Acrolein	Acrylonitrile	Benzene	Bromobenzene	Bromodichloromethane	Bromoform	Bromomethane	N-Butylbenzene	Sec-Butylbenzene	Tert-Butylbenzene	Carbon Tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	2-Chloroethyl Vinyl Ether	Chloroform	Chloromethane	2-Chlorotoluene	4-Chlorotoluene
MW-1	1/29/2016	Volatile Organic Compounds	<0.005	<0.05	<0.05	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.05	<0.005	<0.0025	<0.001	<0.001
	5/26/2016		<0.005	<0.05	<0.05	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.05	<0.005	<0.0025	<0.001	<0.001
MW-2	1/29/2016		<0.005	<0.05	<0.05	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.05	<0.005	<0.0025	<0.001	<0.001
	5/26/2016		<0.005	<0.05	<0.05	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.05	<0.005	<0.0025	<0.001	<0.001
MW-3	1/29/2016		<0.005	<0.05	<0.05	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.05	<0.005	<0.0025	<0.001	<0.001
	5/26/2016		<0.005	<0.05	<0.05	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.05	<0.005	<0.0025	<0.001	<0.001
MW-4	1/29/2016		<0.005	<0.05	<0.05	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.05	<0.005	<0.0025	<0.001	<0.001
	5/26/2016		<0.005	<0.05	<0.05	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.05	<0.005	<0.0025	<0.001	<0.001
MW-5	1/29/2016		<0.005	<0.05	<0.05	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.05	<0.005	<0.0025	<0.001	<0.001
	5/26/2016		<0.005	<0.05	<0.05	<0.01	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.05	<0.005	<0.0025	<0.001	<0.001
EPA RSL/MCL			**0.015**	**1.4**	**0.0000042**	**0.000052**	**0.005**	**0.0062**	**0.08**	**0.08**	**0.00075**	**0.10**	**0.20**	**0.069**	**0.005**	**0.10**	**0.08**	**2.1**	**NL**	**0.08**	**0.019**	**0.024**	**0.025**

All data presented in mg/L - milligrams per Liter (parts per million).
EPA MCL/RSL - Environmental Protection Agency Maximum Contaminant Level/Regional Screening Level for Tapwater (May 2016, HQ=0.1, TCR=1E-06)
*ADEM PSV - Alabama Department of Environmental Management Preliminary Screening Value for Groundwater/Tapwater (April 2008)
Bold - exceeds lab detection limit;
NL - No Listing

Table 4
Groundwater Sample Analytical Results
Voluntary Property Assessment Plan and Report
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Auburn, Lee County, Alabama

Sample ID	Collection Date	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	Dibromomethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	Cis-1,2-Dichloroethene	Trans-1,2-Dichloroethene	1,2-Dichloropropane	1,1-Dichloropropene	1,3-Dichloropropane	Cis-1,3-Dichloropropene	Trans-1,3-Dichloropropene	2,2-Dichloropropane	Di-Isopropyl Ether	Ethylbenzene	Hexachloro-1,3-Butadiene
MW-1	1/29/16	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	5/26/16	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW-2	1/29/16	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	5/26/16	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW-3	1/29/16	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.00211**	<0.001	<0.001
	5/26/16	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
MW-4	1/29/16	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.00753**	<0.001	<0.001
	5/26/16	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	**0.00128**	<0.001	<0.001
MW-5	1/29/16	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	5/26/16	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
EPA RSL/MCL		**0.0002**	**0.00005**	**0.00083**	**0.6**	**0.018***	**0.075**	**0.02**	**0.0028**	**0.005**	**0.007**	**0.07**	**0.1**	**0.005**	**NL**	**0.037**	**0.0004***	**0.0004***	**NL**	**0.15**	**0.7**	**0.00014**

All data presented in mg/L - milligrams per Liter (parts per million).
EPA MCL/RSL - Environmental Protection Agency Maximum Contaminant Level/Regional Screening Level for Tapwater (May 2016, HQ=0.1, TCR=1E-06)
*ADEM PSV - Alabama Department of Environmental Management Preliminary Screening Value for Groundwater/Tapwater (April 2008)
Bold - exceeds lab detection limit;
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Northeast Corner of East Glenn Ave & North Gay St
Auburn, Lee County, Alabama

Sample ID	Collection Date	Isopropylbenzene	P-Isopropyltoluene	2-Butanone (Mek)	Methylene Chloride	4-Methyl-2-Pentanone (Mibk)	Methyl Tert-Butyl Ether	Naphthalene	N-Propylbenzene	Styrene	1,1,1,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichlorotrifluoroethane	Tetrachloroethene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichlorofluoromethane
MW-1	1/29/16	<0.001	<0.001	<0.01	<0.005	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
	5/26/16	<0.001	<0.001	<0.01	<0.005	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
MW-2	1/29/16	<0.001	<0.001	<0.01	<0.005	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
	5/26/16	<0.001	<0.001	<0.01	<0.005	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
MW-3	1/29/16	<0.001	<0.001	<0.01	<0.005	<0.01	**0.00475**	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
	5/26/16	<0.001	<0.001	<0.01	<0.005	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
MW-4	1/29/16	<0.001	<0.001	<0.01	<0.005	<0.01	**0.002190**	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
	5/26/16	<0.001	<0.001	<0.01	<0.005	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
MW-5	1/29/16	<0.001	<0.001	<0.01	<0.005	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
	5/26/16	<0.001	<0.001	<0.01	<0.005	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
EPA RSL/MCL		**0.045**	**NL**	**0.56**	**0.005**	**0.63**	**0.014**	**0.00017**	**0.066**	**0.1**	**0.00057**	**0.000076**	**5.5**	**0.005**	**1**	**0.0007**	**0.07**	**0.2**	**0.005**	**0.005**	**0.52**

All data presented in mg/L - milligrams per Liter (parts per million).
EPA MCL/RSL - Environmental Protection Agency Maximum Contaminant Level/Regional Screening Level for Tapwater (May 2016, HQ=0.1, TCR=1E-06)
*ADEM PSV - Alabama Department of Environmental Management Preliminary Screening Value for Groundwater/Tapwater (April 2008)
Bold - exceeds lab detection limit;
NL - No Listing

Table 4
Groundwater Sample Analytical Results
Voluntary Property Assessment Plan and Report
Northeast Corner of East Glenn Ave & North Gay St
Auburn, Lee County, Alabama

Sample ID	Collection Date	1,2,3-Trichloropropane	1,2,4-Trimethylbenzene	1,2,3-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl Chloride	Xylenes, Total		Anthracene	Acenaphthene	Acenaphthylene	Benzo(A)Anthracene	Benzo(A)Pyrene	Benzo(B)Fluoranthene	Benzo(G,H,I)Perylene	Benzo(K)Fluoranthene	Chrysene	Dibenz(A,H)Anthracene	Fluoranthene	Fluorene
MW-1	1/29/2016	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.003	Polynuclear Aromatic Hydrocarbons	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	5/26/2016	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.003		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
MW-2	1/29/2016	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.003		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	5/26/2016	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.003		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
MW-3	1/29/2016	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.003		**0.0000729**	**0.00291**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	**0.00013**	**0.00213**
	5/26/2016	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.003		<0.00005	**0.0000668**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
MW-4	1/29/2016	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.003		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	5/26/2016	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.003		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
MW-5	1/29/2016	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.003		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
	5/26/2016	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.003		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
EPA RSL/MCL		**0.00000075**	**0.0015**	**0.001**	**0.012**	**0.002**	**10**		**0.18**	**0.053**	**NL**	**0.000012**	**0.0002**	**0.000034**	**0.0469***	**0.00034**	**0.0034**	**0.0000034**	**0.080**	**0.029**

All data presented in mg/L - milligrams per Liter (parts per million).
EPA MCL/RSL - Environmental Protection Agency Maximum Contaminant Level/Regional Screening Level for Tapwater (May 2016, HQ=0.1, TCR=1E-06)
*ADEM PSV - Alabama Department of Environmental Management Preliminary Screening Value for Groundwater/Tapwater (April 2008)
Bold - exceeds lab detection limit;
NL - No Listing

Table 4
Groundwater Sample Analytical Results
Voluntary Property Assessment Plan and Report
Northeast Corner of East Glenn Ave & North Gay St
Auburn, Lee County, Alabama

Sample ID	Collection Date	Indeno(1,2,3-Cd)Pyrene	Naphthalene	Phenanthrene	Pyrene	1-Methylnaphthalene	2-Methylnaphthalene	2-Chloronaphthalene
MW-1	1/29/2016	<0.00005	<0.00025	<0.00005	<0.00005	<0.00025	<0.00025	<0.00025
	5/26/2016	<0.00005	<0.00025	<0.00005	<0.00005	<0.00025	<0.00025	<0.00025
MW-2	1/29/2016	<0.00005	<0.00025	**0.00011**	<0.00005	<0.00025	<0.00025	<0.00025
	5/26/2016	<0.00005	<0.00025	<0.00005	<0.00005	<0.00025	<0.00025	<0.00025
MW-3	1/29/2016	<0.00005	<0.00025	**0.00054**	**0.000058**	**0.0003**	<0.00025	<0.00025
	5/26/2016	<0.00005	<0.00025	<0.00005	<0.00005	<0.00025	<0.00025	<0.00025
MW-4	1/29/2016	<0.00005	<0.00025	<0.00005	<0.00005	<0.00025	<0.00025	<0.00025
	5/26/2016	<0.00005	<0.00025	<0.00005	<0.00005	<0.00025	<0.00025	<0.00025
MW-5	1/29/2016	<0.00005	<0.00025	**0.00032**	<0.00005	<0.00025	<0.00025	<0.00025
	5/26/2016	<0.00005	<0.00025	<0.00005	<0.00005	<0.00025	<0.00025	<0.00025
EPA RSL/MCL		**0.000034**	**0.00017**	**0.0469***	**0.012**	**0.0011**	**0.0036**	**0.075**

All data presented in mg/L - milligrams per Liter (parts per million).
EPA MCL/RSL - Environmental Protection Agency Maximum Contaminant Level/Regional Screening Level for Tapwater (May 2016, HQ=0.1, TCR=1E-06)
*ADEM PSV - Alabama Department of Environmental Management Preliminary Screening Value for Groundwater/Tapwater (April 2008)
Bold - exceeds lab detection limit;
NL - No Listing

EXHIBITS

UNITED STATES — DEPARTMENT OF THE INTERIOR — GEOLOGICAL SURVEY

SCALE 1:24 000

1 .5 0 KILOMETERS 1 2

1000 0 METERS 1000 2000

1 .5 0 1

MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10 000

FEET

CONTOUR INTERVAL 10 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

N

AUBURN, AL

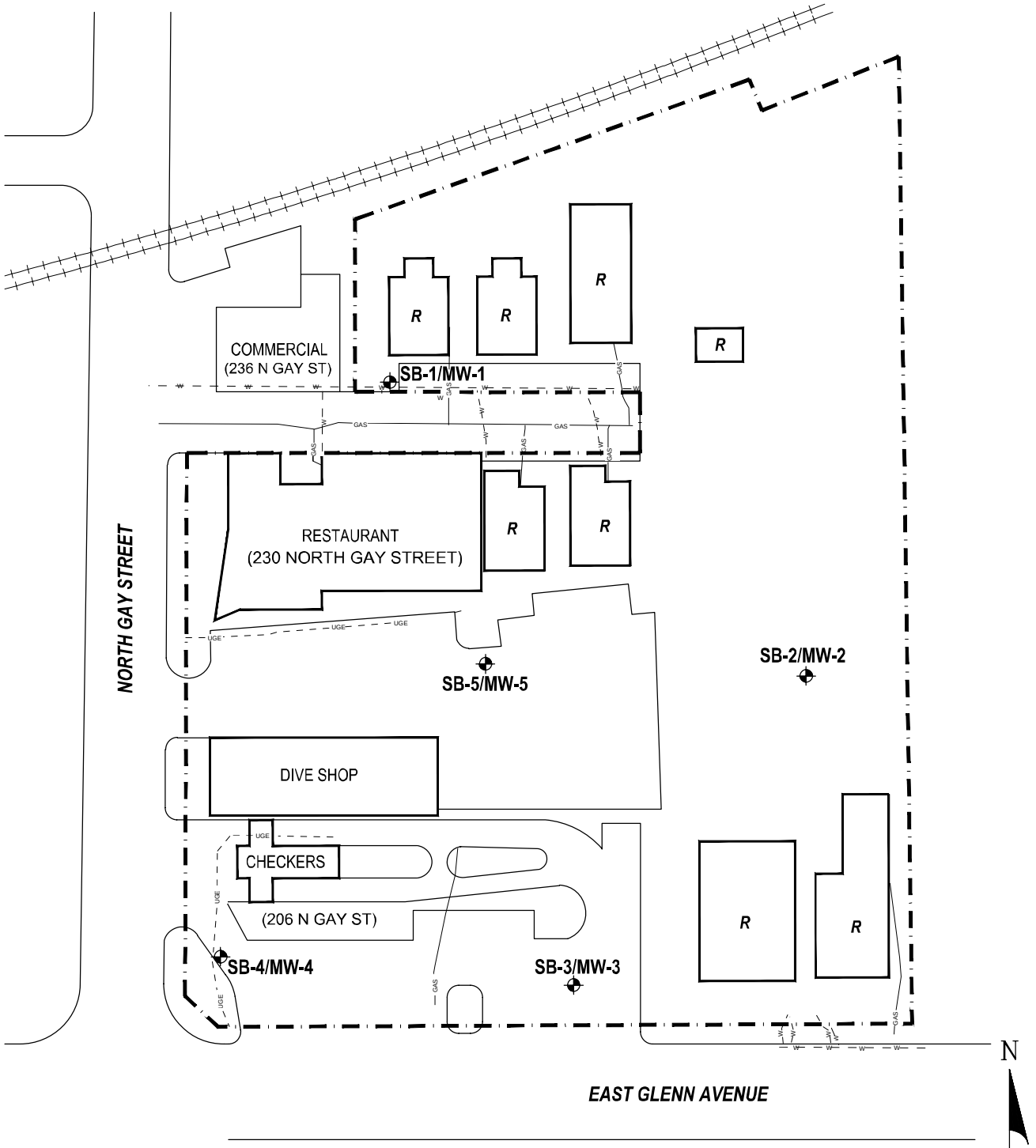
1971

PR1983

7.5 MINUTE SERIES (TOPOGRAPHIC)

*INDICATES WHICH MAP SITE IS LOCATED ON

Project Mngr: TGN	Project No. E1167114	Terracon Consulting Engineers and Scientists	TOPOGRAPHIC VICINITY MAP	EXHIBIT
Drawn By: TLY	Scale: AS SHOWN		Proposed Mixed-use Development Northeast Corner of E Glenn Ave & N Gay St Auburn, Lee County, Alabama	1
Checked By: TGN/MRF	File No. E1167114	110 12th Street North Birmingham, Alabama 35203 (205) 942-1289 (205) 443-5302		
Approved By: TWR	Date: July 2016			



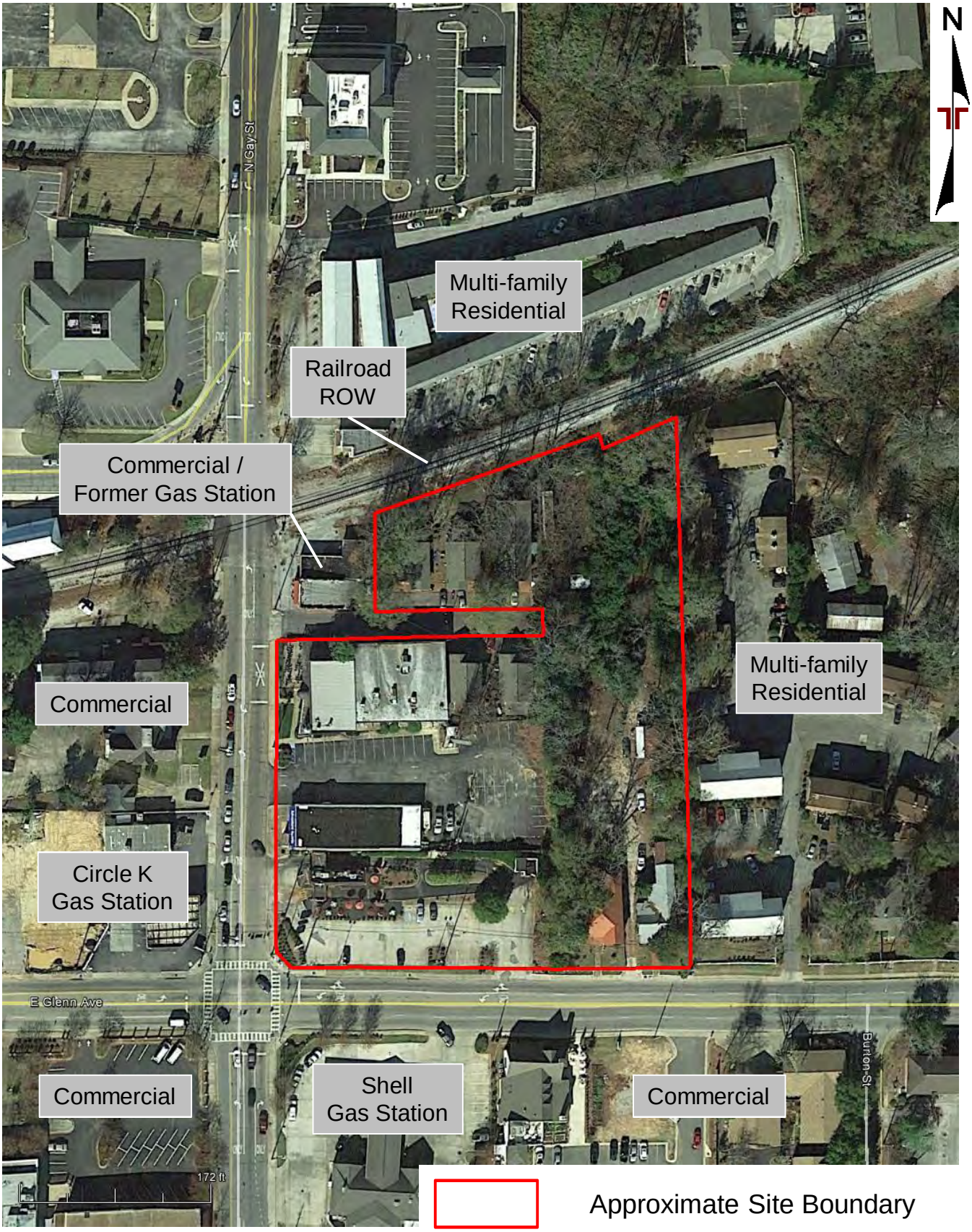
LEGEND

- SITE
- RAILROAD TRACK
- SOIL BORING/MONITORING WELL LOCATION
- R — RESIDENCE
- UGE — UNDERGROUND ELECTRIC LINES
- W — WATER LINES
- GAS — GAS LINES

0 80
Approximate Scale (Feet)

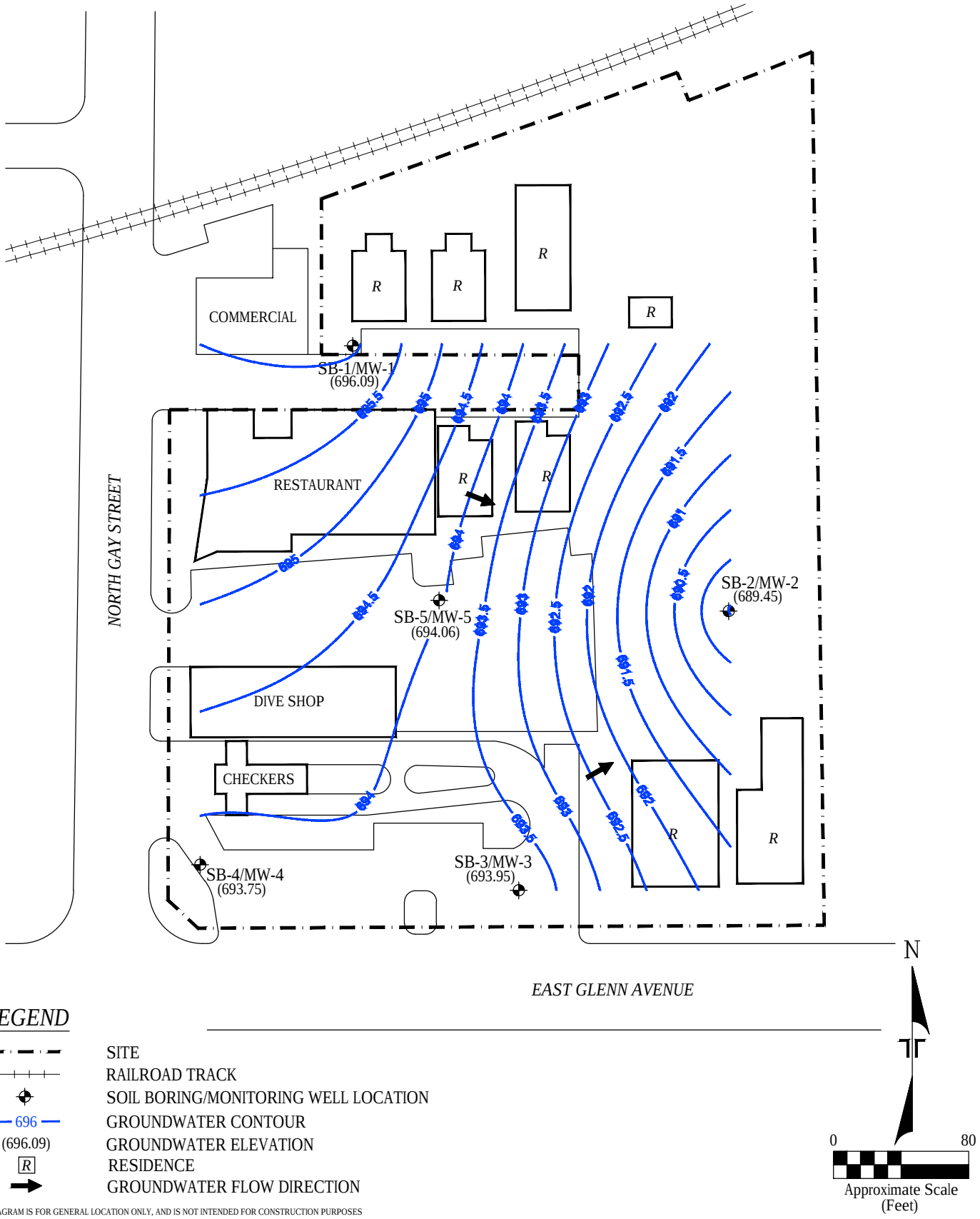
THIS DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mngr: TGN	Project No. E1167114	Terracon Consulting Engineers and Scientists	SOIL BORING/MONITORING WELL LOCATION DIAGRAM
Drawn By: TLY	Scale: AS SHOWN		Proposed Mixed-use Development Northeast Corner of E Glenn Ave & N Gay St Auburn, Lee County, Alabama
Checked By: TGN/MRF	File No. LSIE1167035-2		EXHIBIT
Approved By: FMN	Date: July 2016	110 12th Street North Birmingham, Alabama 35203 (205) 942-1289 (205) 443-5302	2



Approximate Site Boundary

Project Manager: TN	Project No. E1167114	Terracon Consulting Engineers & Scientists	Aerial Photograph with Adjoining Properties	Exhibit
Drawn By: TN	Scale: As shown	110 12th Street North Birmingham, Alabama 35203	Proposed Mixed-use Development	3
Checked By: TWR	File Name: E1167114	PH. (205) 942-1289 FAX. (205) 443-5302	Northeast Corner of E Glenn Ave & N Gay St	
Approved By: TWR	Date: July 2016		Auburn, Lee County, Alabama	

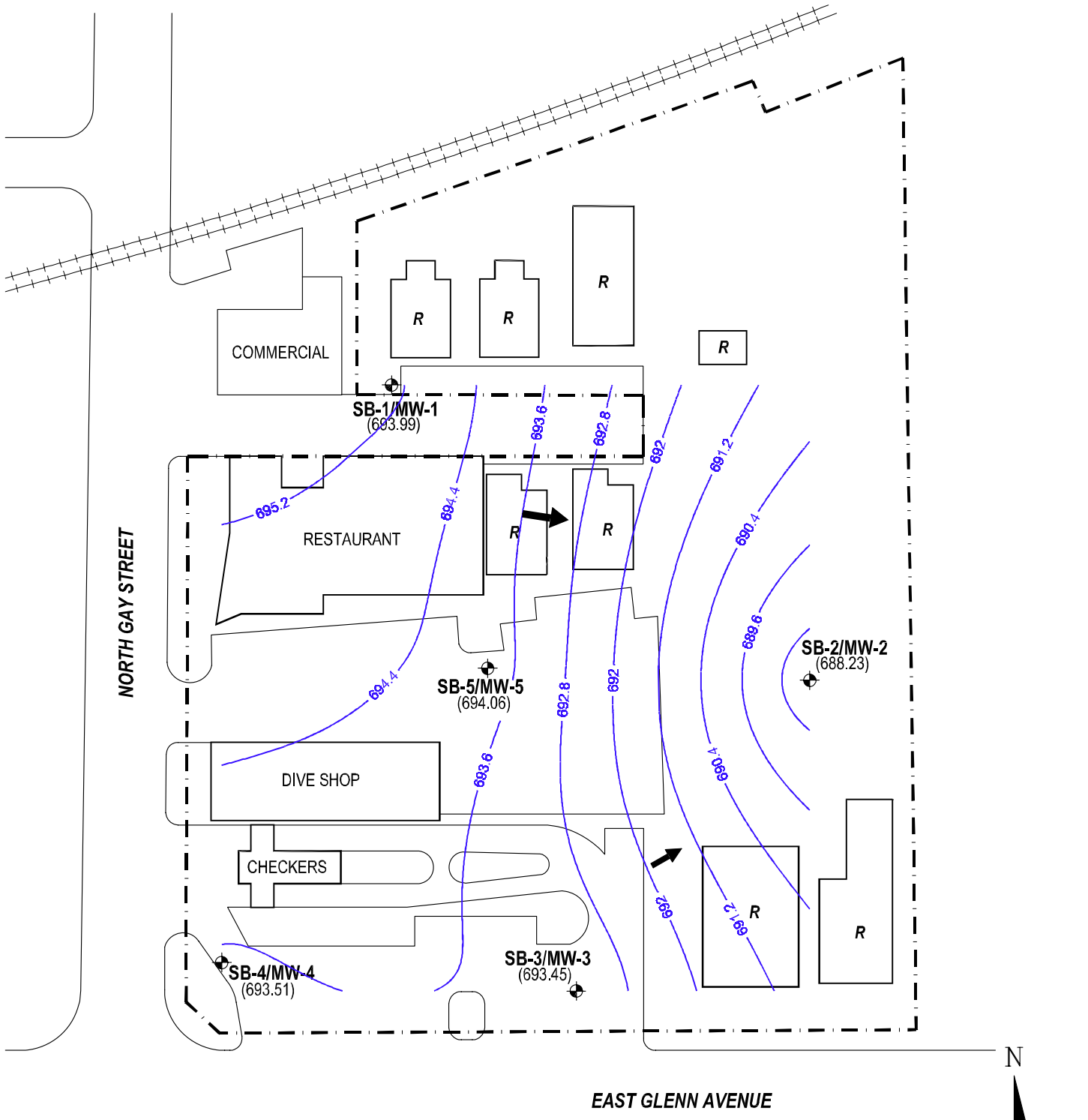


LEGEND

— · — · —	SITE
+++++	RAILROAD TRACK
⊕	SOIL BORING/MONITORING WELL LOCATION
— 696 —	GROUNDWATER CONTOUR
(696.09)	GROUNDWATER ELEVATION
R	RESIDENCE
→	GROUNDWATER FLOW DIRECTION

THIS DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mngr: TGN	Project No: E1167114	Terracon Consulting Engineers and Scientists	Potentiometric Surface Map January 29, 2016
Drawn By: TLY	Scale: AS SHOWN		Proposed Mixed-use Development Northeast Corner of E Glenn Ave & N Gay St Auburn, Lee County, Alabama
Checked By: TGN/MRF	File No. LSIE1167035-3		EXHIBIT
Approved By: FMN	Date: July 2016	110 12th Street North Birmingham, Alabama 35203 (205) 942-1289 (205) 443-5302	4



LEGEND

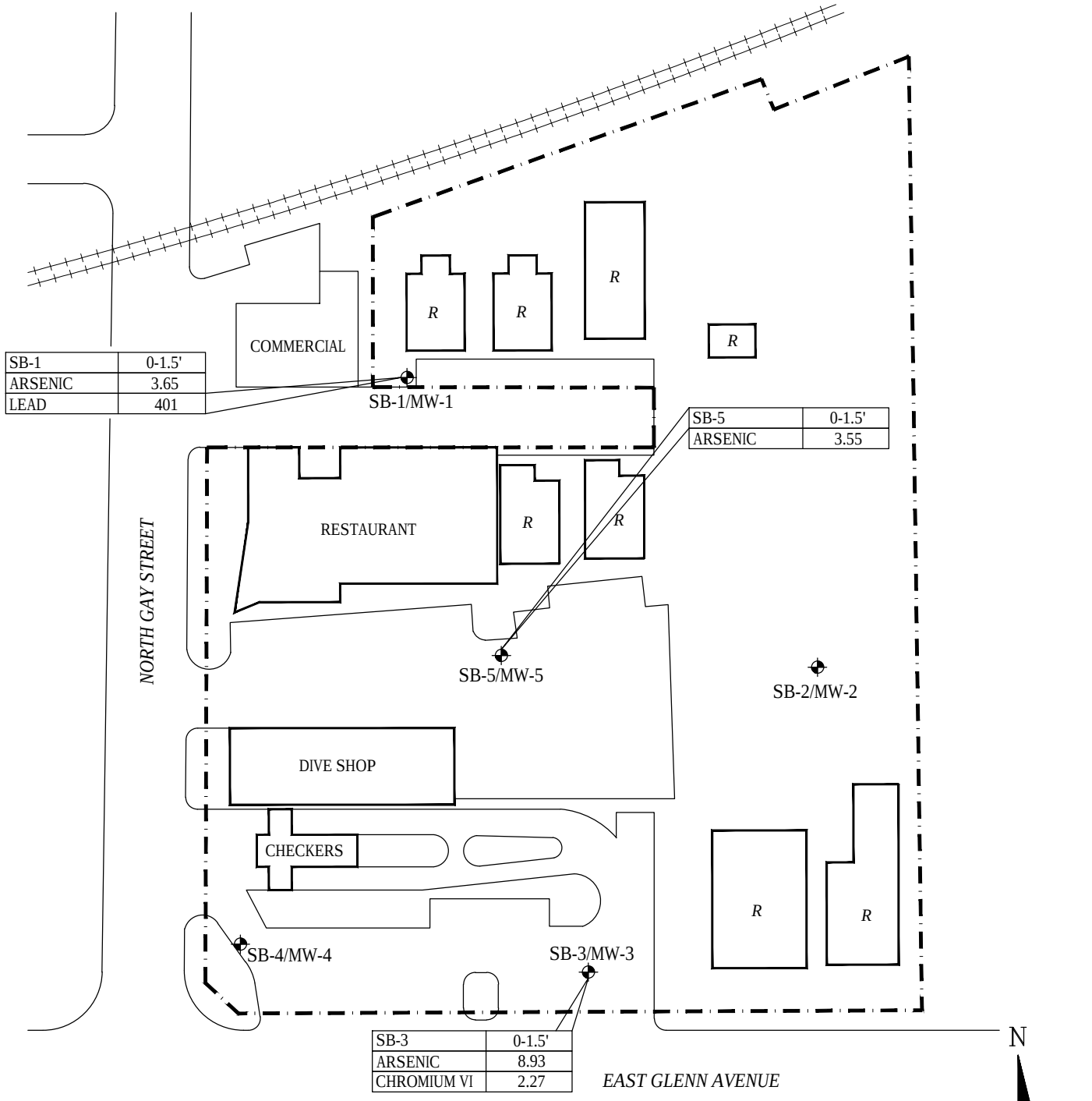
— · — · —	SITE
+++++	RAILROAD TRACK
⊕	SOIL BORING/MONITORING WELL LOCATION
— 692 —	GROUNDWATER CONTOUR
(695.34)	GROUNDWATER ELEVATION
R	RESIDENCE
➡	GROUNDWATER FLOW DIRECTION

0 80
Approximate Scale (Feet)

THIS DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mngr: TGN	Project No. E1167114	Terracon Consulting Engineers and Scientists	POTENTIOMETRIC SURFACE MAP MAY 26, 2016
Drawn By: RLW	Scale: AS SHOWN		Proposed Mixed-use Development
Checked By: TGN/MRF	File No. E1167114-5		EAST GLENN AVENUE
Approved By: FMN	Date: JULY 2016	110 12th Street North Birmingham, Alabama 35203 (205) 942-1289 (205) 443-5302	206 NORTH GAY STREET AUBURN, AL

EXHIBIT 5



LEGEND

- SITE
- RAILROAD TRACK
- SOIL BORING/MONITORING WELL LOCATION
- R RESIDENCE

0 80
Approximate Scale (Feet)

*ONLY COCs THAT EXCEED THE EPA RSL FOR RESIDENTIAL SOIL ARE DISPLAYED

*ALL CONCENTRATION ARE IN mg/kg

THIS DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Mngr: TGN	Project No: E1167114	Terracon Consulting Engineers and Scientists	COC EXCEEDANCES IN SOIL
Drawn By: TLY	Scale: AS SHOWN		Proposed Mixed-use Development Northeast Corner of E Glenn Ave & N Gay St Auburn, Lee County, Alabama
Checked By: TGN/MRF	File No. LSIE1167035-4		EXHIBIT
Approved By: FMN	Date: July 2016	110 12th Street North Birmingham, Alabama 35203 (205) 942-1289 (205) 443-5302	6

APPENDIX A

WELL LOG NO. SB-1 / MW-1

PROJECT: Limited Site Investigation

CLIENT: Landmark Collegiate Acquisitions, LLC

SITE: East Glenn Ave.
Auburn, Alabama

LOCATION See Exhibit A-2

INSTALLATION DETAILS

Well Completion:

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	OVA/PID (ppm)
0.3	**ASPHALT**					
1.5	**SANDY SILT**, brown, with orange/red clayey sand lenses, no odor, friable					
1.9	**SILTY SAND**, dark brown, no odor, roots					
	CLAYEY SAND, with coarse grains, tan, no odor				50	0.2
5.0	**SANDY CLAY**, with sand lens and coarse grains, red/orange, no odor, stiff	5			100	0.1
	~1.0' of clayey sand, white/red/orange mottling, no odor					
10.0	**CLAYEY SAND**, orange with pink/white sand, medium stiff 10' - 10.5' wet lens	10	▽		100	0.1
15.0	**CLAYEY SAND**, with coarse grains, white/tan, no odor, saturated	15			100	0.1
19.0	**WEATHERED SCHIST/ROCK**, pink/red mottling, mica rich					
20.0	***Boring Terminated at 20 Feet***	20				

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
DPT for soils; Hollow stem auger to set wells, Geoprobe

Abandonment Method:
N/A

See Appendices for description of field procedures.
See Appendices for description of laboratory procedures and additional data (if any).
See Appendices for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Water encountered at ~10' on 1/27/2016*

▽ *Water measured at 12.93' on 1/29/2016*

Terracon
110 12th Street North
Birmingham, Alabama

Well Started: 1/27/2016	Well Completed: 1/29/2016
Drill Rig: Geoprobe	Driller: EFS
Project No.: E1167035	Exhibit: B-1

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG E1167035 EAST GLENN AVE LSI.GPJ TERRACON2012.GDT 2/12/16

WELL LOG NO. SB-2 / MW-2

PROJECT: Limited Site Investigation

CLIENT: Landmark Collegiate Acquisitions, LLC

SITE: East Glenn Ave.
Auburn, Alabama

LOCATION See Exhibit A-2

INSTALLATION DETAILS

Well Completion:

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	OVA/PID (ppm)
1.5	**SILTY SAND**, brown, sand/gravel parking area					
2.4	**SANDY CLAY**, moist, soft					
9.0	**CLAYEY SAND**, orange/red with tan/white mottling, no odor, medium stiff, coarse grains, friable	5			100	0.1
					100	0.1
10.0	**SANDY CLAY**, red with white/tan mottling, no odor, stiff, friable	10				
15.0	**CLAY**, some sand, red with pink/white mottling, no odor, stiff, friable				100	0.1
20.0	**SANDY CLAY to COARSE SAND**, with clay, red/orange with white/tan/pink mottling, no odor, coarse grains, mica rich	15			100	0.1
25.3	**CLAYEY SAND**, red/pink with white/tan mottling, no odor, saturated, coarse grains and gravel	20			100	0.1
					100	0.1
28.0	**WEATHERED SCHIST/ROCK, RED CLAY**, stiff, mica rich	25				
	Boring Terminated at 28 Feet					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
DPT for soils; Hollow stem auger to set wells, Geoprobe

Abandonment Method:
N/A

See Appendices for description of field procedures.
See Appendices for description of laboratory procedures and additional data (if any).
See Appendices for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Water encountered at ~20' on 1/27/2016

Water measured at 16.33' on 1/29/2016

Terracon
110 12th Street North
Birmingham, Alabama

Well Started: 1/27/2016 | Well Completed: 1/29/2016

Drill Rig: Geoprobe | Driller: EFS

Project No.: E1167035 | Exhibit: B-2

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG E1167035 EAST GLENN AVE LSI.GPJ TERRACON2012.GDT 2/12/16

WELL LOG NO. SB-3 / MW-3

PROJECT: Limited Site Investigation

CLIENT: Landmark Collegiate Acquisitions, LLC

SITE: East Glenn Ave.
Auburn, Alabama

LOCATION See Exhibit A-2

INSTALLATION DETAILS

Well Completion:

DEPTH	MATERIAL DESCRIPTION	RECOVERY (%)	OVA/PID (ppm)
0.3	**CONCRETE**		
1.5	**SANDY CLAY, FILL MATERIAL**, orange/red, no odor		
7.0	**CLAY**, with coarse grains and some sand, red with orange/tan mottling, no odor, very stiff, friable	100	0.3
10.0	**SANDY CLAY**, tan, no odor, with 0.2' of red clay lens	100	0.3
10.8	**SANDY CLAY**, red/orange/white mottled, no odor, stiff		
15.0	**CLAYEY SAND**, tan/white mottling, no odor, moist	100	0.2
17.5	**CLAYEY SAND**, white/tan, no odor, saturated		
20.0	**CLAYEY SAND**, with coarse grains, gray, petroleum odor	100	0.6
24.1	**CLAYEY SAND**, with gravel, white/tan, odor, saturated lens at top 0.1'	100	0.2
25.0	**WEATHERED ROCK/SCHIST**, red clay, no odor, stiff, mica rich		

Boring Terminated at 25 Feet

DEPTH (ft): 5, 10, 15, 20, 25

WATER LEVEL OBSERVATIONS

SAMPLE TYPE

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
DPT for soils; Hollow stem auger to set wells, Geoprobe

Abandonment Method:
N/A

See Appendices for description of field procedures.
See Appendices for description of laboratory procedures and additional data (if any).
See Appendices for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Water encountered at ~15' on 1/27/2016

Water measured at 11.79' on 1/29/2016

Terracon
110 12th Street North
Birmingham, Alabama

Well Started: 1/27/2016 | Well Completed: 1/29/2016

Drill Rig: Geoprobe | Driller: EFS

Project No.: E1167035 | Exhibit: B-3

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG E1167035 EAST GLENN AVE LSI.GPJ TERRACON2012.GDT 2/12/16

WELL LOG NO. SB-4 / MW-4

PROJECT: Limited Site Investigation

CLIENT: Landmark Collegiate Acquisitions, LLC

SITE: East Glenn Ave.
Auburn, Alabama

LOCATION See Exhibit A-2

INSTALLATION DETAILS

Well Completion:

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	OVA/PID (ppm)
0.4	**CONCRETE**					
1.5	**BROKEN CONCRETE**, red/orange sandy clay, no odor					
	CLAY, some coarse grains, red with orange/white/tan mottling, no odor, very stiff, friable	5			100	0.1
7.5					100	0.1
	CLAYEY SAND, white/tan mottling, no odor, friable					
10.0		10				
	CLAYEY SAND, with coarse grains and gravel, orange/red, soft				85	0.1
13.0						
	CLAYEY SAND, with coarse grains, white/tan mottling, saturated					
15.0		15				
	CLAYEY SAND, coarse grains, some gravel, gray, slight odor, saturated, 0.6' lens, apparent some fallout				75	0.1
20.0		20				
	Boring Terminated at 20 Feet					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
DPT for soils; Hollow stem auger to set wells, Geoprobe

Abandonment Method:
N/A

See Appendices for description of field procedures.
See Appendices for description of laboratory procedures and additional data (if any).
See Appendices for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Water encountered at ~13' on 1/27/2016

Water measured at 11.25' on 1/29/2016

Terracon
110 12th Street North
Birmingham, Alabama

Well Started: 1/27/2016 | Well Completed: 1/29/2016

Drill Rig: Geoprobe | Driller: EFS

Project No.: E1167035 | Exhibit: B-4

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG E1167035 EAST GLENN AVE LSI.GPJ TERRACON2012.GDT 2/12/16

WELL LOG NO. SB-5 / MW-5

PROJECT: Limited Site Investigation

CLIENT: Landmark Collegiate Acquisitions, LLC

SITE: East Glenn Ave.
Auburn, Alabama

LOCATION See Exhibit A-2

INSTALLATION DETAILS

Well Completion:

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	OVA/PID (ppm)
0.6	**ASPHALT**					
1.5	**CLAYEY SAND**, with few clay lenses, some coarse grains, orange with pink/red/white mottling, no odor					
	CLAYEY SAND, with sand lenses and coarse grains, no odor, stiff, friable	5			100	0.0
					100	0.0
		10			100	0.0
15.0	bottom 0.8' moist with 0.6' wet sandy clay	15	▽ ▽			
	CLAYEY SAND, with 0.2' quartz lens and coarse grains, tan/white, no odor, saturated				100	0.0
20.0	**SANDY CLAY**, mica rich, likely weathered rock/schist, red/orange with pink/white/gray mottling, no odor, medium stiff, friable	20			100	0.0
25.0	***Boring Terminated at 25 Feet***	25				

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
DPT for soils; Hollow stem auger to set wells, Geoprobe

Abandonment Method:
N/A

See Appendices for description of field procedures.
See Appendices for description of laboratory procedures and additional data (if any).
See Appendices for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Water encountered at ~15' on 1/27/2016*

▽ *Water measured at 15.61' on 1/29/2016*

Terracon
110 12th Street North
Birmingham, Alabama

Well Started: 1/27/2016 | Well Completed: 1/29/2016

Drill Rig: Geoprobe | Driller: EFS

Project No.: E1167035 | Exhibit: B-5

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ENVIRONMENTAL SMART LOG E1167035 EAST GLENN AVE LSI.GPJ TERRACON2012.GDT 2/12/16

APPENDIX B

Terracon

Office Location: Birmingham, AL.

Terracon provides Geotechnical, Environmental, Construction Materials, and Facilities Consulting Engineering Services delivered with responsiveness, resourcefulness, and reliability.

SITE:	East Glenn Ave LSI	PROJECT #:	E1167035
WELL ID:	**MW-1**	DATE:	01/28 - 01/29/2016
SAMPLE TYPE:	Grab	CITY, STATE	Auburn, AL
SAMPLED BY:	Meghan DiGiorgio	WEATHER:	Sunny 50s

MONITORING WELL SAMPLING RECORD

WELL MEASUREMENT TIME:	1430 (01/28/16)
DEPTH TO WATER (feet):	16.33
TOTAL DEPTH OF WELL (feet):	27.69
WATER COLUMN (feet):	11.36
ONE WELL VOLUME (gal):	1.85
THREE WELL VOLUMES (gal):	5.56
ACTUAL GALLONS PURGED:	9.5
PURGE TIME:	1432
METHOD OF PURGING:	Bailer
METHOD OF SAMPLING:	Bailer
SAMPLE COLLECTION TIME:	1310 (01/29/16)

INTRINSIC GROUNDWATER PARAMETERS

TEMPERATURE (°C):	21.0
SPECIFIC CONDUCTANCE (µs/cm):	146
pH (Standard Units):	8.18
DISSOLVED OXYGEN (mg/L)	7.22
ORP (mV):	821

REASON FOR SAMPLING:	Pursuant to Limited Site Investigation
METHOD OF SHIPMENT:	ESC Courier to FedEx.
PHYSICAL APPEARANCE:	
PRESERVATIVE:	HCl acid

REMARKS

ESC - Environmental Science Corp.

^{o}C - degrees Celsius, µs/cm - micro Siemens per centimeter, mg/L - milligrams per Liter, mV - millivolts

ORP - Oxidation-Reduction Potential

Terracon

Office Location: Birmingham, AL.

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SITE:	East Glenn Ave LSI	PROJECT #:	E1167035
WELL ID:	**MW-2**	DATE:	01/29/16
SAMPLE TYPE:	Grab	CITY, STATE	Auburn, AL
SAMPLED BY:	Meghan DiGiorgio	WEATHER:	Sunny 50s

MONITORING WELL SAMPLING RECORD

WELL MEASUREMENT TIME:	0838
DEPTH TO WATER (feet):	12.93
TOTAL DEPTH OF WELL (feet):	20.01
WATER COLUMN (feet):	7.08
ONE WELL VOLUME (gal):	1.15
THREE WELL VOLUMES (gal):	3.46
ACTUAL GALLONS PURGED:	6.50
PURGE TIME:	1230
METHOD OF PURGING:	Bailer
METHOD OF SAMPLING:	Bailer
SAMPLE COLLECTION TIME:	1330

INTRINSIC GROUNDWATER PARAMETERS

TEMPERATURE (°C):	20.0
SPECIFIC CONDUCTANCE (µs/cm):	166
pH (Standard Units):	8.04
DISSOLVED OXYGEN (mg/L)	5.61
ORP (mV):	853

REASON FOR SAMPLING:	Pursuant to Limited Site Investigation
METHOD OF SHIPMENT:	ESC Courier to FedEx.
PHYSICAL APPEARANCE:	
PRESERVATIVE:	HCl acid

REMARKS

ESC - Environmental Science Corp.

^{o}C - degrees Celsius, µs/cm - micro Siemens per centimeter, mg/L - milligrams per Liter, mV - millivolts

ORP - Oxidation-Reduction Potential

Terracon

Office Location: Birmingham, AL.

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SITE:	East Glenn Ave LSI	PROJECT #:	E1167035
WELL ID:	**MW-3**	DATE:	01/29/16
SAMPLE TYPE:	Grab	CITY, STATE	Auburn, AL
SAMPLED BY:	Meghan DiGiorgio	WEATHER:	Sunny 50s

MONITORING WELL SAMPLING RECORD

WELL MEASUREMENT TIME:	0845
DEPTH TO WATER (feet):	11.79
TOTAL DEPTH OF WELL (feet):	22.69
WATER COLUMN (feet):	10.90
ONE WELL VOLUME (gal):	1.78
THREE WELL VOLUMES (gal):	5.33
ACTUAL GALLONS PURGED:	9.0
PURGE TIME:	1100
METHOD OF PURGING:	Bailer
METHOD OF SAMPLING:	Bailer
SAMPLE COLLECTION TIME:	1345

INTRINSIC GROUNDWATER PARAMETERS

TEMPERATURE (°C):	21.7
SPECIFIC CONDUCTANCE (µs/cm):	142
pH (Standard Units):	7.74
DISSOLVED OXYGEN (mg/L)	3.84
ORP (mV):	827

REASON FOR SAMPLING:	Pursuant to Limited Site Investigation
METHOD OF SHIPMENT:	ESC Courier to FedEx.
PHYSICAL APPEARANCE:	
PRESERVATIVE:	HCl acid

REMARKS

ESC - Environmental Science Corp.

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ORP - Oxidation-Reduction Potential

Terracon

Office Location: Birmingham, AL.

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SITE:	East Glenn Ave LSI	PROJECT #:	E1167035
WELL ID:	**MW-4**	DATE:	01/29/16
SAMPLE TYPE:	Grab	CITY, STATE	Auburn, AL
SAMPLED BY:	Meghan DiGiorgio	WEATHER:	Sunny 50s

MONITORING WELL SAMPLING RECORD

WELL MEASUREMENT TIME:	0842
DEPTH TO WATER (feet):	11.25
TOTAL DEPTH OF WELL (feet):	20.11
WATER COLUMN (feet):	8.86
ONE WELL VOLUME (gal):	1.44
THREE WELL VOLUMES (gal):	4.33
ACTUAL GALLONS PURGED:	7.5
PURGE TIME:	1010
METHOD OF PURGING:	Bailer
METHOD OF SAMPLING:	Bailer
SAMPLE COLLECTION TIME:	1400

INTRINSIC GROUNDWATER PARAMETERS

TEMPERATURE (°C):	21.5
SPECIFIC CONDUCTANCE (µs/cm):	205
pH (Standard Units):	7.49
DISSOLVED OXYGEN (mg/L)	2.55
ORP (mV):	845

REASON FOR SAMPLING:	Pursuant to Limited Site Investigation
METHOD OF SHIPMENT:	ESC Courier to FedEx.
PHYSICAL APPEARANCE:	
PRESERVATIVE:	HCl acid

REMARKS

ESC - Environmental Science Corp.

^{o}C - degrees Celsius, µs/cm - micro Siemens per centimeter, mg/L - milligrams per Liter, mV - millivolts

ORP - Oxidation-Reduction Potential

Terracon

Office Location: Birmingham, AL.

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SITE:	East Glenn Ave LSI	PROJECT #:	E1167035
WELL ID:	**MW-5**	DATE:	01/29/16
SAMPLE TYPE:	Grab	CITY, STATE	Auburn, AL
SAMPLED BY:	Meghan DiGiorgio	WEATHER:	Sunny 50s

MONITORING WELL SAMPLING RECORD

WELL MEASUREMENT TIME:	830
DEPTH TO WATER (feet):	15.61
TOTAL DEPTH OF WELL (feet):	25.40
WATER COLUMN (feet):	9.79
ONE WELL VOLUME (gal):	1.60
THREE WELL VOLUMES (gal):	4.79
ACTUAL GALLONS PURGED:	8.0
PURGE TIME:	1200
METHOD OF PURGING:	Bailer
METHOD OF SAMPLING:	Bailer
SAMPLE COLLECTION TIME:	1410

INTRINSIC GROUNDWATER PARAMETERS

TEMPERATURE (°C):	21.9
SPECIFIC CONDUCTANCE (µs/cm):	127
pH (Standard Units):	7.88
DISSOLVED OXYGEN (mg/L)	6.10
ORP (mV):	857

REASON FOR SAMPLING:	Pursuant to Limited Site Investigation
METHOD OF SHIPMENT:	ESC Courier to FedEx.
PHYSICAL APPEARANCE:	
PRESERVATIVE:	HCl acid

REMARKS

ESC - Environmental Science Corp.

^{o}C - degrees Celsius, µs/cm - micro Siemens per centimeter, mg/L - milligrams per Liter, mV - millivolts

ORP - Oxidation-Reduction Potential

Terracon

Office Location: Birmingham, AL.

Terracon provides Geotechnical, Environmental, Construction Materials, and Facilities Consulting Engineering Services delivered with responsiveness, resourcefulness, and reliability.

SITE:	East Glenn Ave	PROJECT #:	E1167114
WELL ID:	**MW-1**	DATE:	05/26/16
SAMPLE TYPE:	Grab	CITY, STATE	Auburn, AL
SAMPLED BY:	Brian Brown	WEATHER:	Sunny 80s

MONITORING WELL SAMPLING RECORD

WELL MEASUREMENT TIME:	940
DEPTH TO WATER (feet):	13.68
TOTAL DEPTH OF WELL (feet):	20.01
WATER COLUMN (feet):	6.33
ONE WELL VOLUME (gal):	1.03
THREE WELL VOLUMES (gal):	3.10
ACTUAL GALLONS PURGED:	2.0 (dry)
PURGE TIME:	1219
METHOD OF PURGING:	Bailer
METHOD OF SAMPLING:	Bailer
SAMPLE COLLECTION TIME:	1412

INTRINSIC GROUNDWATER PARAMETERS

TEMPERATURE (°C):	22.97
SPECIFIC CONDUCTANCE (µs/cm):	203
pH (Standard Units):	5.75
DISSOLVED OXYGEN (mg/L)	5.11
ORP (mV):	372

REASON FOR SAMPLING:	Pursuant to Voluntary Property Assessment Plan and Report
METHOD OF SHIPMENT:	ESC Courier to FedEx.
PHYSICAL APPEARANCE:	
PRESERVATIVE:	HCl acid

REMARKS

ESC - Environmental Science Corp.

^{o}C - degrees Celsius, µs/cm - micro Siemens per centimeter, mg/L - milligrams per Liter, mV - millivolts

ORP - Oxidation-Reduction Potential

Terracon

Office Location: Birmingham, AL.

Terracon provides Geotechnical, Environmental, Construction Materials, and Facilities Consulting Engineering Services delivered with responsiveness, resourcefulness, and reliability.

SITE:	East Glenn Ave	PROJECT #:	E1167114
WELL ID:	**MW-2**	DATE:	05/26/16
SAMPLE TYPE:	Grab	CITY, STATE	Auburn, AL
SAMPLED BY:	Brian Brown	WEATHER:	Sunny 80s

MONITORING WELL SAMPLING RECORD

WELL MEASUREMENT TIME:	1001
DEPTH TO WATER (feet):	17.55
TOTAL DEPTH OF WELL (feet):	27.69
WATER COLUMN (feet):	10.14
ONE WELL VOLUME (gal):	1.65
THREE WELL VOLUMES (gal):	4.96
ACTUAL GALLONS PURGED:	4.0 (dry)
PURGE TIME:	1207
METHOD OF PURGING:	Bailer
METHOD OF SAMPLING:	Bailer
SAMPLE COLLECTION TIME:	1359

INTRINSIC GROUNDWATER PARAMETERS

TEMPERATURE (°C):	21.56
SPECIFIC CONDUCTANCE (µs/cm):	129
pH (Standard Units):	4.81
DISSOLVED OXYGEN (mg/L)	4.11
ORP (mV):	371.4

REASON FOR SAMPLING:	Pursuant to Voluntary Property Assessment Plan and Report
METHOD OF SHIPMENT:	ESC Courier to FedEx.
PHYSICAL APPEARANCE:	
PRESERVATIVE:	HCl acid

REMARKS

ESC - Environmental Science Corp.

^{o}C - degrees Celsius, µs/cm - micro Siemens per centimeter, mg/L - milligrams per Liter, mV - millivolts

ORP - Oxidation-Reduction Potential

Terracon

Office Location: Birmingham, AL.

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SITE:	East Glenn Ave	PROJECT #:	E1167114
WELL ID:	**MW-3**	DATE:	05/26/16
SAMPLE TYPE:	Grab	CITY, STATE	Auburn, AL
SAMPLED BY:	Brian Brown	WEATHER:	Sunny 80s

MONITORING WELL SAMPLING RECORD

WELL MEASUREMENT TIME:	0954
DEPTH TO WATER (feet):	12.29
TOTAL DEPTH OF WELL (feet):	22.69
WATER COLUMN (feet):	10.40
ONE WELL VOLUME (gal):	1.70
THREE WELL VOLUMES (gal):	5.09
ACTUAL GALLONS PURGED:	3.5 (dry)
PURGE TIME:	1152
METHOD OF PURGING:	Bailer
METHOD OF SAMPLING:	Bailer
SAMPLE COLLECTION TIME:	1347

INTRINSIC GROUNDWATER PARAMETERS

TEMPERATURE (°C):	24.13
SPECIFIC CONDUCTANCE (µs/cm):	98
pH (Standard Units):	5.44
DISSOLVED OXYGEN (mg/L)	3.58
ORP (mV):	333.2

REASON FOR SAMPLING:	Pursuant to Voluntary Assessment Plan and Report
METHOD OF SHIPMENT:	ESC Courier to FedEx.
PHYSICAL APPEARANCE:	
PRESERVATIVE:	HCl acid

REMARKS

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^{o}C - degrees Celsius, µs/cm - micro Siemens per centimeter, mg/L - milligrams per Liter, mV - millivolts

ORP - Oxidation-Reduction Potential

Terracon

Office Location: Birmingham, AL.

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SITE:	East Glenn Ave	PROJECT #:	E1167114
WELL ID:	**MW-4**	DATE:	05/26/16
SAMPLE TYPE:	Grab	CITY, STATE	Auburn, AL
SAMPLED BY:	Brian Brown	WEATHER:	Sunny 80s

MONITORING WELL SAMPLING RECORD

WELL MEASUREMENT TIME:	0951
DEPTH TO WATER (feet):	11.49
TOTAL DEPTH OF WELL (feet):	20.11
WATER COLUMN (feet):	8.62
ONE WELL VOLUME (gal):	1.41
THREE WELL VOLUMES (gal):	4.22
ACTUAL GALLONS PURGED:	2.5 (dry)
PURGE TIME:	1144
METHOD OF PURGING:	Bailer
METHOD OF SAMPLING:	Bailer
SAMPLE COLLECTION TIME:	1336

INTRINSIC GROUNDWATER PARAMETERS

TEMPERATURE (°C):	23.69
SPECIFIC CONDUCTANCE (µs/cm):	173
pH (Standard Units):	5.61
DISSOLVED OXYGEN (mg/L)	2.95
ORP (mV):	313

REASON FOR SAMPLING:	Pursuant to Voluntary Property Assessment Plan and Report
METHOD OF SHIPMENT:	ESC Courier to FedEx.
PHYSICAL APPEARANCE:	
PRESERVATIVE:	HCl acid

REMARKS

ESC - Environmental Science Corp.

^{o}C - degrees Celsius, µs/cm - micro Siemens per centimeter, mg/L - milligrams per Liter, mV - millivolts

ORP - Oxidation-Reduction Potential

Terracon

Office Location: Birmingham, AL.

Terracon provides Geotechnical, Environmental, Construction Materials, and Facilities Consulting Engineering Services delivered with responsiveness, resourcefulness, and reliability.

SITE:	East Glenn Ave	PROJECT #:	E1167114
WELL ID:	**MW-5**	DATE:	05/26/16
SAMPLE TYPE:	Grab	CITY, STATE	Auburn, AL
SAMPLED BY:	Brian Brown	WEATHER:	Sunny 80s

MONITORING WELL SAMPLING RECORD

WELL MEASUREMENT TIME:	0945
DEPTH TO WATER (feet):	15.68
TOTAL DEPTH OF WELL (feet):	25.40
WATER COLUMN (feet):	9.72
ONE WELL VOLUME (gal):	1.58
THREE WELL VOLUMES (gal):	4.75
ACTUAL GALLONS PURGED:	3.5 (dry)
PURGE TIME:	1133
METHOD OF PURGING:	Bailer
METHOD OF SAMPLING:	Bailer
SAMPLE COLLECTION TIME:	1323

INTRINSIC GROUNDWATER PARAMETERS

TEMPERATURE (°C):	24.49
SPECIFIC CONDUCTANCE (µs/cm):	107
pH (Standard Units):	4.99
DISSOLVED OXYGEN (mg/L)	5.01
ORP (mV):	198.6

REASON FOR SAMPLING:	Pursuant to Voluntary Property Assessment Plan and Report
METHOD OF SHIPMENT:	ESC Courier to FedEx.
PHYSICAL APPEARANCE:	
PRESERVATIVE:	HCl acid

REMARKS

ESC - Environmental Science Corp.

^{o}C - degrees Celsius, µs/cm - micro Siemens per centimeter, mg/L - milligrams per Liter, mV - millivolts

ORP - Oxidation-Reduction Potential

APPENDIX C

ANALYTICAL REPORT

February 08, 2016

Terracon Consultants - B-Ham AL.

Sample Delivery Group:	L814859
Samples Received:	01/29/2016
Project Number:	E1167035
Description:	East Glenn Ave LSI E1167035
Report To:	Trey Noland 110 12th Street North Birmingham, AL 35203

Entire Report Reviewed By:

Jimmy Hunt
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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SB-1 0-1.5FT L814859-01 Solid

Collected by M. DiGiorgio | Collected date/time 01/27/16 13:00 | Received date/time 01/29/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG846422	1	02/03/16 12:42	02/04/16 10:23	BRJ
Metals (ICP) by Method 6010B	WG846345	1	02/03/16 15:47	02/04/16 10:02	LTB
Total Solids by Method 2540 G-2011	WG846514	1	02/03/16 14:39	02/03/16 14:47	MEL

SB-1-2 1.5-5FT L814859-02 Solid

Collected by M. DiGiorgio | Collected date/time 01/27/16 13:05 | Received date/time 01/29/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG847056	5	02/05/16 07:03	02/06/16 10:36	KMP
Total Solids by Method 2540 G-2011	WG846514	1	02/03/16 14:39	02/03/16 14:47	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG846130	5	02/01/16 05:00	02/02/16 02:12	BMB

SB-2 0-1.5FT L814859-03 Solid

Collected by M. DiGiorgio | Collected date/time 01/27/16 15:08 | Received date/time 01/29/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG846422	1	02/03/16 12:42	02/04/16 10:25	BRJ
Metals (ICP) by Method 6010B	WG846345	1	02/03/16 15:47	02/04/16 10:15	LTB
Total Solids by Method 2540 G-2011	WG846514	1	02/03/16 14:39	02/03/16 14:47	MEL

SB-2 15-20FT L814859-04 Solid

Collected by M. DiGiorgio | Collected date/time 01/27/16 15:21 | Received date/time 01/29/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG847056	1	02/05/16 07:03	02/06/16 09:08	KMP
Total Solids by Method 2540 G-2011	WG846514	1	02/03/16 14:39	02/03/16 14:47	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG846130	5	02/01/16 05:00	02/02/16 02:30	BMB

SB-3 0-1.5FT L814859-05 Solid

Collected by M. DiGiorgio | Collected date/time 01/27/16 13:45 | Received date/time 01/29/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG846422	1	02/03/16 12:42	02/04/16 10:33	BRJ
Metals (ICP) by Method 6010B	WG846345	1	02/03/16 15:47	02/04/16 09:09	LTB
Total Solids by Method 2540 G-2011	WG846514	1	02/03/16 14:39	02/03/16 14:47	MEL

SB-3 15-20FT L814859-06 Solid

Collected by M. DiGiorgio | Collected date/time 01/27/16 14:04 | Received date/time 01/29/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG847056	1	02/05/16 07:03	02/06/16 09:30	KMP
Total Solids by Method 2540 G-2011	WG846514	1	02/03/16 14:39	02/03/16 14:47	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG846130	5	02/01/16 05:00	02/02/16 02:47	BMB

SB-4 0-1.5FT L814859-07 Solid

Collected by M. DiGiorgio | Collected date/time 01/27/16 14:32 | Received date/time 01/29/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG846422	1	02/03/16 12:42	02/04/16 10:35	BRJ
Metals (ICP) by Method 6010B	WG846345	1	02/03/16 15:47	02/04/16 10:18	LTB
Total Solids by Method 2540 G-2011	WG846514	1	02/03/16 14:39	02/03/16 14:47	MEL

SB-4 10-15FT L814859-08 Solid

Collected by M. DiGiorgio | Collected date/time 01/27/16 14:46 | Received date/time 01/29/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG847056	1	02/05/16 07:03	02/06/16 09:52	KMP
Total Solids by Method 2540 G-2011	WG846514	1	02/03/16 14:39	02/03/16 14:47	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG846130	5	02/01/16 05:00	02/02/16 03:05	BMB

SB-5 0-1.5FT L814859-09 Solid

Collected by M. DiGiorgio | Collected date/time 01/27/16 12:05 | Received date/time 01/29/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7471A	WG846422	1	02/03/16 12:42	02/04/16 10:38	BRJ
Metals (ICP) by Method 6010B	WG846345	1	02/03/16 15:47	02/04/16 10:21	LTB
Total Solids by Method 2540 G-2011	WG846514	1	02/03/16 14:39	02/03/16 14:47	MEL

SB-5-5 15-20FT L814859-10 Solid

Collected by M. DiGiorgio | Collected date/time 01/27/16 12:20 | Received date/time 01/29/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG847056	1	02/05/16 07:03	02/06/16 10:14	KMP
Total Solids by Method 2540 G-2011	WG846514	1	02/03/16 14:39	02/03/16 14:47	MEL
Volatile Organic Compounds (GC/MS) by Method 8260B	WG846130	5	02/01/16 05:00	02/02/16 03:23	BMB

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jimmy Hunt
Technical Service Representative

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.1		1	02/03/2016 14:47	WG846514

Mercury by Method 7471A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.113		0.0225	1	02/04/2016 10:23	WG846422

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.65		2.25	1	02/04/2016 10:02	WG846345
Barium	56.5		0.561	1	02/04/2016 10:02	WG846345
Cadmium	0.866		0.561	1	02/04/2016 10:02	WG846345
Chromium	12.4		1.12	1	02/04/2016 10:02	WG846345
Lead	401		0.561	1	02/04/2016 10:02	WG846345
Selenium	ND		2.25	1	02/04/2016 10:02	WG846345
Silver	ND		1.12	1	02/04/2016 10:02	WG846345

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.2		1	02/03/2016 14:47	WG846514

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.271	5	02/02/2016 02:12	WG846130
Acrylonitrile	ND		0.0543	5	02/02/2016 02:12	WG846130
Benzene	ND		0.00543	5	02/02/2016 02:12	WG846130
Bromobenzene	ND		0.00543	5	02/02/2016 02:12	WG846130
Bromodichloromethane	ND		0.00543	5	02/02/2016 02:12	WG846130
Bromoform	ND		0.00543	5	02/02/2016 02:12	WG846130
Bromomethane	ND		0.0271	5	02/02/2016 02:12	WG846130
n-Butylbenzene	ND		0.00543	5	02/02/2016 02:12	WG846130
sec-Butylbenzene	ND		0.00543	5	02/02/2016 02:12	WG846130
tert-Butylbenzene	ND		0.00543	5	02/02/2016 02:12	WG846130
Carbon tetrachloride	ND		0.00543	5	02/02/2016 02:12	WG846130
Chlorobenzene	ND		0.00543	5	02/02/2016 02:12	WG846130
Chlorodibromomethane	ND		0.00543	5	02/02/2016 02:12	WG846130
Chloroethane	ND		0.0271	5	02/02/2016 02:12	WG846130
2-Chloroethyl vinyl ether	ND	J3	0.271	5	02/02/2016 02:12	WG846130
Chloroform	ND		0.0271	5	02/02/2016 02:12	WG846130
Chloromethane	ND		0.0136	5	02/02/2016 02:12	WG846130
2-Chlorotoluene	ND		0.00543	5	02/02/2016 02:12	WG846130
4-Chlorotoluene	ND		0.00543	5	02/02/2016 02:12	WG846130
1,2-Dibromo-3-Chloropropane	ND	J3	0.0271	5	02/02/2016 02:12	WG846130
1,2-Dibromoethane	ND		0.00543	5	02/02/2016 02:12	WG846130
Dibromomethane	ND		0.00543	5	02/02/2016 02:12	WG846130
1,2-Dichlorobenzene	ND		0.00543	5	02/02/2016 02:12	WG846130
1,3-Dichlorobenzene	ND		0.00543	5	02/02/2016 02:12	WG846130
1,4-Dichlorobenzene	ND		0.00543	5	02/02/2016 02:12	WG846130
Dichlorodifluoromethane	ND		0.0271	5	02/02/2016 02:12	WG846130
1,1-Dichloroethane	ND		0.00543	5	02/02/2016 02:12	WG846130
1,2-Dichloroethane	ND		0.00543	5	02/02/2016 02:12	WG846130
1,1-Dichloroethene	ND		0.00543	5	02/02/2016 02:12	WG846130
cis-1,2-Dichloroethene	ND		0.00543	5	02/02/2016 02:12	WG846130
trans-1,2-Dichloroethene	ND		0.00543	5	02/02/2016 02:12	WG846130
1,2-Dichloropropane	ND		0.00543	5	02/02/2016 02:12	WG846130
1,1-Dichloropropene	ND		0.00543	5	02/02/2016 02:12	WG846130
1,3-Dichloropropane	ND		0.00543	5	02/02/2016 02:12	WG846130
cis-1,3-Dichloropropene	ND		0.00543	5	02/02/2016 02:12	WG846130
trans-1,3-Dichloropropene	ND		0.00543	5	02/02/2016 02:12	WG846130
2,2-Dichloropropane	ND		0.00543	5	02/02/2016 02:12	WG846130
Di-isopropyl ether	ND		0.00543	5	02/02/2016 02:12	WG846130
Ethylbenzene	ND		0.00543	5	02/02/2016 02:12	WG846130
Hexachloro-1,3-butadiene	ND		0.00543	5	02/02/2016 02:12	WG846130
Isopropylbenzene	ND		0.00543	5	02/02/2016 02:12	WG846130
p-Isopropyltoluene	ND		0.00543	5	02/02/2016 02:12	WG846130
2-Butanone (MEK)	ND		0.0543	5	02/02/2016 02:12	WG846130
Methylene Chloride	ND		0.0271	5	02/02/2016 02:12	WG846130
4-Methyl-2-pentanone (MIBK)	ND		0.0543	5	02/02/2016 02:12	WG846130
Methyl tert-butyl ether	ND		0.00543	5	02/02/2016 02:12	WG846130
Naphthalene	ND	J4	0.0271	5	02/02/2016 02:12	WG846130
n-Propylbenzene	ND		0.00543	5	02/02/2016 02:12	WG846130
Styrene	ND		0.00543	5	02/02/2016 02:12	WG846130
1,1,1,2-Tetrachloroethane	ND		0.00543	5	02/02/2016 02:12	WG846130

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	ND		0.00543	5	02/02/2016 02:12	WG846130
1,1,2-Trichlorotrifluoroethane	ND		0.00543	5	02/02/2016 02:12	WG846130
Tetrachloroethene	ND		0.00543	5	02/02/2016 02:12	WG846130
Toluene	ND		0.0271	5	02/02/2016 02:12	WG846130
1,2,3-Trichlorobenzene	ND		0.00543	5	02/02/2016 02:12	WG846130
1,2,4-Trichlorobenzene	ND		0.00543	5	02/02/2016 02:12	WG846130
1,1,1-Trichloroethane	ND		0.00543	5	02/02/2016 02:12	WG846130
1,1,2-Trichloroethane	ND		0.00543	5	02/02/2016 02:12	WG846130
Trichloroethene	ND		0.00543	5	02/02/2016 02:12	WG846130
Trichlorofluoromethane	ND		0.0271	5	02/02/2016 02:12	WG846130
1,2,3-Trichloropropane	ND		0.0136	5	02/02/2016 02:12	WG846130
1,2,4-Trimethylbenzene	ND		0.00543	5	02/02/2016 02:12	WG846130
1,2,3-Trimethylbenzene	ND		0.00543	5	02/02/2016 02:12	WG846130
1,3,5-Trimethylbenzene	ND		0.00543	5	02/02/2016 02:12	WG846130
Vinyl chloride	ND		0.00543	5	02/02/2016 02:12	WG846130
Xylenes, Total	ND		0.0163	5	02/02/2016 02:12	WG846130
(S) Toluene-d8	*103*		*88.7-115*		*02/02/2016 02:12*	WG846130
(S) Dibromofluoromethane	*95.1*		*76.3-123*		*02/02/2016 02:12*	WG846130
(S) 4-Bromofluorobenzene	*88.2*		*69.7-129*		*02/02/2016 02:12*	WG846130

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0326	5	02/06/2016 10:36	WG847056
Acenaphthene	ND		0.0326	5	02/06/2016 10:36	WG847056
Acenaphthylene	ND		0.0326	5	02/06/2016 10:36	WG847056
Benzo(a)anthracene	ND		0.0326	5	02/06/2016 10:36	WG847056
Benzo(a)pyrene	ND		0.0326	5	02/06/2016 10:36	WG847056
Benzo(b)fluoranthene	ND		0.0326	5	02/06/2016 10:36	WG847056
Benzo(g,h,i)perylene	ND		0.0326	5	02/06/2016 10:36	WG847056
Benzo(k)fluoranthene	ND		0.0326	5	02/06/2016 10:36	WG847056
Chrysene	ND		0.0326	5	02/06/2016 10:36	WG847056
Dibenz(a,h)anthracene	ND		0.0326	5	02/06/2016 10:36	WG847056
Fluoranthene	ND		0.0326	5	02/06/2016 10:36	WG847056
Fluorene	ND		0.0326	5	02/06/2016 10:36	WG847056
Indeno(1,2,3-cd)pyrene	ND		0.0326	5	02/06/2016 10:36	WG847056
Naphthalene	ND		0.109	5	02/06/2016 10:36	WG847056
Phenanthrene	ND		0.0326	5	02/06/2016 10:36	WG847056
Pyrene	ND		0.0326	5	02/06/2016 10:36	WG847056
1-Methylnaphthalene	ND		0.109	5	02/06/2016 10:36	WG847056
2-Methylnaphthalene	ND		0.109	5	02/06/2016 10:36	WG847056
2-Chloronaphthalene	ND		0.109	5	02/06/2016 10:36	WG847056
(S) Nitrobenzene-d5	*183*	J1	*22.1-146*		*02/06/2016 10:36*	WG847056
(S) 2-Fluorobiphenyl	*167*	J1	*40.6-122*		*02/06/2016 10:36*	WG847056
(S) p-Terphenyl-d14	*130*		*32.2-131*		*02/06/2016 10:36*	WG847056

Sample Narrative:

8270C-SIM L814859-02 WG847056: Dilution due to matrix

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	90.9		1	02/03/2016 14:47	WG846514

Mercury by Method 7471A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0306		0.0220	1	02/04/2016 10:25	WG846422

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	ND		2.20	1	02/04/2016 10:15	WG846345
Barium	22.7		0.550	1	02/04/2016 10:15	WG846345
Cadmium	ND		0.550	1	02/04/2016 10:15	WG846345
Chromium	4.20		1.10	1	02/04/2016 10:15	WG846345
Lead	5.64		0.550	1	02/04/2016 10:15	WG846345
Selenium	ND		2.20	1	02/04/2016 10:15	WG846345
Silver	ND		1.10	1	02/04/2016 10:15	WG846345

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	83.2		1	02/03/2016 14:47	WG846514

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.301	5	02/02/2016 02:30	WG846130
Acrylonitrile	ND		0.0601	5	02/02/2016 02:30	WG846130
Benzene	ND		0.00601	5	02/02/2016 02:30	WG846130
Bromobenzene	ND		0.00601	5	02/02/2016 02:30	WG846130
Bromodichloromethane	ND		0.00601	5	02/02/2016 02:30	WG846130
Bromoform	ND		0.00601	5	02/02/2016 02:30	WG846130
Bromomethane	ND		0.0301	5	02/02/2016 02:30	WG846130
n-Butylbenzene	ND		0.00601	5	02/02/2016 02:30	WG846130
sec-Butylbenzene	ND		0.00601	5	02/02/2016 02:30	WG846130
tert-Butylbenzene	ND		0.00601	5	02/02/2016 02:30	WG846130
Carbon tetrachloride	ND		0.00601	5	02/02/2016 02:30	WG846130
Chlorobenzene	ND		0.00601	5	02/02/2016 02:30	WG846130
Chlorodibromomethane	ND		0.00601	5	02/02/2016 02:30	WG846130
Chloroethane	ND		0.0301	5	02/02/2016 02:30	WG846130
2-Chloroethyl vinyl ether	ND	J3	0.301	5	02/02/2016 02:30	WG846130
Chloroform	ND		0.0301	5	02/02/2016 02:30	WG846130
Chloromethane	ND		0.0150	5	02/02/2016 02:30	WG846130
2-Chlorotoluene	ND		0.00601	5	02/02/2016 02:30	WG846130
4-Chlorotoluene	ND		0.00601	5	02/02/2016 02:30	WG846130
1,2-Dibromo-3-Chloropropane	ND	J3	0.0301	5	02/02/2016 02:30	WG846130
1,2-Dibromoethane	ND		0.00601	5	02/02/2016 02:30	WG846130
Dibromomethane	ND		0.00601	5	02/02/2016 02:30	WG846130
1,2-Dichlorobenzene	ND		0.00601	5	02/02/2016 02:30	WG846130
1,3-Dichlorobenzene	ND		0.00601	5	02/02/2016 02:30	WG846130
1,4-Dichlorobenzene	ND		0.00601	5	02/02/2016 02:30	WG846130
Dichlorodifluoromethane	ND		0.0301	5	02/02/2016 02:30	WG846130
1,1-Dichloroethane	ND		0.00601	5	02/02/2016 02:30	WG846130
1,2-Dichloroethane	ND		0.00601	5	02/02/2016 02:30	WG846130
1,1-Dichloroethene	ND		0.00601	5	02/02/2016 02:30	WG846130
cis-1,2-Dichloroethene	ND		0.00601	5	02/02/2016 02:30	WG846130
trans-1,2-Dichloroethene	ND		0.00601	5	02/02/2016 02:30	WG846130
1,2-Dichloropropane	ND		0.00601	5	02/02/2016 02:30	WG846130
1,1-Dichloropropene	ND		0.00601	5	02/02/2016 02:30	WG846130
1,3-Dichloropropane	ND		0.00601	5	02/02/2016 02:30	WG846130
cis-1,3-Dichloropropene	ND		0.00601	5	02/02/2016 02:30	WG846130
trans-1,3-Dichloropropene	ND		0.00601	5	02/02/2016 02:30	WG846130
2,2-Dichloropropane	ND		0.00601	5	02/02/2016 02:30	WG846130
Di-isopropyl ether	ND		0.00601	5	02/02/2016 02:30	WG846130
Ethylbenzene	ND		0.00601	5	02/02/2016 02:30	WG846130
Hexachloro-1,3-butadiene	ND		0.00601	5	02/02/2016 02:30	WG846130
Isopropylbenzene	ND		0.00601	5	02/02/2016 02:30	WG846130
p-Isopropyltoluene	ND		0.00601	5	02/02/2016 02:30	WG846130
2-Butanone (MEK)	ND		0.0601	5	02/02/2016 02:30	WG846130
Methylene Chloride	ND		0.0301	5	02/02/2016 02:30	WG846130
4-Methyl-2-pentanone (MIBK)	ND		0.0601	5	02/02/2016 02:30	WG846130
Methyl tert-butyl ether	ND		0.00601	5	02/02/2016 02:30	WG846130
Naphthalene	ND	J4	0.0301	5	02/02/2016 02:30	WG846130
n-Propylbenzene	ND		0.00601	5	02/02/2016 02:30	WG846130
Styrene	ND		0.00601	5	02/02/2016 02:30	WG846130
1,1,1,2-Tetrachloroethane	ND		0.00601	5	02/02/2016 02:30	WG846130

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	ND		0.00601	5	02/02/2016 02:30	WG846130
1,1,2-Trichlorotrifluoroethane	ND		0.00601	5	02/02/2016 02:30	WG846130
Tetrachloroethene	ND		0.00601	5	02/02/2016 02:30	WG846130
Toluene	ND		0.0301	5	02/02/2016 02:30	WG846130
1,2,3-Trichlorobenzene	ND		0.00601	5	02/02/2016 02:30	WG846130
1,2,4-Trichlorobenzene	ND		0.00601	5	02/02/2016 02:30	WG846130
1,1,1-Trichloroethane	ND		0.00601	5	02/02/2016 02:30	WG846130
1,1,2-Trichloroethane	ND		0.00601	5	02/02/2016 02:30	WG846130
Trichloroethene	ND		0.00601	5	02/02/2016 02:30	WG846130
Trichlorofluoromethane	ND		0.0301	5	02/02/2016 02:30	WG846130
1,2,3-Trichloropropane	ND		0.0150	5	02/02/2016 02:30	WG846130
1,2,4-Trimethylbenzene	ND		0.00601	5	02/02/2016 02:30	WG846130
1,2,3-Trimethylbenzene	ND		0.00601	5	02/02/2016 02:30	WG846130
1,3,5-Trimethylbenzene	ND		0.00601	5	02/02/2016 02:30	WG846130
Vinyl chloride	ND		0.00601	5	02/02/2016 02:30	WG846130
Xylenes, Total	ND		0.0180	5	02/02/2016 02:30	WG846130
(S) Toluene-d8	*102*		*88.7-115*		*02/02/2016 02:30*	WG846130
(S) Dibromofluoromethane	*96.2*		*76.3-123*		*02/02/2016 02:30*	WG846130
(S) 4-Bromofluorobenzene	*86.9*		*69.7-129*		*02/02/2016 02:30*	WG846130

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00721	1	02/06/2016 09:08	WG847056
Acenaphthene	ND		0.00721	1	02/06/2016 09:08	WG847056
Acenaphthylene	ND		0.00721	1	02/06/2016 09:08	WG847056
Benzo(a)anthracene	ND		0.00721	1	02/06/2016 09:08	WG847056
Benzo(a)pyrene	ND		0.00721	1	02/06/2016 09:08	WG847056
Benzo(b)fluoranthene	ND		0.00721	1	02/06/2016 09:08	WG847056
Benzo(g,h,i)perylene	ND		0.00721	1	02/06/2016 09:08	WG847056
Benzo(k)fluoranthene	ND		0.00721	1	02/06/2016 09:08	WG847056
Chrysene	ND		0.00721	1	02/06/2016 09:08	WG847056
Dibenz(a,h)anthracene	ND		0.00721	1	02/06/2016 09:08	WG847056
Fluoranthene	ND		0.00721	1	02/06/2016 09:08	WG847056
Fluorene	ND		0.00721	1	02/06/2016 09:08	WG847056
Indeno(1,2,3-cd)pyrene	ND		0.00721	1	02/06/2016 09:08	WG847056
Naphthalene	ND		0.0240	1	02/06/2016 09:08	WG847056
Phenanthrene	ND		0.00721	1	02/06/2016 09:08	WG847056
Pyrene	ND		0.00721	1	02/06/2016 09:08	WG847056
1-Methylnaphthalene	ND		0.0240	1	02/06/2016 09:08	WG847056
2-Methylnaphthalene	ND		0.0240	1	02/06/2016 09:08	WG847056
2-Chloronaphthalene	ND		0.0240	1	02/06/2016 09:08	WG847056
(S) Nitrobenzene-d5	*79.6*		*22.1-146*		*02/06/2016 09:08*	WG847056
(S) 2-Fluorobiphenyl	*76.1*		*40.6-122*		*02/06/2016 09:08*	WG847056
(S) p-Terphenyl-d14	*62.3*		*32.2-131*		*02/06/2016 09:08*	WG847056

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	77.7		1	02/03/2016 14:47	WG846514

Mercury by Method 7471A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.226		0.0258	1	02/04/2016 10:33	WG846422

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	8.92		2.58	1	02/04/2016 09:09	WG846345
Barium	31.8		0.644	1	02/04/2016 09:09	WG846345
Cadmium	ND		0.644	1	02/04/2016 09:09	WG846345
Chromium	73.1		1.29	1	02/04/2016 09:09	WG846345
Lead	16.2	O1	0.644	1	02/04/2016 09:09	WG846345
Selenium	ND		2.58	1	02/04/2016 09:09	WG846345
Silver	ND		1.29	1	02/04/2016 09:09	WG846345

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	82.6		1	02/03/2016 14:47	WG846514

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.303	5	02/02/2016 02:47	WG846130
Acrylonitrile	ND		0.0605	5	02/02/2016 02:47	WG846130
Benzene	ND		0.00605	5	02/02/2016 02:47	WG846130
Bromobenzene	ND		0.00605	5	02/02/2016 02:47	WG846130
Bromodichloromethane	ND		0.00605	5	02/02/2016 02:47	WG846130
Bromoform	ND		0.00605	5	02/02/2016 02:47	WG846130
Bromomethane	ND		0.0303	5	02/02/2016 02:47	WG846130
n-Butylbenzene	ND		0.00605	5	02/02/2016 02:47	WG846130
sec-Butylbenzene	ND		0.00605	5	02/02/2016 02:47	WG846130
tert-Butylbenzene	ND		0.00605	5	02/02/2016 02:47	WG846130
Carbon tetrachloride	ND		0.00605	5	02/02/2016 02:47	WG846130
Chlorobenzene	ND		0.00605	5	02/02/2016 02:47	WG846130
Chlorodibromomethane	ND		0.00605	5	02/02/2016 02:47	WG846130
Chloroethane	ND		0.0303	5	02/02/2016 02:47	WG846130
2-Chloroethyl vinyl ether	ND	J3	0.303	5	02/02/2016 02:47	WG846130
Chloroform	ND		0.0303	5	02/02/2016 02:47	WG846130
Chloromethane	ND		0.0151	5	02/02/2016 02:47	WG846130
2-Chlorotoluene	ND		0.00605	5	02/02/2016 02:47	WG846130
4-Chlorotoluene	ND		0.00605	5	02/02/2016 02:47	WG846130
1,2-Dibromo-3-Chloropropane	ND	J3	0.0303	5	02/02/2016 02:47	WG846130
1,2-Dibromoethane	ND		0.00605	5	02/02/2016 02:47	WG846130
Dibromomethane	ND		0.00605	5	02/02/2016 02:47	WG846130
1,2-Dichlorobenzene	ND		0.00605	5	02/02/2016 02:47	WG846130
1,3-Dichlorobenzene	ND		0.00605	5	02/02/2016 02:47	WG846130
1,4-Dichlorobenzene	ND		0.00605	5	02/02/2016 02:47	WG846130
Dichlorodifluoromethane	ND		0.0303	5	02/02/2016 02:47	WG846130
1,1-Dichloroethane	ND		0.00605	5	02/02/2016 02:47	WG846130
1,2-Dichloroethane	ND		0.00605	5	02/02/2016 02:47	WG846130
1,1-Dichloroethene	ND		0.00605	5	02/02/2016 02:47	WG846130
cis-1,2-Dichloroethene	ND		0.00605	5	02/02/2016 02:47	WG846130
trans-1,2-Dichloroethene	ND		0.00605	5	02/02/2016 02:47	WG846130
1,2-Dichloropropane	ND		0.00605	5	02/02/2016 02:47	WG846130
1,1-Dichloropropene	ND		0.00605	5	02/02/2016 02:47	WG846130
1,3-Dichloropropane	ND		0.00605	5	02/02/2016 02:47	WG846130
cis-1,3-Dichloropropene	ND		0.00605	5	02/02/2016 02:47	WG846130
trans-1,3-Dichloropropene	ND		0.00605	5	02/02/2016 02:47	WG846130
2,2-Dichloropropane	ND		0.00605	5	02/02/2016 02:47	WG846130
Di-isopropyl ether	ND		0.00605	5	02/02/2016 02:47	WG846130
Ethylbenzene	ND		0.00605	5	02/02/2016 02:47	WG846130
Hexachloro-1,3-butadiene	ND		0.00605	5	02/02/2016 02:47	WG846130
Isopropylbenzene	ND		0.00605	5	02/02/2016 02:47	WG846130
p-Isopropyltoluene	ND		0.00605	5	02/02/2016 02:47	WG846130
2-Butanone (MEK)	ND		0.0605	5	02/02/2016 02:47	WG846130
Methylene Chloride	ND		0.0303	5	02/02/2016 02:47	WG846130
4-Methyl-2-pentanone (MIBK)	ND		0.0605	5	02/02/2016 02:47	WG846130
Methyl tert-butyl ether	ND		0.00605	5	02/02/2016 02:47	WG846130
Naphthalene	ND	J4	0.0303	5	02/02/2016 02:47	WG846130
n-Propylbenzene	ND		0.00605	5	02/02/2016 02:47	WG846130
Styrene	ND		0.00605	5	02/02/2016 02:47	WG846130
1,1,1,2-Tetrachloroethane	ND		0.00605	5	02/02/2016 02:47	WG846130

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	ND		0.00605	5	02/02/2016 02:47	WG846130
1,1,2-Trichlorotrifluoroethane	ND		0.00605	5	02/02/2016 02:47	WG846130
Tetrachloroethene	ND		0.00605	5	02/02/2016 02:47	WG846130
Toluene	ND		0.0303	5	02/02/2016 02:47	WG846130
1,2,3-Trichlorobenzene	ND		0.00605	5	02/02/2016 02:47	WG846130
1,2,4-Trichlorobenzene	ND		0.00605	5	02/02/2016 02:47	WG846130
1,1,1-Trichloroethane	ND		0.00605	5	02/02/2016 02:47	WG846130
1,1,2-Trichloroethane	ND		0.00605	5	02/02/2016 02:47	WG846130
Trichloroethene	ND		0.00605	5	02/02/2016 02:47	WG846130
Trichlorofluoromethane	ND		0.0303	5	02/02/2016 02:47	WG846130
1,2,3-Trichloropropane	ND		0.0151	5	02/02/2016 02:47	WG846130
1,2,4-Trimethylbenzene	ND		0.00605	5	02/02/2016 02:47	WG846130
1,2,3-Trimethylbenzene	ND		0.00605	5	02/02/2016 02:47	WG846130
1,3,5-Trimethylbenzene	ND		0.00605	5	02/02/2016 02:47	WG846130
Vinyl chloride	ND		0.00605	5	02/02/2016 02:47	WG846130
Xylenes, Total	ND		0.0182	5	02/02/2016 02:47	WG846130
(S) Toluene-d8	*104*		*88.7-115*		*02/02/2016 02:47*	WG846130
(S) Dibromofluoromethane	*97.6*		*76.3-123*		*02/02/2016 02:47*	WG846130
(S) 4-Bromofluorobenzene	*86.6*		*69.7-129*		*02/02/2016 02:47*	WG846130

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00726	1	02/06/2016 09:30	WG847056
Acenaphthene	ND		0.00726	1	02/06/2016 09:30	WG847056
Acenaphthylene	ND		0.00726	1	02/06/2016 09:30	WG847056
Benzo(a)anthracene	ND		0.00726	1	02/06/2016 09:30	WG847056
Benzo(a)pyrene	ND		0.00726	1	02/06/2016 09:30	WG847056
Benzo(b)fluoranthene	ND		0.00726	1	02/06/2016 09:30	WG847056
Benzo(g,h,i)perylene	ND		0.00726	1	02/06/2016 09:30	WG847056
Benzo(k)fluoranthene	ND		0.00726	1	02/06/2016 09:30	WG847056
Chrysene	ND		0.00726	1	02/06/2016 09:30	WG847056
Dibenz(a,h)anthracene	ND		0.00726	1	02/06/2016 09:30	WG847056
Fluoranthene	ND		0.00726	1	02/06/2016 09:30	WG847056
Fluorene	ND		0.00726	1	02/06/2016 09:30	WG847056
Indeno(1,2,3-cd)pyrene	ND		0.00726	1	02/06/2016 09:30	WG847056
Naphthalene	ND		0.0242	1	02/06/2016 09:30	WG847056
Phenanthrene	ND		0.00726	1	02/06/2016 09:30	WG847056
Pyrene	ND		0.00726	1	02/06/2016 09:30	WG847056
1-Methylnaphthalene	ND		0.0242	1	02/06/2016 09:30	WG847056
2-Methylnaphthalene	ND		0.0242	1	02/06/2016 09:30	WG847056
2-Chloronaphthalene	ND		0.0242	1	02/06/2016 09:30	WG847056
(S) Nitrobenzene-d5	*86.9*		*22.1-146*		*02/06/2016 09:30*	WG847056
(S) 2-Fluorobiphenyl	*79.1*		*40.6-122*		*02/06/2016 09:30*	WG847056
(S) p-Terphenyl-d14	*61.1*		*32.2-131*		*02/06/2016 09:30*	WG847056

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	88.9		1	02/03/2016 14:47	WG846514

Mercury by Method 7471A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	0.0404		0.0225	1	02/04/2016 10:35	WG846422

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	ND		2.25	1	02/04/2016 10:18	WG846345
Barium	12.7		0.562	1	02/04/2016 10:18	WG846345
Cadmium	ND		0.562	1	02/04/2016 10:18	WG846345
Chromium	16.1		1.12	1	02/04/2016 10:18	WG846345
Lead	21.7		0.562	1	02/04/2016 10:18	WG846345
Selenium	ND		2.25	1	02/04/2016 10:18	WG846345
Silver	ND		1.12	1	02/04/2016 10:18	WG846345

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	84.8		1	02/03/2016 14:47	WG846514

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.295	5	02/02/2016 03:05	WG846130
Acrylonitrile	ND		0.0589	5	02/02/2016 03:05	WG846130
Benzene	ND		0.00589	5	02/02/2016 03:05	WG846130
Bromobenzene	ND		0.00589	5	02/02/2016 03:05	WG846130
Bromodichloromethane	ND		0.00589	5	02/02/2016 03:05	WG846130
Bromoform	ND		0.00589	5	02/02/2016 03:05	WG846130
Bromomethane	ND		0.0295	5	02/02/2016 03:05	WG846130
n-Butylbenzene	ND		0.00589	5	02/02/2016 03:05	WG846130
sec-Butylbenzene	ND		0.00589	5	02/02/2016 03:05	WG846130
tert-Butylbenzene	ND		0.00589	5	02/02/2016 03:05	WG846130
Carbon tetrachloride	ND		0.00589	5	02/02/2016 03:05	WG846130
Chlorobenzene	ND		0.00589	5	02/02/2016 03:05	WG846130
Chlorodibromomethane	ND		0.00589	5	02/02/2016 03:05	WG846130
Chloroethane	ND		0.0295	5	02/02/2016 03:05	WG846130
2-Chloroethyl vinyl ether	ND	J3	0.295	5	02/02/2016 03:05	WG846130
Chloroform	ND		0.0295	5	02/02/2016 03:05	WG846130
Chloromethane	ND		0.0147	5	02/02/2016 03:05	WG846130
2-Chlorotoluene	ND		0.00589	5	02/02/2016 03:05	WG846130
4-Chlorotoluene	ND		0.00589	5	02/02/2016 03:05	WG846130
1,2-Dibromo-3-Chloropropane	ND	J3	0.0295	5	02/02/2016 03:05	WG846130
1,2-Dibromoethane	ND		0.00589	5	02/02/2016 03:05	WG846130
Dibromomethane	ND		0.00589	5	02/02/2016 03:05	WG846130
1,2-Dichlorobenzene	ND		0.00589	5	02/02/2016 03:05	WG846130
1,3-Dichlorobenzene	ND		0.00589	5	02/02/2016 03:05	WG846130
1,4-Dichlorobenzene	ND		0.00589	5	02/02/2016 03:05	WG846130
Dichlorodifluoromethane	ND		0.0295	5	02/02/2016 03:05	WG846130
1,1-Dichloroethane	ND		0.00589	5	02/02/2016 03:05	WG846130
1,2-Dichloroethane	ND		0.00589	5	02/02/2016 03:05	WG846130
1,1-Dichloroethene	ND		0.00589	5	02/02/2016 03:05	WG846130
cis-1,2-Dichloroethene	ND		0.00589	5	02/02/2016 03:05	WG846130
trans-1,2-Dichloroethene	ND		0.00589	5	02/02/2016 03:05	WG846130
1,2-Dichloropropane	ND		0.00589	5	02/02/2016 03:05	WG846130
1,1-Dichloropropene	ND		0.00589	5	02/02/2016 03:05	WG846130
1,3-Dichloropropane	ND		0.00589	5	02/02/2016 03:05	WG846130
cis-1,3-Dichloropropene	ND		0.00589	5	02/02/2016 03:05	WG846130
trans-1,3-Dichloropropene	ND		0.00589	5	02/02/2016 03:05	WG846130
2,2-Dichloropropane	ND		0.00589	5	02/02/2016 03:05	WG846130
Di-isopropyl ether	ND		0.00589	5	02/02/2016 03:05	WG846130
Ethylbenzene	ND		0.00589	5	02/02/2016 03:05	WG846130
Hexachloro-1,3-butadiene	ND		0.00589	5	02/02/2016 03:05	WG846130
Isopropylbenzene	ND		0.00589	5	02/02/2016 03:05	WG846130
p-Isopropyltoluene	ND		0.00589	5	02/02/2016 03:05	WG846130
2-Butanone (MEK)	ND		0.0589	5	02/02/2016 03:05	WG846130
Methylene Chloride	ND		0.0295	5	02/02/2016 03:05	WG846130
4-Methyl-2-pentanone (MIBK)	ND		0.0589	5	02/02/2016 03:05	WG846130
Methyl tert-butyl ether	ND		0.00589	5	02/02/2016 03:05	WG846130
Naphthalene	ND	J4	0.0295	5	02/02/2016 03:05	WG846130
n-Propylbenzene	ND		0.00589	5	02/02/2016 03:05	WG846130
Styrene	ND		0.00589	5	02/02/2016 03:05	WG846130
1,1,1,2-Tetrachloroethane	ND		0.00589	5	02/02/2016 03:05	WG846130

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	ND		0.00589	5	02/02/2016 03:05	WG846130
1,1,2-Trichlorotrifluoroethane	ND		0.00589	5	02/02/2016 03:05	WG846130
Tetrachloroethene	ND		0.00589	5	02/02/2016 03:05	WG846130
Toluene	ND		0.0295	5	02/02/2016 03:05	WG846130
1,2,3-Trichlorobenzene	ND		0.00589	5	02/02/2016 03:05	WG846130
1,2,4-Trichlorobenzene	ND		0.00589	5	02/02/2016 03:05	WG846130
1,1,1-Trichloroethane	ND		0.00589	5	02/02/2016 03:05	WG846130
1,1,2-Trichloroethane	ND		0.00589	5	02/02/2016 03:05	WG846130
Trichloroethene	ND		0.00589	5	02/02/2016 03:05	WG846130
Trichlorofluoromethane	ND		0.0295	5	02/02/2016 03:05	WG846130
1,2,3-Trichloropropane	ND		0.0147	5	02/02/2016 03:05	WG846130
1,2,4-Trimethylbenzene	ND		0.00589	5	02/02/2016 03:05	WG846130
1,2,3-Trimethylbenzene	ND		0.00589	5	02/02/2016 03:05	WG846130
1,3,5-Trimethylbenzene	ND		0.00589	5	02/02/2016 03:05	WG846130
Vinyl chloride	ND		0.00589	5	02/02/2016 03:05	WG846130
Xylenes, Total	ND		0.0177	5	02/02/2016 03:05	WG846130
(S) Toluene-d8	*102*		*88.7-115*		*02/02/2016 03:05*	WG846130
(S) Dibromofluoromethane	*98.7*		*76.3-123*		*02/02/2016 03:05*	WG846130
(S) 4-Bromofluorobenzene	*85.7*		*69.7-129*		*02/02/2016 03:05*	WG846130

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00707	1	02/06/2016 09:52	WG847056
Acenaphthene	ND		0.00707	1	02/06/2016 09:52	WG847056
Acenaphthylene	ND		0.00707	1	02/06/2016 09:52	WG847056
Benzo(a)anthracene	ND		0.00707	1	02/06/2016 09:52	WG847056
Benzo(a)pyrene	ND		0.00707	1	02/06/2016 09:52	WG847056
Benzo(b)fluoranthene	ND		0.00707	1	02/06/2016 09:52	WG847056
Benzo(g,h,i)perylene	ND		0.00707	1	02/06/2016 09:52	WG847056
Benzo(k)fluoranthene	ND		0.00707	1	02/06/2016 09:52	WG847056
Chrysene	ND		0.00707	1	02/06/2016 09:52	WG847056
Dibenz(a,h)anthracene	ND		0.00707	1	02/06/2016 09:52	WG847056
Fluoranthene	ND		0.00707	1	02/06/2016 09:52	WG847056
Fluorene	ND		0.00707	1	02/06/2016 09:52	WG847056
Indeno(1,2,3-cd)pyrene	ND		0.00707	1	02/06/2016 09:52	WG847056
Naphthalene	ND		0.0236	1	02/06/2016 09:52	WG847056
Phenanthrene	ND		0.00707	1	02/06/2016 09:52	WG847056
Pyrene	ND		0.00707	1	02/06/2016 09:52	WG847056
1-Methylnaphthalene	ND		0.0236	1	02/06/2016 09:52	WG847056
2-Methylnaphthalene	ND		0.0236	1	02/06/2016 09:52	WG847056
2-Chloronaphthalene	ND		0.0236	1	02/06/2016 09:52	WG847056
(S) Nitrobenzene-d5	*80.2*		*22.1-146*		*02/06/2016 09:52*	WG847056
(S) 2-Fluorobiphenyl	*78.0*		*40.6-122*		*02/06/2016 09:52*	WG847056
(S) p-Terphenyl-d14	*66.2*		*32.2-131*		*02/06/2016 09:52*	WG847056

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	85.4		1	02/03/2016 14:47	WG846514

Mercury by Method 7471A

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0234	1	02/04/2016 10:38	WG846422

Metals (ICP) by Method 6010B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Arsenic	3.55		2.34	1	02/04/2016 10:21	WG846345
Barium	8.57		0.585	1	02/04/2016 10:21	WG846345
Cadmium	ND		0.585	1	02/04/2016 10:21	WG846345
Chromium	26.0		1.17	1	02/04/2016 10:21	WG846345
Lead	8.44		0.585	1	02/04/2016 10:21	WG846345
Selenium	ND		2.34	1	02/04/2016 10:21	WG846345
Silver	ND		1.17	1	02/04/2016 10:21	WG846345

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	86.0		1	02/03/2016 14:47	WG846514

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.291	5	02/02/2016 03:23	WG846130
Acrylonitrile	ND		0.0582	5	02/02/2016 03:23	WG846130
Benzene	ND		0.00582	5	02/02/2016 03:23	WG846130
Bromobenzene	ND		0.00582	5	02/02/2016 03:23	WG846130
Bromodichloromethane	ND		0.00582	5	02/02/2016 03:23	WG846130
Bromoform	ND		0.00582	5	02/02/2016 03:23	WG846130
Bromomethane	ND		0.0291	5	02/02/2016 03:23	WG846130
n-Butylbenzene	ND		0.00582	5	02/02/2016 03:23	WG846130
sec-Butylbenzene	ND		0.00582	5	02/02/2016 03:23	WG846130
tert-Butylbenzene	ND		0.00582	5	02/02/2016 03:23	WG846130
Carbon tetrachloride	ND		0.00582	5	02/02/2016 03:23	WG846130
Chlorobenzene	ND		0.00582	5	02/02/2016 03:23	WG846130
Chlorodibromomethane	ND		0.00582	5	02/02/2016 03:23	WG846130
Chloroethane	ND		0.0291	5	02/02/2016 03:23	WG846130
2-Chloroethyl vinyl ether	ND	J3	0.291	5	02/02/2016 03:23	WG846130
Chloroform	ND		0.0291	5	02/02/2016 03:23	WG846130
Chloromethane	ND		0.0145	5	02/02/2016 03:23	WG846130
2-Chlorotoluene	ND		0.00582	5	02/02/2016 03:23	WG846130
4-Chlorotoluene	ND		0.00582	5	02/02/2016 03:23	WG846130
1,2-Dibromo-3-Chloropropane	ND	J3	0.0291	5	02/02/2016 03:23	WG846130
1,2-Dibromoethane	ND		0.00582	5	02/02/2016 03:23	WG846130
Dibromomethane	ND		0.00582	5	02/02/2016 03:23	WG846130
1,2-Dichlorobenzene	ND		0.00582	5	02/02/2016 03:23	WG846130
1,3-Dichlorobenzene	ND		0.00582	5	02/02/2016 03:23	WG846130
1,4-Dichlorobenzene	ND		0.00582	5	02/02/2016 03:23	WG846130
Dichlorodifluoromethane	ND		0.0291	5	02/02/2016 03:23	WG846130
1,1-Dichloroethane	ND		0.00582	5	02/02/2016 03:23	WG846130
1,2-Dichloroethane	ND		0.00582	5	02/02/2016 03:23	WG846130
1,1-Dichloroethene	ND		0.00582	5	02/02/2016 03:23	WG846130
cis-1,2-Dichloroethene	ND		0.00582	5	02/02/2016 03:23	WG846130
trans-1,2-Dichloroethene	ND		0.00582	5	02/02/2016 03:23	WG846130
1,2-Dichloropropane	ND		0.00582	5	02/02/2016 03:23	WG846130
1,1-Dichloropropene	ND		0.00582	5	02/02/2016 03:23	WG846130
1,3-Dichloropropane	ND		0.00582	5	02/02/2016 03:23	WG846130
cis-1,3-Dichloropropene	ND		0.00582	5	02/02/2016 03:23	WG846130
trans-1,3-Dichloropropene	ND		0.00582	5	02/02/2016 03:23	WG846130
2,2-Dichloropropane	ND		0.00582	5	02/02/2016 03:23	WG846130
Di-isopropyl ether	ND		0.00582	5	02/02/2016 03:23	WG846130
Ethylbenzene	ND		0.00582	5	02/02/2016 03:23	WG846130
Hexachloro-1,3-butadiene	ND		0.00582	5	02/02/2016 03:23	WG846130
Isopropylbenzene	ND		0.00582	5	02/02/2016 03:23	WG846130
p-Isopropyltoluene	ND		0.00582	5	02/02/2016 03:23	WG846130
2-Butanone (MEK)	ND		0.0582	5	02/02/2016 03:23	WG846130
Methylene Chloride	ND		0.0291	5	02/02/2016 03:23	WG846130
4-Methyl-2-pentanone (MIBK)	ND		0.0582	5	02/02/2016 03:23	WG846130
Methyl tert-butyl ether	ND		0.00582	5	02/02/2016 03:23	WG846130
Naphthalene	ND	J4	0.0291	5	02/02/2016 03:23	WG846130
n-Propylbenzene	ND		0.00582	5	02/02/2016 03:23	WG846130
Styrene	ND		0.00582	5	02/02/2016 03:23	WG846130
1,1,1,2-Tetrachloroethane	ND		0.00582	5	02/02/2016 03:23	WG846130

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2,2-Tetrachloroethane	ND		0.00582	5	02/02/2016 03:23	WG846130
1,1,2-Trichlorotrifluoroethane	ND		0.00582	5	02/02/2016 03:23	WG846130
Tetrachloroethene	ND		0.00582	5	02/02/2016 03:23	WG846130
Toluene	ND		0.0291	5	02/02/2016 03:23	WG846130
1,2,3-Trichlorobenzene	ND		0.00582	5	02/02/2016 03:23	WG846130
1,2,4-Trichlorobenzene	ND		0.00582	5	02/02/2016 03:23	WG846130
1,1,1-Trichloroethane	ND		0.00582	5	02/02/2016 03:23	WG846130
1,1,2-Trichloroethane	ND		0.00582	5	02/02/2016 03:23	WG846130
Trichloroethene	ND		0.00582	5	02/02/2016 03:23	WG846130
Trichlorofluoromethane	ND		0.0291	5	02/02/2016 03:23	WG846130
1,2,3-Trichloropropane	ND		0.0145	5	02/02/2016 03:23	WG846130
1,2,4-Trimethylbenzene	ND		0.00582	5	02/02/2016 03:23	WG846130
1,2,3-Trimethylbenzene	ND		0.00582	5	02/02/2016 03:23	WG846130
1,3,5-Trimethylbenzene	ND		0.00582	5	02/02/2016 03:23	WG846130
Vinyl chloride	ND		0.00582	5	02/02/2016 03:23	WG846130
Xylenes, Total	ND		0.0175	5	02/02/2016 03:23	WG846130
(S) Toluene-d8	*102*		*88.7-115*		*02/02/2016 03:23*	WG846130
(S) Dibromofluoromethane	*96.6*		*76.3-123*		*02/02/2016 03:23*	WG846130
(S) 4-Bromofluorobenzene	*85.3*		*69.7-129*		*02/02/2016 03:23*	WG846130

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00698	1	02/06/2016 10:14	WG847056
Acenaphthene	ND		0.00698	1	02/06/2016 10:14	WG847056
Acenaphthylene	ND		0.00698	1	02/06/2016 10:14	WG847056
Benzo(a)anthracene	ND		0.00698	1	02/06/2016 10:14	WG847056
Benzo(a)pyrene	ND		0.00698	1	02/06/2016 10:14	WG847056
Benzo(b)fluoranthene	ND		0.00698	1	02/06/2016 10:14	WG847056
Benzo(g,h,i)perylene	ND		0.00698	1	02/06/2016 10:14	WG847056
Benzo(k)fluoranthene	ND		0.00698	1	02/06/2016 10:14	WG847056
Chrysene	ND		0.00698	1	02/06/2016 10:14	WG847056
Dibenz(a,h)anthracene	ND		0.00698	1	02/06/2016 10:14	WG847056
Fluoranthene	ND		0.00698	1	02/06/2016 10:14	WG847056
Fluorene	ND		0.00698	1	02/06/2016 10:14	WG847056
Indeno(1,2,3-cd)pyrene	ND		0.00698	1	02/06/2016 10:14	WG847056
Naphthalene	ND		0.0233	1	02/06/2016 10:14	WG847056
Phenanthrene	ND		0.00698	1	02/06/2016 10:14	WG847056
Pyrene	ND		0.00698	1	02/06/2016 10:14	WG847056
1-Methylnaphthalene	ND		0.0233	1	02/06/2016 10:14	WG847056
2-Methylnaphthalene	ND		0.0233	1	02/06/2016 10:14	WG847056
2-Chloronaphthalene	ND		0.0233	1	02/06/2016 10:14	WG847056
(S) Nitrobenzene-d5	*78.8*		*22.1-146*		*02/06/2016 10:14*	WG847056
(S) 2-Fluorobiphenyl	*78.0*		*40.6-122*		*02/06/2016 10:14*	WG847056
(S) p-Terphenyl-d14	*60.8*		*32.2-131*		*02/06/2016 10:14*	WG847056

Method Blank (MB)

(MB) 02/03/16 14:47

Analyte	MB Result %	MB Qualifier	MB RDL %
Total Solids	0.000300		

L814859-01 Original Sample (OS) • Duplicate (DUP)

(OS) 02/03/16 14:47 • (DUP) 02/03/16 14:47

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	89.1	85.5	1	4.10		5

Laboratory Control Sample (LCS)

(LCS) 02/03/16 14:47

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) 02/04/16 09:24

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Mercury	ND		0.0200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/04/16 09:32 • (LCSD) 02/04/16 09:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.300	0.278	0.276	93	92	80-120			0	20

L814805-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/04/16 09:37 • (MS) 02/04/16 09:39 • (MSD) 02/04/16 09:42

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.300	0.00813	0.271	0.262	87	85	1	75-125			3	20

Method Blank (MB)

(MB) 02/04/16 08:53

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Arsenic	ND		2.00
Barium	ND		0.500
Cadmium	ND		0.500
Chromium	ND		1.00
Lead	ND		0.500
Selenium	ND		2.00
Silver	ND		1.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/04/16 09:03 • (LCSD) 02/04/16 09:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	102	100	102	100	80-120			2	20
Barium	100	104	102	104	102	80-120			2	20
Cadmium	100	102	100	102	100	80-120			2	20
Chromium	100	99.2	97.3	99	97	80-120			2	20
Lead	100	103	101	103	101	80-120			2	20
Selenium	100	105	102	105	102	80-120			3	20
Silver	100	98.2	96.6	98	97	80-120			2	20

L814859-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/04/16 09:09 • (MS) 02/04/16 09:18 • (MSD) 02/04/16 09:20

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	6.93	96.7	98.2	90	91	1	75-125			2	20
Barium	100	24.7	127	123	102	98	1	75-125			3	20
Cadmium	100	0.00176	98.2	97.8	98	98	1	75-125			0	20
Chromium	100	56.7	145	153	88	96	1	75-125			5	20
Lead	100	12.6	114	115	101	102	1	75-125			1	20
Selenium	100	0.393	92.3	90.2	92	90	1	75-125			2	20
Silver	100	ND	99.9	98.8	100	99	1	75-125			1	20

Method Blank (MB)

(MB) 02/01/16 15:04

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Acetone	ND		0.0500
Acrylonitrile	ND		0.0100
Benzene	ND		0.00100
Bromobenzene	ND		0.00100
Bromodichloromethane	ND		0.00100
Bromoform	ND		0.00100
Bromomethane	ND		0.00500
n-Butylbenzene	ND		0.00100
sec-Butylbenzene	ND		0.00100
tert-Butylbenzene	ND		0.00100
Carbon tetrachloride	ND		0.00100
Chlorobenzene	ND		0.00100
Chlorodibromomethane	ND		0.00100
Chloroethane	ND		0.00500
2-Chloroethyl vinyl ether	ND		0.0500
Chloroform	ND		0.00500
Chloromethane	ND		0.00250
2-Chlorotoluene	ND		0.00100
4-Chlorotoluene	ND		0.00100
1,2-Dibromo-3-Chloropropane	ND		0.00500
1,2-Dibromoethane	ND		0.00100
Dibromomethane	ND		0.00100
1,2-Dichlorobenzene	ND		0.00100
1,3-Dichlorobenzene	ND		0.00100
1,4-Dichlorobenzene	ND		0.00100
Dichlorodifluoromethane	ND		0.00500
1,1-Dichloroethane	ND		0.00100
1,2-Dichloroethane	ND		0.00100
1,1-Dichloroethene	ND		0.00100
cis-1,2-Dichloroethene	ND		0.00100
trans-1,2-Dichloroethene	ND		0.00100
1,2-Dichloropropane	ND		0.00100
1,1-Dichloropropene	ND		0.00100
1,3-Dichloropropane	ND		0.00100
cis-1,3-Dichloropropene	ND		0.00100
trans-1,3-Dichloropropene	ND		0.00100

Method Blank (MB)

(MB) 02/01/16 15:04

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
2,2-Dichloropropane	ND		0.00100
Di-isopropyl ether	ND		0.00100
Ethylbenzene	ND		0.00100
Hexachloro-1,3-butadiene	ND		0.00100
Isopropylbenzene	ND		0.00100
p-Isopropyltoluene	ND		0.00100
2-Butanone (MEK)	ND		0.0100
Methylene Chloride	ND		0.00500
4-Methyl-2-pentanone (MIBK)	ND		0.0100
Methyl tert-butyl ether	ND		0.00100
Naphthalene	ND		0.00500
n-Propylbenzene	ND		0.00100
Styrene	ND		0.00100
1,1,1,2-Tetrachloroethane	ND		0.00100
1,1,2,2-Tetrachloroethane	ND		0.00100
Tetrachloroethene	ND		0.00100
Toluene	ND		0.00500
1,1,2-Trichlorotrifluoroethane	ND		0.00100
1,2,3-Trichlorobenzene	ND		0.00100
1,2,4-Trichlorobenzene	ND		0.00100
1,1,1-Trichloroethane	ND		0.00100
1,1,2-Trichloroethane	ND		0.00100
Trichloroethene	ND		0.00100
Trichlorofluoromethane	ND		0.00500
1,2,3-Trichloropropane	ND		0.00250
1,2,3-Trimethylbenzene	ND		0.00100
1,2,4-Trimethylbenzene	ND		0.00100
1,3,5-Trimethylbenzene	ND		0.00100
Vinyl chloride	ND		0.00100
Xylenes, Total	ND		0.00300
(S) Toluene-d8	*101*		*88.7-115*
(S) Dibromofluoromethane	*90.8*		*76.3-123*
(S) 4-Bromofluorobenzene	*91.8*		*69.7-129*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/01/16 13:54 • (LCSD) 02/01/16 14:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.0958	0.103	76.7	82.6	25.3-178			7.39	22.9
Acrylonitrile	0.125	0.107	0.121	85.6	96.9	57.8-143			12.4	20
Benzene	0.0250	0.0242	0.0250	96.8	100	72.6-120			3.40	20
Bromobenzene	0.0250	0.0248	0.0258	99.3	103	80.3-115			3.98	20
Bromodichloromethane	0.0250	0.0237	0.0246	94.8	98.4	75.3-119			3.75	20
Bromoform	0.0250	0.0279	0.0308	111	123	69.1-135			9.98	20
Bromomethane	0.0250	0.0286	0.0298	114	119	23.0-191			4.12	20
n-Butylbenzene	0.0250	0.0241	0.0264	96.4	106	74.2-134			9.12	20
sec-Butylbenzene	0.0250	0.0266	0.0289	106	116	77.8-129			8.23	20
tert-Butylbenzene	0.0250	0.0282	0.0303	113	121	77.2-129			7.25	20
Carbon tetrachloride	0.0250	0.0281	0.0291	112	116	69.4-129			3.40	20
Chlorobenzene	0.0250	0.0277	0.0288	111	115	78.9-122			3.90	20
Chlorodibromomethane	0.0250	0.0260	0.0277	104	111	76.4-126			6.12	20
Chloroethane	0.0250	0.0282	0.0283	113	113	47.2-147			0.300	20
2-Chloroethyl vinyl ether	0.125	0.0506	0.0676	40.5	54.1	16.7-162		J3	28.7	23.7
Chloroform	0.0250	0.0253	0.0258	101	103	73.3-122			2.03	20
Chloromethane	0.0250	0.0311	0.0318	124	127	53.1-135			2.29	20
2-Chlorotoluene	0.0250	0.0279	0.0290	112	116	74.6-127			4.07	20
4-Chlorotoluene	0.0250	0.0259	0.0274	104	110	79.5-123			5.71	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0190	0.0234	76.2	93.5	64.9-131		J3	20.4	20
1,2-Dibromoethane	0.0250	0.0229	0.0250	91.8	99.9	78.7-123			8.47	20
Dibromomethane	0.0250	0.0235	0.0250	93.8	100	78.5-117			6.53	20
1,2-Dichlorobenzene	0.0250	0.0239	0.0258	95.5	103	83.6-119			7.55	20
1,3-Dichlorobenzene	0.0250	0.0266	0.0279	106	112	75.9-129			5.06	20
1,4-Dichlorobenzene	0.0250	0.0230	0.0243	92.0	97.2	81.0-115			5.51	20
Dichlorodifluoromethane	0.0250	0.0281	0.0286	112	114	50.9-139			1.79	20
1,1-Dichloroethane	0.0250	0.0261	0.0272	104	109	71.7-125			4.20	20
1,2-Dichloroethane	0.0250	0.0207	0.0224	82.7	89.4	67.2-121			7.79	20
1,1-Dichloroethene	0.0250	0.0257	0.0264	103	106	60.6-133			2.75	20
cis-1,2-Dichloroethene	0.0250	0.0246	0.0254	98.3	102	76.1-121			3.32	20
trans-1,2-Dichloroethene	0.0250	0.0255	0.0257	102	103	70.7-124			0.850	20
1,2-Dichloropropane	0.0250	0.0271	0.0285	108	114	76.9-123			5.11	20
1,1-Dichloropropene	0.0250	0.0284	0.0294	114	118	71.2-126			3.40	20
1,3-Dichloropropane	0.0250	0.0235	0.0250	94.1	100	80.3-114			6.19	20
cis-1,3-Dichloropropene	0.0250	0.0267	0.0275	107	110	77.3-123			2.82	20
trans-1,3-Dichloropropene	0.0250	0.0244	0.0257	97.7	103	73.0-127			5.00	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/01/16 13:54 • (LCSD) 02/01/16 14:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2,2-Dichloropropane	0.0250	0.0288	0.0300	115	120	61.9-132			4.08	20
Di-isopropyl ether	0.0250	0.0253	0.0263	101	105	67.2-131			3.98	20
Ethylbenzene	0.0250	0.0277	0.0294	111	118	78.6-124			6.14	20
Hexachloro-1,3-butadiene	0.0250	0.0260	0.0282	104	113	69.2-136			8.29	20
Isopropylbenzene	0.0250	0.0274	0.0293	110	117	79.4-126			6.64	20
p-Isopropyltoluene	0.0250	0.0278	0.0300	111	120	75.4-132			7.66	20
2-Butanone (MEK)	0.125	0.113	0.127	90.3	101	44.5-154			11.6	21.3
Methylene Chloride	0.0250	0.0209	0.0217	83.6	86.7	68.2-119			3.63	20
4-Methyl-2-pentanone (MIBK)	0.125	0.104	0.119	82.8	94.9	61.1-138			13.6	20
Methyl tert-butyl ether	0.0250	0.0220	0.0239	88.0	95.5	70.2-122			8.14	20
Naphthalene	0.0250	0.0169	0.0198	67.6	79.2	69.9-132	J4		15.9	20
n-Propylbenzene	0.0250	0.0262	0.0281	105	113	80.2-124			7.12	20
Styrene	0.0250	0.0236	0.0252	94.3	101	79.4-124			6.78	20
1,1,1,2-Tetrachloroethane	0.0250	0.0282	0.0294	113	118	76.7-127			4.16	20
1,1,2,2-Tetrachloroethane	0.0250	0.0212	0.0249	84.8	99.8	78.8-124			16.2	20
Tetrachloroethene	0.0250	0.0302	0.0311	121	124	71.1-133			2.76	20
Toluene	0.0250	0.0251	0.0260	101	104	76.7-116			3.37	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0264	0.0274	105	110	62.6-138			3.86	20
1,2,3-Trichlorobenzene	0.0250	0.0210	0.0234	84.0	93.5	72.5-137			10.8	20
1,2,4-Trichlorobenzene	0.0250	0.0232	0.0255	92.7	102	74.0-137			9.54	20
1,1,1-Trichloroethane	0.0250	0.0258	0.0266	103	106	69.9-127			2.88	20
1,1,2-Trichloroethane	0.0250	0.0230	0.0248	91.8	99.3	81.9-119			7.84	20
Trichloroethene	0.0250	0.0287	0.0297	115	119	77.2-122			3.50	20
Trichlorofluoromethane	0.0250	0.0280	0.0285	112	114	51.5-151			1.73	20
1,2,3-Trichloropropane	0.0250	0.0207	0.0249	82.6	99.7	74.0-124			18.7	20
1,2,3-Trimethylbenzene	0.0250	0.0235	0.0251	93.9	100	79.4-118			6.72	20
1,2,4-Trimethylbenzene	0.0250	0.0266	0.0284	107	114	77.1-124			6.51	20
1,3,5-Trimethylbenzene	0.0250	0.0266	0.0290	106	116	79.0-125			8.71	20
Vinyl chloride	0.0250	0.0287	0.0298	115	119	58.4-134			3.57	20
Xylenes, Total	0.0750	0.0831	0.0879	111	117	78.1-123			5.64	20
(S) Toluene-d8				*101*	*101*	*88.7-115*				
(S) Dibromofluoromethane				*91.6*	*91.4*	*76.3-123*				
(S) 4-Bromofluorobenzene				*96.6*	*97.6*	*69.7-129*				

Method Blank (MB)

(MB) 02/06/16 02:36

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Anthracene	ND		0.00600
Acenaphthene	ND		0.00600
Acenaphthylene	ND		0.00600
Benzo(a)anthracene	ND		0.00600
Benzo(a)pyrene	ND		0.00600
Benzo(b)fluoranthene	ND		0.00600
Benzo(g,h,i)perylene	ND		0.00600
Benzo(k)fluoranthene	ND		0.00600
Chrysene	ND		0.00600
Dibenz(a,h)anthracene	ND		0.00600
Fluoranthene	ND		0.00600
Fluorene	ND		0.00600
Indeno(1,2,3-cd)pyrene	ND		0.00600
Naphthalene	ND		0.0200
Phenanthrene	ND		0.00600
Pyrene	ND		0.00600
1-Methylnaphthalene	ND		0.0200
2-Methylnaphthalene	ND		0.0200
2-Chloronaphthalene	ND		0.0200
(S) p-Terphenyl-d14	*71.0*		*32.2-131*
(S) Nitrobenzene-d5	*76.3*		*22.1-146*
(S) 2-Fluorobiphenyl	*73.7*		*40.6-122*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/06/16 01:52 • (LCSD) 02/06/16 02:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	0.0539	0.0608	67.4	75.9	50.3-130			12.0	20
Acenaphthene	0.0800	0.0589	0.0652	73.7	81.5	52.4-120			10.1	20
Acenaphthylene	0.0800	0.0562	0.0633	70.3	79.1	49.6-120			11.8	20
Benzo(a)anthracene	0.0800	0.0541	0.0606	67.6	75.8	46.7-125			11.4	20
Benzo(a)pyrene	0.0800	0.0440	0.0486	55.1	60.7	42.3-119			9.83	20
Benzo(b)fluoranthene	0.0800	0.0526	0.0543	65.8	67.8	43.6-124			3.09	20
Benzo(g,h,i)perylene	0.0800	0.0572	0.0628	71.6	78.5	45.1-132			9.27	20
Benzo(k)fluoranthene	0.0800	0.0534	0.0634	66.7	79.2	46.1-131			17.1	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/06/16 01:52 • (LCSD) 02/06/16 02:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chrysene	0.0800	0.0560	0.0637	70.0	79.6	49.5-131			12.8	20
Dibenz(a,h)anthracene	0.0800	0.0592	0.0653	74.0	81.6	44.8-133			9.74	20
Fluoranthene	0.0800	0.0542	0.0617	67.8	77.1	49.3-128			12.9	20
Fluorene	0.0800	0.0564	0.0637	70.6	79.6	50.6-121			12.1	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0587	0.0653	73.4	81.6	46.1-135			10.6	20
Naphthalene	0.0800	0.0548	0.0620	68.5	77.4	49.6-115			12.2	20
Phenanthrene	0.0800	0.0548	0.0609	68.5	76.1	48.8-121			10.5	20
Pyrene	0.0800	0.0567	0.0633	70.8	79.1	44.7-130			11.0	20
1-Methylnaphthalene	0.0800	0.0510	0.0590	63.8	73.7	50.6-122			14.4	20
2-Methylnaphthalene	0.0800	0.0522	0.0586	65.2	73.3	50.4-120			11.7	20
2-Chloronaphthalene	0.0800	0.0593	0.0659	74.1	82.4	53.9-121			10.6	20
(S) p-Terphenyl-d14				*67.6*	*75.0*	*32.2-131*				
(S) Nitrobenzene-d5				*73.1*	*81.3*	*22.1-146*				
(S) 2-Fluorobiphenyl				*70.5*	*78.7*	*40.6-122*				

L814777-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/06/16 08:03 • (MS) 02/06/16 08:25 • (MSD) 02/06/16 08:46

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	ND	0.0508	0.0542	63.6	67.8	1	26.5-141			6.45	21.2
Acenaphthene	0.0800	ND	0.0520	0.0538	65.0	67.2	1	31.9-130			3.29	20
Acenaphthylene	0.0800	ND	0.0570	0.0575	71.2	71.9	1	33.7-129			0.960	20
Benzo(a)anthracene	0.0800	ND	0.0452	0.0484	56.4	60.5	1	18.3-136			7.00	24.6
Benzo(a)pyrene	0.0800	ND	0.0446	0.0468	55.8	58.5	1	16.9-135			4.78	25.2
Benzo(b)fluoranthene	0.0800	ND	0.0368	0.0385	46.0	48.1	1	10.0-134			4.55	30.9
Benzo(g,h,i)perylene	0.0800	ND	0.0430	0.0454	53.7	56.7	1	14.1-140			5.41	25.5
Benzo(k)fluoranthene	0.0800	ND	0.0474	0.0499	59.2	62.3	1	18.2-138			5.10	25.6
Chrysene	0.0800	ND	0.0492	0.0516	61.5	64.5	1	17.1-145			4.88	24.2
Dibenz(a,h)anthracene	0.0800	ND	0.0504	0.0522	63.0	65.2	1	18.5-138			3.51	24.3
Fluoranthene	0.0800	ND	0.0428	0.0446	53.5	55.7	1	15.4-144			4.02	27.1
Fluorene	0.0800	ND	0.0491	0.0508	61.4	63.5	1	23.5-136			3.43	20
Indeno(1,2,3-cd)pyrene	0.0800	ND	0.0459	0.0481	57.4	60.1	1	14.5-142			4.52	25.8
Naphthalene	0.0800	0.000736	0.0542	0.0544	66.8	67.1	1	29.2-128			0.420	20
Phenanthrene	0.0800	ND	0.0457	0.0484	57.1	60.5	1	20.1-134			5.79	23.6
Pyrene	0.0800	ND	0.0443	0.0455	55.4	56.9	1	11.0-148			2.72	26.1

L814777-15 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/06/16 08:03 • (MS) 02/06/16 08:25 • (MSD) 02/06/16 08:46

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1-Methylnaphthalene	0.0800	ND	0.0483	0.0490	60.4	61.3	1	28.4-137			1.43	20
2-Methylnaphthalene	0.0800	ND	0.0494	0.0501	61.7	62.6	1	26.6-137			1.45	20
2-Chloronaphthalene	0.0800	ND	0.0529	0.0549	66.1	68.7	1	38.6-126			3.81	20
(S) p-Terphenyl-d14					*57.0*	*58.4*		*32.2-131*				
(S) Nitrobenzene-d5					*71.1*	*76.8*		*22.1-146*				
(S) 2-Fluorobiphenyl					*63.8*	*69.6*		*40.6-122*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

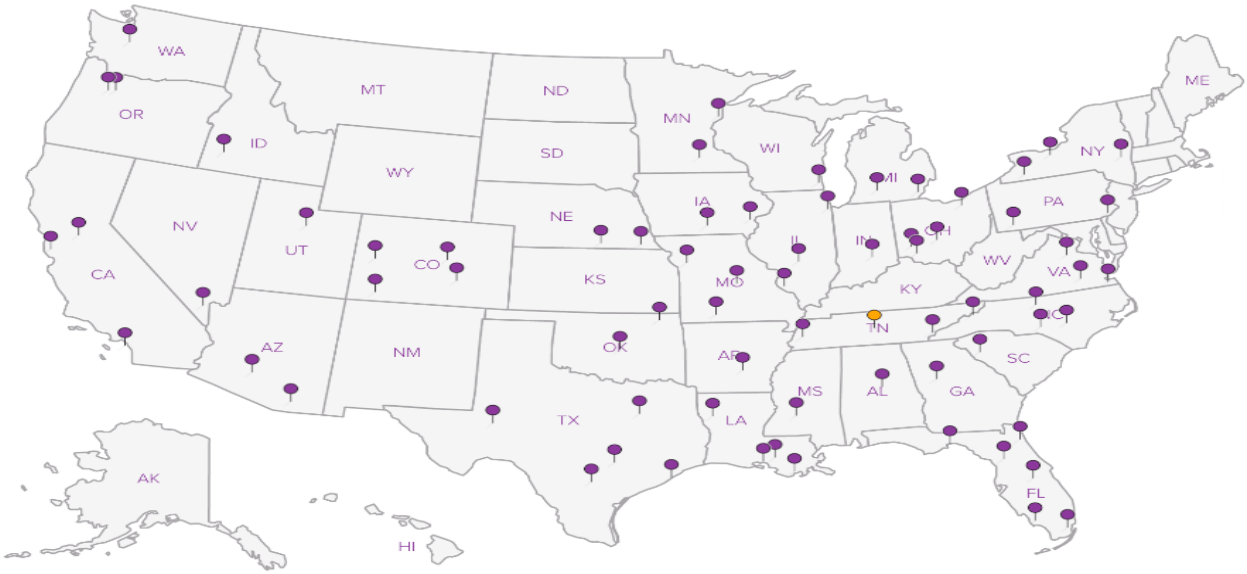
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA – ISO 17025 [5]	1461.02
Canada	1461.01
EPA–Crypto	TN00003
AIHA	100789
DOD	1461.01
USDA	S-67674

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Terracon Consultants - B-Ham AL.

110 12th Street North
Birmingham, AL 35203

Billing Information:
Lisa Sharman
110 12th Street North
Birmingham, AL 35203

Report to: TREY NOLAND

Email To: TREY.NOLAND@TERRACON.COM

Project Description: EAST GLENN AVE LSI E1167035

City/State Collected: AUBURN, AL

Phone: 205-942-1289
Fax: 205-443-1266

Client Project # E1167035

Lab Project #

Collected by (print): M. DIGIORGIO

Site/Facility ID #

P.O. #

Collected by (signature): [signature]

Immediately Packed on Ice N ____ Y ✓

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L814859
Table #
E032
Acctnum: GALLET
Template:
Prelogin:
TSR: 350 - Jimmy Hunt
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs 8260B	PAH 8270C-SIM	RCRA-8 METALS 7470/6010B	Rem./Contaminant	Sample # (lab only)
SB-1	COMP	SS	0-1.5	1/27/16	1300	3	X	X	X		-01
SB-1-2			1.5-5		1305	2	X	X	X		02
SB-2			0-1.5		1508	3	X	X	X		03
SB-2			15-20		1521	2	X	X	X		04
SB-3			0-1.5		1345	3	X	X	X		05
SB-3			15-20		1404	3	X	X	X		06
SB-4			0-1.5		1432	3	X	X	X		07
SB-4			10-15		1446	3	X	X	X		08
SB-5			0-1.5		1205	3	X	X	X		09
SB-5-5			15-20		1220	3					10

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: FG

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
[signature]	1/28/16		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			[signature]

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____

Temp: 3.2 °C Bottles Received: 15+TB

Date: 1/29/16 Time: 9:00

Condition: (lab use only) GOOD

COC Seal Intact: ✓ Y ___N ___NA

pH Checked: NCF: YES

Andy Vann

ESC Lab Sciences
Non-Conformance Form

Login #:L814859	Client: GALLET	Date: 1/29/16	Evaluated by: Forrest

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time	x	Login Clarification Needed		**If Broken Container:**
	Improper temperature		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	Improper preservation		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Couri
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: Does client need all analysis ran on all ID's.
Conflicting analysis on COC and Containers. Client only sent VOCs container for Shallow depths and PAHSIM and MRCRA8
For Deeper Depths. Please Advise.

Client informed by:		Call	x	Email		Voice Mail		Date: 2/1/16	Time: 0905
TSR Initials: jeh	Client Contact: Trey Noland								

Login Instructions: All shallow depths should be analyzed for RCRA8 metals. All deeper depths should be logged for V8260, TS and SV8270PAHSIM.

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ANALYTICAL REPORT

February 08, 2016

Terracon Consultants - B-Ham AL.

Sample Delivery Group:	L814810
Samples Received:	01/30/2016
Project Number:	E1167035
Description:	East Glenn Ave LSI
Report To:	Trey Noland 110 12th Street North Birmingham, AL 35203

Entire Report Reviewed By:

Jimmy Hunt
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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DRUM COMPOSITE L814810-01 Solid

Collected by: M. DiGiorgio | Collected date/time: 01/29/16 09:30 | Received date/time: 01/30/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG846736	1	02/04/16 22:17	02/05/16 17:56	KMP
Semi-Volatile Organic Compounds (GC) by Method 3546/DRO	WG846760	1	02/03/16 12:32	02/03/16 17:46	TRF
Total Solids by Method 2540 G-2011	WG846380	1	02/02/16 15:18	02/02/16 15:29	KDW
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG846308	5	02/03/16 13:26	02/04/16 09:34	DAH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG846254	5	02/02/16 00:34	02/02/16 07:53	JHH

DRUM COMPOSITE L814810-02 Waste

Collected by: M. DiGiorgio | Collected date/time: 01/29/16 09:30 | Received date/time: 01/30/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Mercury by Method 7470A	WG846500	1	02/03/16 09:59	02/03/16 15:40	TRB
Metals (ICP) by Method 6010B	WG846458	1	02/02/16 17:27	02/03/16 04:16	LTB
Preparation by Method 1311	WG846101	1	02/01/16 12:46	02/01/16 12:47	CHM

MW-1 L814810-03 GW

Collected by: M. DiGiorgio | Collected date/time: 01/29/16 13:10 | Received date/time: 01/30/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG845969	1	02/03/16 18:17	02/04/16 08:32	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG846848	1	02/04/16 18:06	02/05/16 08:49	CJR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG845930	1	02/01/16 17:33	02/01/16 17:33	BMB

MW-2 L814810-04 GW

Collected by: M. DiGiorgio | Collected date/time: 01/29/16 13:30 | Received date/time: 01/30/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG845969	1	02/03/16 18:17	02/04/16 08:35	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG846848	1	02/04/16 18:06	02/05/16 09:11	CJR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG845930	1	02/01/16 17:54	02/01/16 17:54	BMB

MW-3 L814810-05 GW

Collected by: M. DiGiorgio | Collected date/time: 01/29/16 13:45 | Received date/time: 01/30/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG845969	1	02/03/16 18:17	02/04/16 08:38	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG846848	1	02/04/16 18:06	02/05/16 09:54	CJR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG845946	1	02/01/16 17:38	02/01/16 17:38	JHH

MW-4 L814810-06 GW

Collected by: M. DiGiorgio | Collected date/time: 01/29/16 14:00 | Received date/time: 01/30/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG845969	1	02/03/16 18:17	02/04/16 08:41	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG846848	1	02/04/16 18:06	02/05/16 10:16	CJR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG845946	1	02/01/16 17:57	02/01/16 17:57	JHH

MW-5 L814810-07 GW

Collected by	Collected date/time	Received date/time
M. DiGiorgio	01/29/16 14:10	01/30/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG845969	1	02/03/16 18:17	02/04/16 08:44	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG846848	1	02/04/16 18:06	02/05/16 10:38	CJR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG845946	1	02/01/16 18:17	02/01/16 18:17	JHH

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jimmy Hunt
Technical Service Representative

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	84.5		1	02/02/2016 15:29	WG846380

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	ND		0.592	5	02/04/2016 09:34	WG846308
(S) α,α,α-Trifluorotoluene(FID)	*101*		*59.0-128*		*02/04/2016 09:34*	WG846308

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		0.296	5	02/02/2016 07:53	WG846254
Acrylonitrile	ND		0.0592	5	02/02/2016 07:53	WG846254
Benzene	ND		0.00592	5	02/02/2016 07:53	WG846254
Bromobenzene	ND		0.00592	5	02/02/2016 07:53	WG846254
Bromodichloromethane	ND		0.00592	5	02/02/2016 07:53	WG846254
Bromoform	ND		0.00592	5	02/02/2016 07:53	WG846254
Bromomethane	ND		0.0296	5	02/02/2016 07:53	WG846254
n-Butylbenzene	ND		0.00592	5	02/02/2016 07:53	WG846254
sec-Butylbenzene	ND		0.00592	5	02/02/2016 07:53	WG846254
tert-Butylbenzene	ND		0.00592	5	02/02/2016 07:53	WG846254
Carbon tetrachloride	ND		0.00592	5	02/02/2016 07:53	WG846254
Chlorobenzene	ND		0.00592	5	02/02/2016 07:53	WG846254
Chlorodibromomethane	ND		0.00592	5	02/02/2016 07:53	WG846254
Chloroethane	ND		0.0296	5	02/02/2016 07:53	WG846254
2-Chloroethyl vinyl ether	ND		0.296	5	02/02/2016 07:53	WG846254
Chloroform	ND		0.0296	5	02/02/2016 07:53	WG846254
Chloromethane	ND		0.0148	5	02/02/2016 07:53	WG846254
2-Chlorotoluene	ND		0.00592	5	02/02/2016 07:53	WG846254
4-Chlorotoluene	ND		0.00592	5	02/02/2016 07:53	WG846254
1,2-Dibromo-3-Chloropropane	ND		0.0296	5	02/02/2016 07:53	WG846254
1,2-Dibromoethane	ND		0.00592	5	02/02/2016 07:53	WG846254
Dibromomethane	ND		0.00592	5	02/02/2016 07:53	WG846254
1,2-Dichlorobenzene	ND		0.00592	5	02/02/2016 07:53	WG846254
1,3-Dichlorobenzene	ND		0.00592	5	02/02/2016 07:53	WG846254
1,4-Dichlorobenzene	ND		0.00592	5	02/02/2016 07:53	WG846254
Dichlorodifluoromethane	ND		0.0296	5	02/02/2016 07:53	WG846254
1,1-Dichloroethane	ND		0.00592	5	02/02/2016 07:53	WG846254
1,2-Dichloroethane	ND		0.00592	5	02/02/2016 07:53	WG846254
1,1-Dichloroethene	ND		0.00592	5	02/02/2016 07:53	WG846254
cis-1,2-Dichloroethene	ND		0.00592	5	02/02/2016 07:53	WG846254
trans-1,2-Dichloroethene	ND		0.00592	5	02/02/2016 07:53	WG846254
1,2-Dichloropropane	ND		0.00592	5	02/02/2016 07:53	WG846254
1,1-Dichloropropene	ND		0.00592	5	02/02/2016 07:53	WG846254
1,3-Dichloropropane	ND		0.00592	5	02/02/2016 07:53	WG846254
cis-1,3-Dichloropropene	ND		0.00592	5	02/02/2016 07:53	WG846254
trans-1,3-Dichloropropene	ND		0.00592	5	02/02/2016 07:53	WG846254
2,2-Dichloropropane	ND		0.00592	5	02/02/2016 07:53	WG846254
Di-isopropyl ether	ND		0.00592	5	02/02/2016 07:53	WG846254
Ethylbenzene	ND		0.00592	5	02/02/2016 07:53	WG846254
Hexachloro-1,3-butadiene	ND		0.00592	5	02/02/2016 07:53	WG846254
Isopropylbenzene	ND		0.00592	5	02/02/2016 07:53	WG846254
p-Isopropyltoluene	ND		0.00592	5	02/02/2016 07:53	WG846254
2-Butanone (MEK)	ND		0.0592	5	02/02/2016 07:53	WG846254
Methylene Chloride	ND		0.0296	5	02/02/2016 07:53	WG846254

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	ND		0.0592	5	02/02/2016 07:53	WG846254
Methyl tert-butyl ether	ND		0.00592	5	02/02/2016 07:53	WG846254
Naphthalene	ND		0.0296	5	02/02/2016 07:53	WG846254
n-Propylbenzene	ND		0.00592	5	02/02/2016 07:53	WG846254
Styrene	ND		0.00592	5	02/02/2016 07:53	WG846254
1,1,1,2-Tetrachloroethane	ND		0.00592	5	02/02/2016 07:53	WG846254
1,1,2,2-Tetrachloroethane	ND		0.00592	5	02/02/2016 07:53	WG846254
1,1,2-Trichlorotrifluoroethane	ND		0.00592	5	02/02/2016 07:53	WG846254
Tetrachloroethene	ND		0.00592	5	02/02/2016 07:53	WG846254
Toluene	ND		0.0296	5	02/02/2016 07:53	WG846254
1,2,3-Trichlorobenzene	ND		0.00592	5	02/02/2016 07:53	WG846254
1,2,4-Trichlorobenzene	ND		0.00592	5	02/02/2016 07:53	WG846254
1,1,1-Trichloroethane	ND		0.00592	5	02/02/2016 07:53	WG846254
1,1,2-Trichloroethane	ND		0.00592	5	02/02/2016 07:53	WG846254
Trichloroethene	ND		0.00592	5	02/02/2016 07:53	WG846254
Trichlorofluoromethane	ND		0.0296	5	02/02/2016 07:53	WG846254
1,2,3-Trichloropropane	ND		0.0148	5	02/02/2016 07:53	WG846254
1,2,4-Trimethylbenzene	ND		0.00592	5	02/02/2016 07:53	WG846254
1,2,3-Trimethylbenzene	ND		0.00592	5	02/02/2016 07:53	WG846254
1,3,5-Trimethylbenzene	ND		0.00592	5	02/02/2016 07:53	WG846254
Vinyl chloride	ND		0.00592	5	02/02/2016 07:53	WG846254
Xylenes, Total	ND		0.0177	5	02/02/2016 07:53	WG846254
(S) Toluene-d8	*96.7*		*88.7-115*		*02/02/2016 07:53*	WG846254
(S) Dibromofluoromethane	*94.3*		*76.3-123*		*02/02/2016 07:53*	WG846254
(S) 4-Bromofluorobenzene	*106*		*69.7-129*		*02/02/2016 07:53*	WG846254

Semi-Volatile Organic Compounds (GC) by Method 3546/DRO

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	ND		4.73	1	02/03/2016 17:46	WG846760
(S) o-Terphenyl	*70.9*		*50.0-150*		*02/03/2016 17:46*	WG846760

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00710	1	02/05/2016 17:56	WG846736
Acenaphthene	ND		0.00710	1	02/05/2016 17:56	WG846736
Acenaphthylene	ND		0.00710	1	02/05/2016 17:56	WG846736
Benzo(a)anthracene	ND		0.00710	1	02/05/2016 17:56	WG846736
Benzo(a)pyrene	ND		0.00710	1	02/05/2016 17:56	WG846736
Benzo(b)fluoranthene	ND		0.00710	1	02/05/2016 17:56	WG846736
Benzo(g,h,i)perylene	ND		0.00710	1	02/05/2016 17:56	WG846736
Benzo(k)fluoranthene	ND		0.00710	1	02/05/2016 17:56	WG846736
Chrysene	ND		0.00710	1	02/05/2016 17:56	WG846736
Dibenz(a,h)anthracene	ND		0.00710	1	02/05/2016 17:56	WG846736
Fluoranthene	0.0146		0.00710	1	02/05/2016 17:56	WG846736
Fluorene	ND		0.00710	1	02/05/2016 17:56	WG846736
Indeno(1,2,3-cd)pyrene	ND		0.00710	1	02/05/2016 17:56	WG846736
Naphthalene	ND		0.0237	1	02/05/2016 17:56	WG846736
Phenanthrene	0.00722		0.00710	1	02/05/2016 17:56	WG846736
Pyrene	0.0116		0.00710	1	02/05/2016 17:56	WG846736
1-Methylnaphthalene	ND		0.0237	1	02/05/2016 17:56	WG846736
2-Methylnaphthalene	ND		0.0237	1	02/05/2016 17:56	WG846736
2-Chloronaphthalene	ND		0.0237	1	02/05/2016 17:56	WG846736
(S) Nitrobenzene-d5	*57.0*		*22.1-146*		*02/05/2016 17:56*	WG846736

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 2-Fluorobiphenyl	*63.6*		*40.6-122*		*02/05/2016 17:56*	WG846736
(S) p-Terphenyl-d14	*62.4*		*32.2-131*		*02/05/2016 17:56*	WG846736

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		2/1/2016 12:46:56 PM	WG846101

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Mercury	ND		0.0100	0.20	1	02/03/2016 15:40	WG846500

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Arsenic	ND		0.450	5	1	02/03/2016 04:16	WG846458
Barium	ND		1.35	100	1	02/03/2016 04:16	WG846458
Cadmium	ND		0.450	1	1	02/03/2016 04:16	WG846458
Chromium	ND		0.450	5	1	02/03/2016 04:16	WG846458
Lead	ND		0.450	5	1	02/03/2016 04:16	WG846458
Selenium	ND		0.450	1	1	02/03/2016 04:16	WG846458
Silver	ND		0.450	5	1	02/03/2016 04:16	WG846458

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	ND		0.00500	1	02/04/2016 08:32	WG845969

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	02/01/2016 17:33	WG845930
Acrolein	ND		0.0500	1	02/01/2016 17:33	WG845930
Acrylonitrile	ND		0.0100	1	02/01/2016 17:33	WG845930
Benzene	ND		0.00100	1	02/01/2016 17:33	WG845930
Bromobenzene	ND		0.00100	1	02/01/2016 17:33	WG845930
Bromodichloromethane	ND		0.00100	1	02/01/2016 17:33	WG845930
Bromoform	ND		0.00100	1	02/01/2016 17:33	WG845930
Bromomethane	ND		0.00500	1	02/01/2016 17:33	WG845930
n-Butylbenzene	ND		0.00100	1	02/01/2016 17:33	WG845930
sec-Butylbenzene	ND		0.00100	1	02/01/2016 17:33	WG845930
tert-Butylbenzene	ND		0.00100	1	02/01/2016 17:33	WG845930
Carbon tetrachloride	ND		0.00100	1	02/01/2016 17:33	WG845930
Chlorobenzene	ND		0.00100	1	02/01/2016 17:33	WG845930
Chlorodibromomethane	ND		0.00100	1	02/01/2016 17:33	WG845930
Chloroethane	ND		0.00500	1	02/01/2016 17:33	WG845930
2-Chloroethyl vinyl ether	ND		0.0500	1	02/01/2016 17:33	WG845930
Chloroform	ND		0.00500	1	02/01/2016 17:33	WG845930
Chloromethane	ND		0.00250	1	02/01/2016 17:33	WG845930
2-Chlorotoluene	ND		0.00100	1	02/01/2016 17:33	WG845930
4-Chlorotoluene	ND		0.00100	1	02/01/2016 17:33	WG845930
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	02/01/2016 17:33	WG845930
1,2-Dibromoethane	ND		0.00100	1	02/01/2016 17:33	WG845930
Dibromomethane	ND		0.00100	1	02/01/2016 17:33	WG845930
1,2-Dichlorobenzene	ND		0.00100	1	02/01/2016 17:33	WG845930
1,3-Dichlorobenzene	ND		0.00100	1	02/01/2016 17:33	WG845930
1,4-Dichlorobenzene	ND		0.00100	1	02/01/2016 17:33	WG845930
Dichlorodifluoromethane	ND		0.00500	1	02/01/2016 17:33	WG845930
1,1-Dichloroethane	ND		0.00100	1	02/01/2016 17:33	WG845930
1,2-Dichloroethane	ND		0.00100	1	02/01/2016 17:33	WG845930
1,1-Dichloroethene	ND		0.00100	1	02/01/2016 17:33	WG845930
cis-1,2-Dichloroethene	ND		0.00100	1	02/01/2016 17:33	WG845930
trans-1,2-Dichloroethene	ND		0.00100	1	02/01/2016 17:33	WG845930
1,2-Dichloropropane	ND		0.00100	1	02/01/2016 17:33	WG845930
1,1-Dichloropropene	ND		0.00100	1	02/01/2016 17:33	WG845930
1,3-Dichloropropane	ND		0.00100	1	02/01/2016 17:33	WG845930
cis-1,3-Dichloropropene	ND		0.00100	1	02/01/2016 17:33	WG845930
trans-1,3-Dichloropropene	ND		0.00100	1	02/01/2016 17:33	WG845930
2,2-Dichloropropane	ND		0.00100	1	02/01/2016 17:33	WG845930
Di-isopropyl ether	ND		0.00100	1	02/01/2016 17:33	WG845930
Ethylbenzene	ND		0.00100	1	02/01/2016 17:33	WG845930
Hexachloro-1,3-butadiene	ND		0.00100	1	02/01/2016 17:33	WG845930
Isopropylbenzene	ND		0.00100	1	02/01/2016 17:33	WG845930
p-Isopropyltoluene	ND		0.00100	1	02/01/2016 17:33	WG845930
2-Butanone (MEK)	ND		0.0100	1	02/01/2016 17:33	WG845930
Methylene Chloride	ND		0.00500	1	02/01/2016 17:33	WG845930
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	02/01/2016 17:33	WG845930
Methyl tert-butyl ether	ND		0.00100	1	02/01/2016 17:33	WG845930
Naphthalene	ND		0.00500	1	02/01/2016 17:33	WG845930
n-Propylbenzene	ND		0.00100	1	02/01/2016 17:33	WG845930
Styrene	ND		0.00100	1	02/01/2016 17:33	WG845930

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1,2-Tetrachloroethane	ND		0.00100	1	02/01/2016 17:33	WG845930
1,1,2,2-Tetrachloroethane	ND		0.00100	1	02/01/2016 17:33	WG845930
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	02/01/2016 17:33	WG845930
Tetrachloroethene	ND		0.00100	1	02/01/2016 17:33	WG845930
Toluene	ND		0.00500	1	02/01/2016 17:33	WG845930
1,2,3-Trichlorobenzene	ND		0.00100	1	02/01/2016 17:33	WG845930
1,2,4-Trichlorobenzene	ND		0.00100	1	02/01/2016 17:33	WG845930
1,1,1-Trichloroethane	ND		0.00100	1	02/01/2016 17:33	WG845930
1,1,2-Trichloroethane	ND		0.00100	1	02/01/2016 17:33	WG845930
Trichloroethene	ND		0.00100	1	02/01/2016 17:33	WG845930
Trichlorofluoromethane	ND		0.00500	1	02/01/2016 17:33	WG845930
1,2,3-Trichloropropane	ND		0.00250	1	02/01/2016 17:33	WG845930
1,2,4-Trimethylbenzene	ND		0.00100	1	02/01/2016 17:33	WG845930
1,2,3-Trimethylbenzene	ND		0.00100	1	02/01/2016 17:33	WG845930
1,3,5-Trimethylbenzene	ND		0.00100	1	02/01/2016 17:33	WG845930
Vinyl chloride	ND		0.00100	1	02/01/2016 17:33	WG845930
Xylenes, Total	ND		0.00300	1	02/01/2016 17:33	WG845930
(S) Toluene-d8	*102*		*90.0-115*		*02/01/2016 17:33*	WG845930
(S) Dibromofluoromethane	*95.6*		*79.0-121*		*02/01/2016 17:33*	WG845930
(S) 4-Bromofluorobenzene	*104*		*80.1-120*		*02/01/2016 17:33*	WG845930

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0000500	1	02/05/2016 08:49	WG846848
Acenaphthene	ND		0.0000500	1	02/05/2016 08:49	WG846848
Acenaphthylene	ND		0.0000500	1	02/05/2016 08:49	WG846848
Benzo(a)anthracene	ND		0.0000500	1	02/05/2016 08:49	WG846848
Benzo(a)pyrene	ND		0.0000500	1	02/05/2016 08:49	WG846848
Benzo(b)fluoranthene	ND		0.0000500	1	02/05/2016 08:49	WG846848
Benzo(g,h,i)perylene	ND		0.0000500	1	02/05/2016 08:49	WG846848
Benzo(k)fluoranthene	ND		0.0000500	1	02/05/2016 08:49	WG846848
Chrysene	ND		0.0000500	1	02/05/2016 08:49	WG846848
Dibenz(a,h)anthracene	ND		0.0000500	1	02/05/2016 08:49	WG846848
Fluoranthene	ND		0.0000500	1	02/05/2016 08:49	WG846848
Fluorene	ND		0.0000500	1	02/05/2016 08:49	WG846848
Indeno(1,2,3-cd)pyrene	ND		0.0000500	1	02/05/2016 08:49	WG846848
Naphthalene	ND		0.000250	1	02/05/2016 08:49	WG846848
Phenanthrene	ND		0.0000500	1	02/05/2016 08:49	WG846848
Pyrene	ND		0.0000500	1	02/05/2016 08:49	WG846848
1-Methylnaphthalene	ND		0.000250	1	02/05/2016 08:49	WG846848
2-Methylnaphthalene	ND		0.000250	1	02/05/2016 08:49	WG846848
2-Chloronaphthalene	ND		0.000250	1	02/05/2016 08:49	WG846848
(S) Nitrobenzene-d5	*91.8*		*33.8-179*		*02/05/2016 08:49*	WG846848
(S) 2-Fluorobiphenyl	*85.7*		*55.5-150*		*02/05/2016 08:49*	WG846848
(S) p-Terphenyl-d14	*75.7*		*46.2-163*		*02/05/2016 08:49*	WG846848

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	ND		0.00500	1	02/04/2016 08:35	WG845969

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	02/01/2016 17:54	WG845930
Acrolein	ND		0.0500	1	02/01/2016 17:54	WG845930
Acrylonitrile	ND		0.0100	1	02/01/2016 17:54	WG845930
Benzene	ND		0.00100	1	02/01/2016 17:54	WG845930
Bromobenzene	ND		0.00100	1	02/01/2016 17:54	WG845930
Bromodichloromethane	ND		0.00100	1	02/01/2016 17:54	WG845930
Bromoform	ND		0.00100	1	02/01/2016 17:54	WG845930
Bromomethane	ND		0.00500	1	02/01/2016 17:54	WG845930
n-Butylbenzene	ND		0.00100	1	02/01/2016 17:54	WG845930
sec-Butylbenzene	ND		0.00100	1	02/01/2016 17:54	WG845930
tert-Butylbenzene	ND		0.00100	1	02/01/2016 17:54	WG845930
Carbon tetrachloride	ND		0.00100	1	02/01/2016 17:54	WG845930
Chlorobenzene	ND		0.00100	1	02/01/2016 17:54	WG845930
Chlorodibromomethane	ND		0.00100	1	02/01/2016 17:54	WG845930
Chloroethane	ND		0.00500	1	02/01/2016 17:54	WG845930
2-Chloroethyl vinyl ether	ND		0.0500	1	02/01/2016 17:54	WG845930
Chloroform	ND		0.00500	1	02/01/2016 17:54	WG845930
Chloromethane	ND		0.00250	1	02/01/2016 17:54	WG845930
2-Chlorotoluene	ND		0.00100	1	02/01/2016 17:54	WG845930
4-Chlorotoluene	ND		0.00100	1	02/01/2016 17:54	WG845930
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	02/01/2016 17:54	WG845930
1,2-Dibromoethane	ND		0.00100	1	02/01/2016 17:54	WG845930
Dibromomethane	ND		0.00100	1	02/01/2016 17:54	WG845930
1,2-Dichlorobenzene	ND		0.00100	1	02/01/2016 17:54	WG845930
1,3-Dichlorobenzene	ND		0.00100	1	02/01/2016 17:54	WG845930
1,4-Dichlorobenzene	ND		0.00100	1	02/01/2016 17:54	WG845930
Dichlorodifluoromethane	ND		0.00500	1	02/01/2016 17:54	WG845930
1,1-Dichloroethane	ND		0.00100	1	02/01/2016 17:54	WG845930
1,2-Dichloroethane	ND		0.00100	1	02/01/2016 17:54	WG845930
1,1-Dichloroethene	ND		0.00100	1	02/01/2016 17:54	WG845930
cis-1,2-Dichloroethene	ND		0.00100	1	02/01/2016 17:54	WG845930
trans-1,2-Dichloroethene	ND		0.00100	1	02/01/2016 17:54	WG845930
1,2-Dichloropropane	ND		0.00100	1	02/01/2016 17:54	WG845930
1,1-Dichloropropene	ND		0.00100	1	02/01/2016 17:54	WG845930
1,3-Dichloropropane	ND		0.00100	1	02/01/2016 17:54	WG845930
cis-1,3-Dichloropropene	ND		0.00100	1	02/01/2016 17:54	WG845930
trans-1,3-Dichloropropene	ND		0.00100	1	02/01/2016 17:54	WG845930
2,2-Dichloropropane	ND		0.00100	1	02/01/2016 17:54	WG845930
Di-isopropyl ether	ND		0.00100	1	02/01/2016 17:54	WG845930
Ethylbenzene	ND		0.00100	1	02/01/2016 17:54	WG845930
Hexachloro-1,3-butadiene	ND		0.00100	1	02/01/2016 17:54	WG845930
Isopropylbenzene	ND		0.00100	1	02/01/2016 17:54	WG845930
p-Isopropyltoluene	ND		0.00100	1	02/01/2016 17:54	WG845930
2-Butanone (MEK)	ND		0.0100	1	02/01/2016 17:54	WG845930
Methylene Chloride	ND		0.00500	1	02/01/2016 17:54	WG845930
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	02/01/2016 17:54	WG845930
Methyl tert-butyl ether	ND		0.00100	1	02/01/2016 17:54	WG845930
Naphthalene	ND		0.00500	1	02/01/2016 17:54	WG845930
n-Propylbenzene	ND		0.00100	1	02/01/2016 17:54	WG845930
Styrene	ND		0.00100	1	02/01/2016 17:54	WG845930

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1,2-Tetrachloroethane	ND		0.00100	1	02/01/2016 17:54	WG845930
1,1,2,2-Tetrachloroethane	ND		0.00100	1	02/01/2016 17:54	WG845930
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	02/01/2016 17:54	WG845930
Tetrachloroethene	ND		0.00100	1	02/01/2016 17:54	WG845930
Toluene	ND		0.00500	1	02/01/2016 17:54	WG845930
1,2,3-Trichlorobenzene	ND		0.00100	1	02/01/2016 17:54	WG845930
1,2,4-Trichlorobenzene	ND		0.00100	1	02/01/2016 17:54	WG845930
1,1,1-Trichloroethane	ND		0.00100	1	02/01/2016 17:54	WG845930
1,1,2-Trichloroethane	ND		0.00100	1	02/01/2016 17:54	WG845930
Trichloroethene	ND		0.00100	1	02/01/2016 17:54	WG845930
Trichlorofluoromethane	ND		0.00500	1	02/01/2016 17:54	WG845930
1,2,3-Trichloropropane	ND		0.00250	1	02/01/2016 17:54	WG845930
1,2,4-Trimethylbenzene	ND		0.00100	1	02/01/2016 17:54	WG845930
1,2,3-Trimethylbenzene	ND		0.00100	1	02/01/2016 17:54	WG845930
1,3,5-Trimethylbenzene	ND		0.00100	1	02/01/2016 17:54	WG845930
Vinyl chloride	ND		0.00100	1	02/01/2016 17:54	WG845930
Xylenes, Total	ND		0.00300	1	02/01/2016 17:54	WG845930
(S) Toluene-d8	*101*		*90.0-115*		*02/01/2016 17:54*	WG845930
(S) Dibromofluoromethane	*96.0*		*79.0-121*		*02/01/2016 17:54*	WG845930
(S) 4-Bromofluorobenzene	*104*		*80.1-120*		*02/01/2016 17:54*	WG845930

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0000500	1	02/05/2016 09:11	WG846848
Acenaphthene	ND		0.0000500	1	02/05/2016 09:11	WG846848
Acenaphthylene	ND		0.0000500	1	02/05/2016 09:11	WG846848
Benzo(a)anthracene	ND		0.0000500	1	02/05/2016 09:11	WG846848
Benzo(a)pyrene	ND		0.0000500	1	02/05/2016 09:11	WG846848
Benzo(b)fluoranthene	ND		0.0000500	1	02/05/2016 09:11	WG846848
Benzo(g,h,i)perylene	ND		0.0000500	1	02/05/2016 09:11	WG846848
Benzo(k)fluoranthene	ND		0.0000500	1	02/05/2016 09:11	WG846848
Chrysene	ND		0.0000500	1	02/05/2016 09:11	WG846848
Dibenz(a,h)anthracene	ND		0.0000500	1	02/05/2016 09:11	WG846848
Fluoranthene	ND		0.0000500	1	02/05/2016 09:11	WG846848
Fluorene	ND		0.0000500	1	02/05/2016 09:11	WG846848
Indeno(1,2,3-cd)pyrene	ND		0.0000500	1	02/05/2016 09:11	WG846848
Naphthalene	ND		0.000250	1	02/05/2016 09:11	WG846848
Phenanthrene	0.000111		0.0000500	1	02/05/2016 09:11	WG846848
Pyrene	ND		0.0000500	1	02/05/2016 09:11	WG846848
1-Methylnaphthalene	ND		0.000250	1	02/05/2016 09:11	WG846848
2-Methylnaphthalene	ND		0.000250	1	02/05/2016 09:11	WG846848
2-Chloronaphthalene	ND		0.000250	1	02/05/2016 09:11	WG846848
(S) Nitrobenzene-d5	*93.1*		*33.8-179*		*02/05/2016 09:11*	WG846848
(S) 2-Fluorobiphenyl	*84.8*		*55.5-150*		*02/05/2016 09:11*	WG846848
(S) p-Terphenyl-d14	*72.9*		*46.2-163*		*02/05/2016 09:11*	WG846848

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	ND		0.00500	1	02/04/2016 08:38	WG845969

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	02/01/2016 17:38	WG845946
Acrolein	ND		0.0500	1	02/01/2016 17:38	WG845946
Acrylonitrile	ND		0.0100	1	02/01/2016 17:38	WG845946
Benzene	ND		0.00100	1	02/01/2016 17:38	WG845946
Bromobenzene	ND		0.00100	1	02/01/2016 17:38	WG845946
Bromodichloromethane	ND		0.00100	1	02/01/2016 17:38	WG845946
Bromoform	ND		0.00100	1	02/01/2016 17:38	WG845946
Bromomethane	ND	J4	0.00500	1	02/01/2016 17:38	WG845946
n-Butylbenzene	ND		0.00100	1	02/01/2016 17:38	WG845946
sec-Butylbenzene	ND		0.00100	1	02/01/2016 17:38	WG845946
tert-Butylbenzene	ND		0.00100	1	02/01/2016 17:38	WG845946
Carbon tetrachloride	ND		0.00100	1	02/01/2016 17:38	WG845946
Chlorobenzene	ND		0.00100	1	02/01/2016 17:38	WG845946
Chlorodibromomethane	ND		0.00100	1	02/01/2016 17:38	WG845946
Chloroethane	ND	J4	0.00500	1	02/01/2016 17:38	WG845946
2-Chloroethyl vinyl ether	ND		0.0500	1	02/01/2016 17:38	WG845946
Chloroform	ND		0.00500	1	02/01/2016 17:38	WG845946
Chloromethane	ND		0.00250	1	02/01/2016 17:38	WG845946
2-Chlorotoluene	ND		0.00100	1	02/01/2016 17:38	WG845946
4-Chlorotoluene	ND		0.00100	1	02/01/2016 17:38	WG845946
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	02/01/2016 17:38	WG845946
1,2-Dibromoethane	ND		0.00100	1	02/01/2016 17:38	WG845946
Dibromomethane	ND		0.00100	1	02/01/2016 17:38	WG845946
1,2-Dichlorobenzene	ND		0.00100	1	02/01/2016 17:38	WG845946
1,3-Dichlorobenzene	ND		0.00100	1	02/01/2016 17:38	WG845946
1,4-Dichlorobenzene	ND		0.00100	1	02/01/2016 17:38	WG845946
Dichlorodifluoromethane	ND		0.00500	1	02/01/2016 17:38	WG845946
1,1-Dichloroethane	ND		0.00100	1	02/01/2016 17:38	WG845946
1,2-Dichloroethane	ND		0.00100	1	02/01/2016 17:38	WG845946
1,1-Dichloroethene	ND		0.00100	1	02/01/2016 17:38	WG845946
cis-1,2-Dichloroethene	ND		0.00100	1	02/01/2016 17:38	WG845946
trans-1,2-Dichloroethene	ND		0.00100	1	02/01/2016 17:38	WG845946
1,2-Dichloropropane	ND		0.00100	1	02/01/2016 17:38	WG845946
1,1-Dichloropropene	ND		0.00100	1	02/01/2016 17:38	WG845946
1,3-Dichloropropane	ND		0.00100	1	02/01/2016 17:38	WG845946
cis-1,3-Dichloropropene	ND		0.00100	1	02/01/2016 17:38	WG845946
trans-1,3-Dichloropropene	ND		0.00100	1	02/01/2016 17:38	WG845946
2,2-Dichloropropane	ND		0.00100	1	02/01/2016 17:38	WG845946
Di-isopropyl ether	0.00211		0.00100	1	02/01/2016 17:38	WG845946
Ethylbenzene	ND		0.00100	1	02/01/2016 17:38	WG845946
Hexachloro-1,3-butadiene	ND	J4	0.00100	1	02/01/2016 17:38	WG845946
Isopropylbenzene	ND		0.00100	1	02/01/2016 17:38	WG845946
p-Isopropyltoluene	ND		0.00100	1	02/01/2016 17:38	WG845946
2-Butanone (MEK)	ND		0.0100	1	02/01/2016 17:38	WG845946
Methylene Chloride	ND		0.00500	1	02/01/2016 17:38	WG845946
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	02/01/2016 17:38	WG845946
Methyl tert-butyl ether	0.00475		0.00100	1	02/01/2016 17:38	WG845946
Naphthalene	ND		0.00500	1	02/01/2016 17:38	WG845946
n-Propylbenzene	ND		0.00100	1	02/01/2016 17:38	WG845946
Styrene	ND		0.00100	1	02/01/2016 17:38	WG845946

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1,2-Tetrachloroethane	ND		0.00100	1	02/01/2016 17:38	WG845946
1,1,2,2-Tetrachloroethane	ND		0.00100	1	02/01/2016 17:38	WG845946
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	02/01/2016 17:38	WG845946
Tetrachloroethene	ND		0.00100	1	02/01/2016 17:38	WG845946
Toluene	ND		0.00500	1	02/01/2016 17:38	WG845946
1,2,3-Trichlorobenzene	ND		0.00100	1	02/01/2016 17:38	WG845946
1,2,4-Trichlorobenzene	ND		0.00100	1	02/01/2016 17:38	WG845946
1,1,1-Trichloroethane	ND		0.00100	1	02/01/2016 17:38	WG845946
1,1,2-Trichloroethane	ND		0.00100	1	02/01/2016 17:38	WG845946
Trichloroethene	ND		0.00100	1	02/01/2016 17:38	WG845946
Trichlorofluoromethane	ND		0.00500	1	02/01/2016 17:38	WG845946
1,2,3-Trichloropropane	ND		0.00250	1	02/01/2016 17:38	WG845946
1,2,4-Trimethylbenzene	ND		0.00100	1	02/01/2016 17:38	WG845946
1,2,3-Trimethylbenzene	ND		0.00100	1	02/01/2016 17:38	WG845946
1,3,5-Trimethylbenzene	ND		0.00100	1	02/01/2016 17:38	WG845946
Vinyl chloride	ND		0.00100	1	02/01/2016 17:38	WG845946
Xylenes, Total	ND		0.00300	1	02/01/2016 17:38	WG845946
(S) Toluene-d8	*108*		*90.0-115*		*02/01/2016 17:38*	WG845946
(S) Dibromofluoromethane	*120*		*79.0-121*		*02/01/2016 17:38*	WG845946
(S) 4-Bromofluorobenzene	*97.3*		*80.1-120*		*02/01/2016 17:38*	WG845946

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	0.0000729		0.0000500	1	02/05/2016 09:54	WG846848
Acenaphthene	0.00291		0.0000500	1	02/05/2016 09:54	WG846848
Acenaphthylene	ND		0.0000500	1	02/05/2016 09:54	WG846848
Benzo(a)anthracene	ND		0.0000500	1	02/05/2016 09:54	WG846848
Benzo(a)pyrene	ND		0.0000500	1	02/05/2016 09:54	WG846848
Benzo(b)fluoranthene	ND		0.0000500	1	02/05/2016 09:54	WG846848
Benzo(g,h,i)perylene	ND		0.0000500	1	02/05/2016 09:54	WG846848
Benzo(k)fluoranthene	ND		0.0000500	1	02/05/2016 09:54	WG846848
Chrysene	ND		0.0000500	1	02/05/2016 09:54	WG846848
Dibenz(a,h)anthracene	ND		0.0000500	1	02/05/2016 09:54	WG846848
Fluoranthene	0.000131		0.0000500	1	02/05/2016 09:54	WG846848
Fluorene	0.00213		0.0000500	1	02/05/2016 09:54	WG846848
Indeno(1,2,3-cd)pyrene	ND		0.0000500	1	02/05/2016 09:54	WG846848
Naphthalene	ND		0.000250	1	02/05/2016 09:54	WG846848
Phenanthrene	0.000537		0.0000500	1	02/05/2016 09:54	WG846848
Pyrene	0.0000580		0.0000500	1	02/05/2016 09:54	WG846848
1-Methylnaphthalene	0.000296		0.000250	1	02/05/2016 09:54	WG846848
2-Methylnaphthalene	ND		0.000250	1	02/05/2016 09:54	WG846848
2-Chloronaphthalene	ND		0.000250	1	02/05/2016 09:54	WG846848
(S) Nitrobenzene-d5	*82.1*		*33.8-179*		*02/05/2016 09:54*	WG846848
(S) 2-Fluorobiphenyl	*85.7*		*55.5-150*		*02/05/2016 09:54*	WG846848
(S) p-Terphenyl-d14	*79.3*		*46.2-163*		*02/05/2016 09:54*	WG846848

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	ND		0.00500	1	02/04/2016 08:41	WG845969

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	02/01/2016 17:57	WG845946
Acrolein	ND		0.0500	1	02/01/2016 17:57	WG845946
Acrylonitrile	ND		0.0100	1	02/01/2016 17:57	WG845946
Benzene	ND		0.00100	1	02/01/2016 17:57	WG845946
Bromobenzene	ND		0.00100	1	02/01/2016 17:57	WG845946
Bromodichloromethane	ND		0.00100	1	02/01/2016 17:57	WG845946
Bromoform	ND		0.00100	1	02/01/2016 17:57	WG845946
Bromomethane	ND	J4	0.00500	1	02/01/2016 17:57	WG845946
n-Butylbenzene	ND		0.00100	1	02/01/2016 17:57	WG845946
sec-Butylbenzene	ND		0.00100	1	02/01/2016 17:57	WG845946
tert-Butylbenzene	ND		0.00100	1	02/01/2016 17:57	WG845946
Carbon tetrachloride	ND		0.00100	1	02/01/2016 17:57	WG845946
Chlorobenzene	ND		0.00100	1	02/01/2016 17:57	WG845946
Chlorodibromomethane	ND		0.00100	1	02/01/2016 17:57	WG845946
Chloroethane	ND	J4	0.00500	1	02/01/2016 17:57	WG845946
2-Chloroethyl vinyl ether	ND		0.0500	1	02/01/2016 17:57	WG845946
Chloroform	ND		0.00500	1	02/01/2016 17:57	WG845946
Chloromethane	ND		0.00250	1	02/01/2016 17:57	WG845946
2-Chlorotoluene	ND		0.00100	1	02/01/2016 17:57	WG845946
4-Chlorotoluene	ND		0.00100	1	02/01/2016 17:57	WG845946
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	02/01/2016 17:57	WG845946
1,2-Dibromoethane	ND		0.00100	1	02/01/2016 17:57	WG845946
Dibromomethane	ND		0.00100	1	02/01/2016 17:57	WG845946
1,2-Dichlorobenzene	ND		0.00100	1	02/01/2016 17:57	WG845946
1,3-Dichlorobenzene	ND		0.00100	1	02/01/2016 17:57	WG845946
1,4-Dichlorobenzene	ND		0.00100	1	02/01/2016 17:57	WG845946
Dichlorodifluoromethane	ND		0.00500	1	02/01/2016 17:57	WG845946
1,1-Dichloroethane	ND		0.00100	1	02/01/2016 17:57	WG845946
1,2-Dichloroethane	ND		0.00100	1	02/01/2016 17:57	WG845946
1,1-Dichloroethene	ND		0.00100	1	02/01/2016 17:57	WG845946
cis-1,2-Dichloroethene	ND		0.00100	1	02/01/2016 17:57	WG845946
trans-1,2-Dichloroethene	ND		0.00100	1	02/01/2016 17:57	WG845946
1,2-Dichloropropane	ND		0.00100	1	02/01/2016 17:57	WG845946
1,1-Dichloropropene	ND		0.00100	1	02/01/2016 17:57	WG845946
1,3-Dichloropropane	ND		0.00100	1	02/01/2016 17:57	WG845946
cis-1,3-Dichloropropene	ND		0.00100	1	02/01/2016 17:57	WG845946
trans-1,3-Dichloropropene	ND		0.00100	1	02/01/2016 17:57	WG845946
2,2-Dichloropropane	ND		0.00100	1	02/01/2016 17:57	WG845946
Di-isopropyl ether	0.00753		0.00100	1	02/01/2016 17:57	WG845946
Ethylbenzene	ND		0.00100	1	02/01/2016 17:57	WG845946
Hexachloro-1,3-butadiene	ND	J4	0.00100	1	02/01/2016 17:57	WG845946
Isopropylbenzene	ND		0.00100	1	02/01/2016 17:57	WG845946
p-Isopropyltoluene	ND		0.00100	1	02/01/2016 17:57	WG845946
2-Butanone (MEK)	ND		0.0100	1	02/01/2016 17:57	WG845946
Methylene Chloride	ND		0.00500	1	02/01/2016 17:57	WG845946
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	02/01/2016 17:57	WG845946
Methyl tert-butyl ether	0.00219		0.00100	1	02/01/2016 17:57	WG845946
Naphthalene	ND		0.00500	1	02/01/2016 17:57	WG845946
n-Propylbenzene	ND		0.00100	1	02/01/2016 17:57	WG845946
Styrene	ND		0.00100	1	02/01/2016 17:57	WG845946

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1,2-Tetrachloroethane	ND		0.00100	1	02/01/2016 17:57	WG845946
1,1,2,2-Tetrachloroethane	ND		0.00100	1	02/01/2016 17:57	WG845946
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	02/01/2016 17:57	WG845946
Tetrachloroethene	ND		0.00100	1	02/01/2016 17:57	WG845946
Toluene	ND		0.00500	1	02/01/2016 17:57	WG845946
1,2,3-Trichlorobenzene	ND		0.00100	1	02/01/2016 17:57	WG845946
1,2,4-Trichlorobenzene	ND		0.00100	1	02/01/2016 17:57	WG845946
1,1,1-Trichloroethane	ND		0.00100	1	02/01/2016 17:57	WG845946
1,1,2-Trichloroethane	ND		0.00100	1	02/01/2016 17:57	WG845946
Trichloroethene	ND		0.00100	1	02/01/2016 17:57	WG845946
Trichlorofluoromethane	ND		0.00500	1	02/01/2016 17:57	WG845946
1,2,3-Trichloropropane	ND		0.00250	1	02/01/2016 17:57	WG845946
1,2,4-Trimethylbenzene	ND		0.00100	1	02/01/2016 17:57	WG845946
1,2,3-Trimethylbenzene	ND		0.00100	1	02/01/2016 17:57	WG845946
1,3,5-Trimethylbenzene	ND		0.00100	1	02/01/2016 17:57	WG845946
Vinyl chloride	ND		0.00100	1	02/01/2016 17:57	WG845946
Xylenes, Total	ND		0.00300	1	02/01/2016 17:57	WG845946
(S) Toluene-d8	*108*		*90.0-115*		*02/01/2016 17:57*	WG845946
(S) Dibromofluoromethane	*119*		*79.0-121*		*02/01/2016 17:57*	WG845946
(S) 4-Bromofluorobenzene	*95.7*		*80.1-120*		*02/01/2016 17:57*	WG845946

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0000500	1	02/05/2016 10:16	WG846848
Acenaphthene	ND		0.0000500	1	02/05/2016 10:16	WG846848
Acenaphthylene	ND		0.0000500	1	02/05/2016 10:16	WG846848
Benzo(a)anthracene	ND		0.0000500	1	02/05/2016 10:16	WG846848
Benzo(a)pyrene	ND		0.0000500	1	02/05/2016 10:16	WG846848
Benzo(b)fluoranthene	ND		0.0000500	1	02/05/2016 10:16	WG846848
Benzo(g,h,i)perylene	ND		0.0000500	1	02/05/2016 10:16	WG846848
Benzo(k)fluoranthene	ND		0.0000500	1	02/05/2016 10:16	WG846848
Chrysene	ND		0.0000500	1	02/05/2016 10:16	WG846848
Dibenz(a,h)anthracene	ND		0.0000500	1	02/05/2016 10:16	WG846848
Fluoranthene	ND		0.0000500	1	02/05/2016 10:16	WG846848
Fluorene	ND		0.0000500	1	02/05/2016 10:16	WG846848
Indeno(1,2,3-cd)pyrene	ND		0.0000500	1	02/05/2016 10:16	WG846848
Naphthalene	ND		0.000250	1	02/05/2016 10:16	WG846848
Phenanthrene	ND		0.0000500	1	02/05/2016 10:16	WG846848
Pyrene	ND		0.0000500	1	02/05/2016 10:16	WG846848
1-Methylnaphthalene	ND		0.000250	1	02/05/2016 10:16	WG846848
2-Methylnaphthalene	ND		0.000250	1	02/05/2016 10:16	WG846848
2-Chloronaphthalene	ND		0.000250	1	02/05/2016 10:16	WG846848
(S) Nitrobenzene-d5	*72.9*		*33.8-179*		*02/05/2016 10:16*	WG846848
(S) 2-Fluorobiphenyl	*87.1*		*55.5-150*		*02/05/2016 10:16*	WG846848
(S) p-Terphenyl-d14	*77.1*		*46.2-163*		*02/05/2016 10:16*	WG846848

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	ND		0.00500	1	02/04/2016 08:44	WG845969

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	02/01/2016 18:17	WG845946
Acrolein	ND		0.0500	1	02/01/2016 18:17	WG845946
Acrylonitrile	ND		0.0100	1	02/01/2016 18:17	WG845946
Benzene	ND		0.00100	1	02/01/2016 18:17	WG845946
Bromobenzene	ND		0.00100	1	02/01/2016 18:17	WG845946
Bromodichloromethane	ND		0.00100	1	02/01/2016 18:17	WG845946
Bromoform	ND		0.00100	1	02/01/2016 18:17	WG845946
Bromomethane	ND	J4	0.00500	1	02/01/2016 18:17	WG845946
n-Butylbenzene	ND		0.00100	1	02/01/2016 18:17	WG845946
sec-Butylbenzene	ND		0.00100	1	02/01/2016 18:17	WG845946
tert-Butylbenzene	ND		0.00100	1	02/01/2016 18:17	WG845946
Carbon tetrachloride	ND		0.00100	1	02/01/2016 18:17	WG845946
Chlorobenzene	ND		0.00100	1	02/01/2016 18:17	WG845946
Chlorodibromomethane	ND		0.00100	1	02/01/2016 18:17	WG845946
Chloroethane	ND	J4	0.00500	1	02/01/2016 18:17	WG845946
2-Chloroethyl vinyl ether	ND		0.0500	1	02/01/2016 18:17	WG845946
Chloroform	ND		0.00500	1	02/01/2016 18:17	WG845946
Chloromethane	ND		0.00250	1	02/01/2016 18:17	WG845946
2-Chlorotoluene	ND		0.00100	1	02/01/2016 18:17	WG845946
4-Chlorotoluene	ND		0.00100	1	02/01/2016 18:17	WG845946
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	02/01/2016 18:17	WG845946
1,2-Dibromoethane	ND		0.00100	1	02/01/2016 18:17	WG845946
Dibromomethane	ND		0.00100	1	02/01/2016 18:17	WG845946
1,2-Dichlorobenzene	ND		0.00100	1	02/01/2016 18:17	WG845946
1,3-Dichlorobenzene	ND		0.00100	1	02/01/2016 18:17	WG845946
1,4-Dichlorobenzene	ND		0.00100	1	02/01/2016 18:17	WG845946
Dichlorodifluoromethane	ND		0.00500	1	02/01/2016 18:17	WG845946
1,1-Dichloroethane	ND		0.00100	1	02/01/2016 18:17	WG845946
1,2-Dichloroethane	ND		0.00100	1	02/01/2016 18:17	WG845946
1,1-Dichloroethene	ND		0.00100	1	02/01/2016 18:17	WG845946
cis-1,2-Dichloroethene	ND		0.00100	1	02/01/2016 18:17	WG845946
trans-1,2-Dichloroethene	ND		0.00100	1	02/01/2016 18:17	WG845946
1,2-Dichloropropane	ND		0.00100	1	02/01/2016 18:17	WG845946
1,1-Dichloropropene	ND		0.00100	1	02/01/2016 18:17	WG845946
1,3-Dichloropropane	ND		0.00100	1	02/01/2016 18:17	WG845946
cis-1,3-Dichloropropene	ND		0.00100	1	02/01/2016 18:17	WG845946
trans-1,3-Dichloropropene	ND		0.00100	1	02/01/2016 18:17	WG845946
2,2-Dichloropropane	ND		0.00100	1	02/01/2016 18:17	WG845946
Di-isopropyl ether	ND		0.00100	1	02/01/2016 18:17	WG845946
Ethylbenzene	ND		0.00100	1	02/01/2016 18:17	WG845946
Hexachloro-1,3-butadiene	ND	J4	0.00100	1	02/01/2016 18:17	WG845946
Isopropylbenzene	ND		0.00100	1	02/01/2016 18:17	WG845946
p-Isopropyltoluene	ND		0.00100	1	02/01/2016 18:17	WG845946
2-Butanone (MEK)	ND		0.0100	1	02/01/2016 18:17	WG845946
Methylene Chloride	ND		0.00500	1	02/01/2016 18:17	WG845946
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	02/01/2016 18:17	WG845946
Methyl tert-butyl ether	ND		0.00100	1	02/01/2016 18:17	WG845946
Naphthalene	ND		0.00500	1	02/01/2016 18:17	WG845946
n-Propylbenzene	ND		0.00100	1	02/01/2016 18:17	WG845946
Styrene	ND		0.00100	1	02/01/2016 18:17	WG845946

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1,2-Tetrachloroethane	ND		0.00100	1	02/01/2016 18:17	WG845946
1,1,2,2-Tetrachloroethane	ND		0.00100	1	02/01/2016 18:17	WG845946
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	02/01/2016 18:17	WG845946
Tetrachloroethene	ND		0.00100	1	02/01/2016 18:17	WG845946
Toluene	ND		0.00500	1	02/01/2016 18:17	WG845946
1,2,3-Trichlorobenzene	ND		0.00100	1	02/01/2016 18:17	WG845946
1,2,4-Trichlorobenzene	ND		0.00100	1	02/01/2016 18:17	WG845946
1,1,1-Trichloroethane	ND		0.00100	1	02/01/2016 18:17	WG845946
1,1,2-Trichloroethane	ND		0.00100	1	02/01/2016 18:17	WG845946
Trichloroethene	ND		0.00100	1	02/01/2016 18:17	WG845946
Trichlorofluoromethane	ND		0.00500	1	02/01/2016 18:17	WG845946
1,2,3-Trichloropropane	ND		0.00250	1	02/01/2016 18:17	WG845946
1,2,4-Trimethylbenzene	ND		0.00100	1	02/01/2016 18:17	WG845946
1,2,3-Trimethylbenzene	ND		0.00100	1	02/01/2016 18:17	WG845946
1,3,5-Trimethylbenzene	ND		0.00100	1	02/01/2016 18:17	WG845946
Vinyl chloride	ND		0.00100	1	02/01/2016 18:17	WG845946
Xylenes, Total	ND		0.00300	1	02/01/2016 18:17	WG845946
(S) Toluene-d8	*107*		*90.0-115*		*02/01/2016 18:17*	WG845946
(S) Dibromofluoromethane	*121*		*79.0-121*		*02/01/2016 18:17*	WG845946
(S) 4-Bromofluorobenzene	*95.7*		*80.1-120*		*02/01/2016 18:17*	WG845946

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0000500	1	02/05/2016 10:38	WG846848
Acenaphthene	ND		0.0000500	1	02/05/2016 10:38	WG846848
Acenaphthylene	ND		0.0000500	1	02/05/2016 10:38	WG846848
Benzo(a)anthracene	ND		0.0000500	1	02/05/2016 10:38	WG846848
Benzo(a)pyrene	ND		0.0000500	1	02/05/2016 10:38	WG846848
Benzo(b)fluoranthene	ND		0.0000500	1	02/05/2016 10:38	WG846848
Benzo(g,h,i)perylene	ND		0.0000500	1	02/05/2016 10:38	WG846848
Benzo(k)fluoranthene	ND		0.0000500	1	02/05/2016 10:38	WG846848
Chrysene	ND		0.0000500	1	02/05/2016 10:38	WG846848
Dibenz(a,h)anthracene	ND		0.0000500	1	02/05/2016 10:38	WG846848
Fluoranthene	ND		0.0000500	1	02/05/2016 10:38	WG846848
Fluorene	ND		0.0000500	1	02/05/2016 10:38	WG846848
Indeno(1,2,3-cd)pyrene	ND		0.0000500	1	02/05/2016 10:38	WG846848
Naphthalene	ND		0.000250	1	02/05/2016 10:38	WG846848
Phenanthrene	0.000317		0.0000500	1	02/05/2016 10:38	WG846848
Pyrene	ND		0.0000500	1	02/05/2016 10:38	WG846848
1-Methylnaphthalene	ND		0.000250	1	02/05/2016 10:38	WG846848
2-Methylnaphthalene	ND		0.000250	1	02/05/2016 10:38	WG846848
2-Chloronaphthalene	ND		0.000250	1	02/05/2016 10:38	WG846848
(S) Nitrobenzene-d5	*89.7*		*33.8-179*		*02/05/2016 10:38*	WG846848
(S) 2-Fluorobiphenyl	*83.8*		*55.5-150*		*02/05/2016 10:38*	WG846848
(S) p-Terphenyl-d14	*76.6*		*46.2-163*		*02/05/2016 10:38*	WG846848

Method Blank (MB)

(MB) 02/02/16 15:29

Analyte	MB Result	MB Qualifier	MB RDL
	%		%
Total Solids	0.00130		

L814805-02 Original Sample (OS) • Duplicate (DUP)

(OS) 02/02/16 15:29 • (DUP) 02/02/16 15:29

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	78.5	79.5	1	1.20		5

Laboratory Control Sample (LCS)

(LCS) 02/02/16 15:29

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	99.9	85.0-115	

Method Blank (MB)

(MB) 02/03/16 14:46

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Mercury	ND		0.0100

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/03/16 18:10 • (LCSD) 02/03/16 18:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.0300	0.0318	0.0319	106	106	80-120			0	20

L814694-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/03/16 14:54 • (MS) 02/03/16 14:56 • (MSD) 02/03/16 15:04

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.0300	ND	0.0334	0.0326	111	109	1	75-125			3	20

L814588-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/03/16 14:59 • (MS) 02/03/16 15:02 • (MSD) 02/03/16 15:07

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.0300	ND	0.0319	0.0308	106	103	1	75-125			3	20

Method Blank (MB)

(MB) 02/04/16 07:46

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Lead,Dissolved	ND		0.00500

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/04/16 07:49 • (LCSD) 02/04/16 07:52

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Lead,Dissolved	1.00	1.02	1.04	102	104	80-120			2	20

L814739-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/04/16 07:55 • (MS) 02/04/16 08:01 • (MSD) 02/04/16 08:04

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead,Dissolved	1.00	0.00136	1.03	1.02	103	102	1	75-125			1	20

Method Blank (MB)

(MB) 02/03/16 03:15

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Arsenic	ND		0.450
Barium	ND		1.35
Cadmium	ND		0.450
Chromium	ND		0.450
Lead	ND		0.450
Selenium	ND		0.450
Silver	ND		0.450

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/03/16 03:17 • (LCSD) 02/03/16 03:20

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	10.0	9.47	9.59	95	96	80-120			1	20
Barium	10.0	9.38	9.48	94	95	80-120			1	20
Cadmium	10.0	9.38	9.49	94	95	80-120			1	20
Chromium	10.0	9.43	9.57	94	96	80-120			1	20
Lead	10.0	9.46	9.58	95	96	80-120			1	20
Selenium	10.0	9.47	9.59	95	96	80-120			1	20
Silver	10.0	9.33	9.47	93	95	80-120			2	20

L814588-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/03/16 03:23 • (MS) 02/03/16 03:29 • (MSD) 02/03/16 03:32

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	10.0	0.0187	9.50	9.52	95	95	1	75-125			0	20
Barium	10.0	0.186	9.44	9.44	93	93	1	75-125			0	20
Cadmium	10.0	0.000228	9.34	9.38	93	94	1	75-125			0	20
Chromium	10.0	ND	9.36	9.36	94	94	1	75-125			0	20
Lead	10.0	0.000832	9.45	9.44	95	94	1	75-125			0	20
Selenium	10.0	0.00765	9.49	9.52	95	95	1	75-125			0	20
Silver	10.0	ND	9.33	9.31	93	93	1	75-125			0	20

L814810-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/03/16 04:16 • (MS) 02/03/16 04:19 • (MSD) 02/03/16 04:28

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	10.0	0.0269	9.73	9.82	97	98	1	75-125			1	20
Barium	10.0	0.133	9.34	9.44	92	93	1	75-125			1	20
Cadmium	10.0	ND	9.54	9.61	95	96	1	75-125			1	20
Chromium	10.0	0.0113	9.60	9.55	96	95	1	75-125			0	20
Lead	10.0	0.0195	9.60	9.67	96	96	1	75-125			1	20
Selenium	10.0	ND	9.83	9.93	98	99	1	75-125			1	20
Silver	10.0	0.00164	9.51	9.61	95	96	1	75-125			1	20

Method Blank (MB)

(MB) 02/04/16 01:55

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
TPH (GC/FID) Low Fraction	ND		0.100
(S) a,a,a-Trifluorotoluene(FID)	*102*		*59.0-128*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/04/16 00:50 • (LCSD) 02/04/16 01:12

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	6.10	6.00	111	109	63.5-137			1.76	20
(S) a,a,a-Trifluorotoluene(FID)				*104*	*103*	*59.0-128*				

L814554-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/04/16 02:39 • (MS) 02/04/16 03:45 • (MSD) 02/04/16 04:07

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	3.20	22.9	23.1	71.5	72.3	5	28.5-138			0.960	23.6
(S) a,a,a-Trifluorotoluene(FID)					*99.6*	*100*		*59.0-128*				

Method Blank (MB)

(MB) 02/01/16 09:19

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Acetone	ND		0.0500
Acrolein	ND		0.0500
Acrylonitrile	ND		0.0100
Benzene	ND		0.00100
Bromobenzene	ND		0.00100
Bromodichloromethane	ND		0.00100
Bromoform	ND		0.00100
Bromomethane	ND		0.00500
n-Butylbenzene	ND		0.00100
sec-Butylbenzene	ND		0.00100
tert-Butylbenzene	ND		0.00100
Carbon tetrachloride	ND		0.00100
Chlorobenzene	ND		0.00100
Chlorodibromomethane	ND		0.00100
Chloroethane	ND		0.00500
2-Chloroethyl vinyl ether	ND		0.0500
Chloroform	ND		0.00500
Chloromethane	ND		0.00250
2-Chlorotoluene	ND		0.00100
4-Chlorotoluene	ND		0.00100
1,2-Dibromo-3-Chloropropane	ND		0.00500
1,2-Dibromoethane	ND		0.00100
Dibromomethane	ND		0.00100
1,2-Dichlorobenzene	ND		0.00100
1,3-Dichlorobenzene	ND		0.00100
1,4-Dichlorobenzene	ND		0.00100
Dichlorodifluoromethane	ND		0.00500
1,1-Dichloroethane	ND		0.00100
1,2-Dichloroethane	ND		0.00100
1,1-Dichloroethene	ND		0.00100
cis-1,2-Dichloroethene	ND		0.00100
trans-1,2-Dichloroethene	ND		0.00100
1,2-Dichloropropane	ND		0.00100
1,1-Dichloropropene	ND		0.00100
1,3-Dichloropropane	ND		0.00100
cis-1,3-Dichloropropene	ND		0.00100

Method Blank (MB)

(MB) 02/01/16 09:19

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
trans-1,3-Dichloropropene	ND		0.00100
2,2-Dichloropropane	ND		0.00100
Di-isopropyl ether	ND		0.00100
Ethylbenzene	ND		0.00100
Hexachloro-1,3-butadiene	ND		0.00100
Isopropylbenzene	ND		0.00100
p-Isopropyltoluene	ND		0.00100
2-Butanone (MEK)	ND		0.0100
Methylene Chloride	ND		0.00500
4-Methyl-2-pentanone (MIBK)	ND		0.0100
Methyl tert-butyl ether	ND		0.00100
Naphthalene	ND		0.00500
n-Propylbenzene	ND		0.00100
Styrene	ND		0.00100
1,1,1,2-Tetrachloroethane	ND		0.00100
1,1,2,2-Tetrachloroethane	ND		0.00100
Tetrachloroethene	ND		0.00100
Toluene	ND		0.00500
1,1,2-Trichlorotrifluoroethane	ND		0.00100
1,2,3-Trichlorobenzene	ND		0.00100
1,2,4-Trichlorobenzene	ND		0.00100
1,1,1-Trichloroethane	ND		0.00100
1,1,2-Trichloroethane	ND		0.00100
Trichloroethene	ND		0.00100
Trichlorofluoromethane	ND		0.00500
1,2,3-Trichloropropane	ND		0.00250
1,2,3-Trimethylbenzene	ND		0.00100
1,2,4-Trimethylbenzene	ND		0.00100
1,3,5-Trimethylbenzene	ND		0.00100
Vinyl chloride	ND		0.00100
Xylenes, Total	ND		0.00300
(S) Toluene-d8	*101*		*90.0-115*
(S) Dibromofluoromethane	*96.7*		*79.0-121*
(S) 4-Bromofluorobenzene	*102*		*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/01/16 07:08 • (LCSD) 02/01/16 07:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.111	0.104	88.7	83.6	28.7-175			5.97	20.9
Acrolein	0.125	0.0880	0.0905	70.4	72.4	40.4-172			2.78	20
Acrylonitrile	0.125	0.131	0.115	105	91.9	58.2-145			13.1	20
Benzene	0.0250	0.0254	0.0238	102	95.0	73.0-122			6.72	20
Bromobenzene	0.0250	0.0253	0.0255	101	102	81.5-115			0.680	20
Bromodichloromethane	0.0250	0.0265	0.0258	106	103	75.5-121			2.75	20
Bromoform	0.0250	0.0268	0.0286	107	114	71.5-131			6.51	20
Bromomethane	0.0250	0.0266	0.0261	107	104	22.4-187			2.12	20
n-Butylbenzene	0.0250	0.0268	0.0272	107	109	75.9-134			1.20	20
sec-Butylbenzene	0.0250	0.0270	0.0297	108	119	80.6-126			9.38	20
tert-Butylbenzene	0.0250	0.0281	0.0296	112	118	79.3-127			5.31	20
Carbon tetrachloride	0.0250	0.0266	0.0258	106	103	70.9-129			3.12	20
Chlorobenzene	0.0250	0.0258	0.0273	103	109	79.7-122			5.58	20
Chlorodibromomethane	0.0250	0.0255	0.0270	102	108	78.2-124			5.72	20
Chloroethane	0.0250	0.0276	0.0264	110	106	41.2-153			4.61	20
2-Chloroethyl vinyl ether	0.125	0.0762	0.0697	60.9	55.8	23.4-162			8.81	23.5
Chloroform	0.0250	0.0269	0.0247	108	99.0	73.2-125			8.51	20
Chloromethane	0.0250	0.0244	0.0238	97.5	95.0	55.8-134			2.55	20
2-Chlorotoluene	0.0250	0.0275	0.0283	110	113	76.4-125			2.77	20
4-Chlorotoluene	0.0250	0.0271	0.0279	109	111	81.5-121			2.59	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0253	0.0264	101	106	64.8-131			4.29	20
1,2-Dibromoethane	0.0250	0.0251	0.0262	100	105	79.8-122			4.30	20
Dibromomethane	0.0250	0.0266	0.0257	106	103	79.5-118			3.59	20
1,2-Dichlorobenzene	0.0250	0.0261	0.0261	104	104	84.7-118			0.100	20
1,3-Dichlorobenzene	0.0250	0.0254	0.0276	101	110	77.6-127			8.50	20
1,4-Dichlorobenzene	0.0250	0.0257	0.0258	103	103	82.2-114			0.560	20
Dichlorodifluoromethane	0.0250	0.0296	0.0299	118	120	56.0-134			1.22	20
1,1-Dichloroethane	0.0250	0.0270	0.0246	108	98.2	71.7-127			9.60	20
1,2-Dichloroethane	0.0250	0.0267	0.0238	107	95.4	65.3-126			11.2	20
1,1-Dichloroethene	0.0250	0.0254	0.0252	101	101	59.9-137			0.680	20
cis-1,2-Dichloroethene	0.0250	0.0276	0.0256	110	102	77.3-122			7.39	20
trans-1,2-Dichloroethene	0.0250	0.0266	0.0259	106	104	72.6-125			2.57	20
1,2-Dichloropropane	0.0250	0.0260	0.0245	104	98.1	77.4-125			5.98	20
1,1-Dichloropropene	0.0250	0.0298	0.0281	119	112	72.5-127			5.96	20
1,3-Dichloropropane	0.0250	0.0239	0.0256	95.7	102	80.6-115			6.60	20
cis-1,3-Dichloropropene	0.0250	0.0267	0.0261	107	105	77.7-124			2.05	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/01/16 07:08 • (LCSD) 02/01/16 07:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
trans-1,3-Dichloropropene	0.0250	0.0259	0.0260	104	104	73.5-127			0.300	20
2,2-Dichloropropane	0.0250	0.0297	0.0283	119	113	61.3-134			4.76	20
Di-isopropyl ether	0.0250	0.0251	0.0221	100	88.5	65.1-135			12.6	20
Ethylbenzene	0.0250	0.0267	0.0282	107	113	80.9-121			5.80	20
Hexachloro-1,3-butadiene	0.0250	0.0290	0.0303	116	121	73.7-133			4.36	20
Isopropylbenzene	0.0250	0.0277	0.0290	111	116	81.6-124			4.29	20
p-Isopropyltoluene	0.0250	0.0283	0.0312	113	125	77.6-129			9.73	20
2-Butanone (MEK)	0.125	0.127	0.109	102	87.5	46.4-155			15.2	20
Methylene Chloride	0.0250	0.0241	0.0235	96.6	93.9	69.5-120			2.77	20
4-Methyl-2-pentanone (MIBK)	0.125	0.126	0.118	101	94.6	63.3-138			6.20	20
Methyl tert-butyl ether	0.0250	0.0244	0.0231	97.8	92.4	70.1-125			5.61	20
Naphthalene	0.0250	0.0230	0.0249	92.0	99.6	69.7-134			7.93	20
n-Propylbenzene	0.0250	0.0276	0.0284	110	114	81.9-122			2.97	20
Styrene	0.0250	0.0243	0.0246	97.2	98.2	79.9-124			1.04	20
1,1,1,2-Tetrachloroethane	0.0250	0.0264	0.0272	106	109	78.5-125			2.78	20
1,1,2,2-Tetrachloroethane	0.0250	0.0254	0.0248	102	99.4	79.3-123			2.31	20
Tetrachloroethene	0.0250	0.0281	0.0310	112	124	73.5-130			9.90	20
Toluene	0.0250	0.0252	0.0256	101	102	77.9-116			1.63	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0279	0.0283	111	113	62.0-141			1.65	20
1,2,3-Trichlorobenzene	0.0250	0.0263	0.0280	105	112	75.7-134			6.07	20
1,2,4-Trichlorobenzene	0.0250	0.0264	0.0280	106	112	76.1-136			5.90	20
1,1,1-Trichloroethane	0.0250	0.0280	0.0267	112	107	71.1-129			4.81	20
1,1,2-Trichloroethane	0.0250	0.0246	0.0252	98.6	101	81.6-120			2.33	20
Trichloroethene	0.0250	0.0270	0.0279	108	112	79.5-121			3.49	20
Trichlorofluoromethane	0.0250	0.0281	0.0287	113	115	49.1-157			2.00	20
1,2,3-Trichloropropane	0.0250	0.0258	0.0260	103	104	74.9-124			0.680	20
1,2,3-Trimethylbenzene	0.0250	0.0253	0.0252	101	101	79.9-118			0.410	20
1,2,4-Trimethylbenzene	0.0250	0.0255	0.0281	102	112	79.0-122			9.42	20
1,3,5-Trimethylbenzene	0.0250	0.0274	0.0283	110	113	81.0-123			3.02	20
Vinyl chloride	0.0250	0.0276	0.0272	110	109	61.5-134			1.30	20
Xylenes, Total	0.0750	0.0803	0.0844	107	112	79.2-122			4.91	20
(S) Toluene-d8				*101*	*101*	*90.0-115*				
(S) Dibromofluoromethane				*103*	*95.9*	*79.0-121*				
(S) 4-Bromofluorobenzene				*97.8*	*102*	*80.1-120*				

L814734-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/01/16 11:16 • (MS) 02/01/16 09:50 • (MSD) 02/01/16 10:11

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.000830	0.0880	0.0874	69.7	69.3	1	25.0-156			0.680	21.5
Acrolein	0.125	ND	0.0827	0.0893	66.2	71.5	1	34.0-194			7.65	21.5
Acrylonitrile	0.125	ND	0.104	0.112	83.4	90.0	1	55.9-161			7.58	20
Benzene	0.0250	ND	0.0208	0.0212	83.2	84.8	1	58.6-133			1.84	20
Bromobenzene	0.0250	ND	0.0244	0.0244	97.7	97.7	1	70.6-125			0.0600	20
Bromodichloromethane	0.0250	ND	0.0237	0.0243	94.7	97.2	1	69.2-127			2.55	20
Bromoform	0.0250	ND	0.0275	0.0280	110	112	1	66.3-140			1.64	20
Bromomethane	0.0250	ND	0.0221	0.0226	88.5	90.5	1	16.6-183			2.29	20.5
n-Butylbenzene	0.0250	ND	0.0236	0.0239	94.4	95.6	1	64.8-145			1.22	20
sec-Butylbenzene	0.0250	ND	0.0270	0.0272	108	109	1	66.8-139			0.490	20
tert-Butylbenzene	0.0250	ND	0.0270	0.0273	108	109	1	67.1-138			1.11	20
Carbon tetrachloride	0.0250	ND	0.0214	0.0223	85.6	89.1	1	60.6-139			3.92	20
Chlorobenzene	0.0250	ND	0.0259	0.0257	104	103	1	70.1-130			0.890	20
Chlorodibromomethane	0.0250	ND	0.0269	0.0268	108	107	1	71.6-132			0.190	20
Chloroethane	0.0250	ND	0.0225	0.0228	90.1	91.3	1	33.3-155			1.39	20
2-Chloroethyl vinyl ether	0.125	ND	0.0765	0.0916	61.2	73.3	1	5.00-149			18.0	40
Chloroform	0.0250	ND	0.0221	0.0227	88.4	90.9	1	66.1-133			2.81	20
Chloromethane	0.0250	0.000153	0.0198	0.0204	78.8	81.1	1	40.7-139			2.94	20
2-Chlorotoluene	0.0250	ND	0.0270	0.0272	108	109	1	66.9-134			0.910	20
4-Chlorotoluene	0.0250	ND	0.0263	0.0263	105	105	1	66.8-134			0.130	20
1,2-Dibromo-3-Chloropropane	0.0250	ND	0.0237	0.0267	94.7	107	1	63.9-142			12.1	20.2
1,2-Dibromoethane	0.0250	ND	0.0254	0.0258	102	103	1	73.8-131			1.29	20
Dibromomethane	0.0250	ND	0.0242	0.0253	96.7	101	1	72.8-127			4.53	20
1,2-Dichlorobenzene	0.0250	ND	0.0246	0.0248	98.6	99.4	1	77.4-127			0.780	20
1,3-Dichlorobenzene	0.0250	ND	0.0268	0.0270	107	108	1	67.9-136			0.580	20
1,4-Dichlorobenzene	0.0250	ND	0.0239	0.0241	95.5	96.2	1	74.4-123			0.720	20
Dichlorodifluoromethane	0.0250	ND	0.0237	0.0238	94.9	95.1	1	42.2-146			0.140	20
1,1-Dichloroethane	0.0250	ND	0.0213	0.0219	85.2	87.6	1	64.0-134			2.81	20
1,2-Dichloroethane	0.0250	ND	0.0219	0.0224	87.5	89.8	1	60.7-132			2.61	20
1,1-Dichloroethene	0.0250	ND	0.0206	0.0210	82.5	83.9	1	48.8-144			1.76	20
cis-1,2-Dichloroethene	0.0250	0.000169	0.0235	0.0240	93.4	95.2	1	60.6-136			1.95	20
trans-1,2-Dichloroethene	0.0250	ND	0.0224	0.0231	89.4	92.2	1	61.0-132			3.08	20
1,2-Dichloropropane	0.0250	ND	0.0224	0.0228	89.7	91.2	1	69.7-130			1.67	20
1,1-Dichloropropene	0.0250	ND	0.0231	0.0241	92.5	96.3	1	61.5-136			4.03	20
1,3-Dichloropropane	0.0250	ND	0.0246	0.0250	98.4	99.8	1	74.3-123			1.43	20
cis-1,3-Dichloropropene	0.0250	ND	0.0245	0.0249	98.1	99.7	1	71.1-129			1.58	20

L814734-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/01/16 11:16 • (MS) 02/01/16 09:50 • (MSD) 02/01/16 10:11

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
trans-1,3-Dichloropropene	0.0250	ND	0.0243	0.0248	97.3	99.1	1	66.3-136			1.83	20
2,2-Dichloropropane	0.0250	ND	0.0236	0.0242	94.3	96.7	1	54.9-142			2.49	20
Di-isopropyl ether	0.0250	ND	0.0199	0.0207	79.7	82.7	1	59.9-140			3.69	20
Ethylbenzene	0.0250	ND	0.0258	0.0260	103	104	1	62.7-136			1.00	20
Hexachloro-1,3-butadiene	0.0250	ND	0.0275	0.0280	110	112	1	61.1-144			1.93	20.1
Isopropylbenzene	0.0250	ND	0.0265	0.0266	106	106	1	67.4-136			0.170	20
p-Isopropyltoluene	0.0250	ND	0.0289	0.0289	116	115	1	62.8-143			0.0300	20
2-Butanone (MEK)	0.125	ND	0.0933	0.0957	74.7	76.6	1	45.0-156			2.52	20.8
Methylene Chloride	0.0250	ND	0.0211	0.0222	84.4	88.7	1	61.5-125			4.93	20
4-Methyl-2-pentanone (MIBK)	0.125	ND	0.106	0.114	84.5	91.1	1	60.7-150			7.57	20
Methyl tert-butyl ether	0.0250	ND	0.0214	0.0224	85.4	89.8	1	61.4-136			4.97	20
Naphthalene	0.0250	0.000143	0.0242	0.0254	96.1	101	1	61.8-143			4.79	20
n-Propylbenzene	0.0250	ND	0.0261	0.0260	104	104	1	63.2-139			0.440	20
Styrene	0.0250	ND	0.0240	0.0241	95.8	96.5	1	68.2-133			0.730	20
1,1,1,2-Tetrachloroethane	0.0250	ND	0.0268	0.0265	107	106	1	70.5-132			1.11	20
1,1,2,2-Tetrachloroethane	0.0250	ND	0.0245	0.0252	98.2	101	1	64.9-145			2.58	20
Tetrachloroethene	0.0250	0.000751	0.0277	0.0278	108	108	1	57.4-141			0.300	20
Toluene	0.0250	ND	0.0230	0.0233	92.1	93.2	1	67.8-124			1.25	20
1,1,2-Trichlorotrifluoroethane	0.0250	ND	0.0227	0.0236	90.7	94.4	1	53.7-150			4.09	20
1,2,3-Trichlorobenzene	0.0250	ND	0.0264	0.0279	106	111	1	65.7-143			5.29	20
1,2,4-Trichlorobenzene	0.0250	ND	0.0266	0.0271	106	108	1	67.0-146			2.03	20
1,1,1-Trichloroethane	0.0250	ND	0.0223	0.0231	89.4	92.4	1	58.7-134			3.40	20
1,1,2-Trichloroethane	0.0250	ND	0.0252	0.0246	101	98.4	1	74.1-130			2.28	20
Trichloroethene	0.0250	0.000215	0.0242	0.0249	95.8	98.7	1	48.9-148			2.99	20
Trichlorofluoromethane	0.0250	ND	0.0229	0.0237	91.7	94.9	1	39.9-165			3.51	20
1,2,3-Trichloropropane	0.0250	ND	0.0265	0.0270	106	108	1	71.5-134			2.06	20
1,2,3-Trimethylbenzene	0.0250	ND	0.0233	0.0237	93.1	94.9	1	62.7-133			1.92	20
1,2,4-Trimethylbenzene	0.0250	ND	0.0271	0.0269	109	108	1	60.5-137			0.730	20
1,3,5-Trimethylbenzene	0.0250	ND	0.0265	0.0267	106	107	1	67.9-134			0.780	20
Vinyl chloride	0.0250	ND	0.0221	0.0224	88.4	89.5	1	44.3-143			1.22	20
Xylenes, Total	0.0750	ND	0.0786	0.0774	105	103	1	65.6-133			1.45	20
(S) Toluene-d8					*101*	*101*		*90.0-115*				
(S) Dibromofluoromethane					*93.7*	*96.2*		*79.0-121*				
(S) 4-Bromofluorobenzene					*105*	*103*		*80.1-120*				

Method Blank (MB)

(MB) 02/01/16 10:35

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Acetone	ND		0.0500
Acrolein	ND		0.0500
Acrylonitrile	ND		0.0100
Benzene	ND		0.00100
Bromobenzene	ND		0.00100
Bromodichloromethane	ND		0.00100
Bromoform	ND		0.00100
Bromomethane	ND		0.00500
n-Butylbenzene	ND		0.00100
sec-Butylbenzene	ND		0.00100
tert-Butylbenzene	ND		0.00100
Carbon tetrachloride	ND		0.00100
Chlorobenzene	ND		0.00100
Chlorodibromomethane	ND		0.00100
Chloroethane	ND		0.00500
2-Chloroethyl vinyl ether	ND		0.0500
Chloroform	ND		0.00500
Chloromethane	ND		0.00250
2-Chlorotoluene	ND		0.00100
4-Chlorotoluene	ND		0.00100
1,2-Dibromo-3-Chloropropane	ND		0.00500
1,2-Dibromoethane	ND		0.00100
Dibromomethane	ND		0.00100
1,2-Dichlorobenzene	ND		0.00100
1,3-Dichlorobenzene	ND		0.00100
1,4-Dichlorobenzene	ND		0.00100
Dichlorodifluoromethane	ND		0.00500
1,1-Dichloroethane	ND		0.00100
1,2-Dichloroethane	ND		0.00100
1,1-Dichloroethene	ND		0.00100
cis-1,2-Dichloroethene	ND		0.00100
trans-1,2-Dichloroethene	ND		0.00100
1,2-Dichloropropane	ND		0.00100
1,1-Dichloropropene	ND		0.00100
1,3-Dichloropropane	ND		0.00100
cis-1,3-Dichloropropene	ND		0.00100

Method Blank (MB)

(MB) 02/01/16 10:35

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
trans-1,3-Dichloropropene	ND		0.00100
2,2-Dichloropropane	ND		0.00100
Di-isopropyl ether	ND		0.00100
Ethylbenzene	ND		0.00100
Hexachloro-1,3-butadiene	ND		0.00100
Isopropylbenzene	ND		0.00100
p-Isopropyltoluene	ND		0.00100
2-Butanone (MEK)	ND		0.0100
Methylene Chloride	ND		0.00500
4-Methyl-2-pentanone (MIBK)	ND		0.0100
Methyl tert-butyl ether	ND		0.00100
Naphthalene	ND		0.00500
n-Propylbenzene	ND		0.00100
Styrene	ND		0.00100
1,1,1,2-Tetrachloroethane	ND		0.00100
1,1,2,2-Tetrachloroethane	ND		0.00100
Tetrachloroethene	ND		0.00100
Toluene	ND		0.00500
1,1,2-Trichlorotrifluoroethane	ND		0.00100
1,2,3-Trichlorobenzene	ND		0.00100
1,2,4-Trichlorobenzene	ND		0.00100
1,1,1-Trichloroethane	ND		0.00100
1,1,2-Trichloroethane	ND		0.00100
Trichloroethene	ND		0.00100
Trichlorofluoromethane	ND		0.00500
1,2,3-Trichloropropane	ND		0.00250
1,2,3-Trimethylbenzene	ND		0.00100
1,2,4-Trimethylbenzene	ND		0.00100
1,3,5-Trimethylbenzene	ND		0.00100
Vinyl chloride	ND		0.00100
Xylenes, Total	ND		0.00300
(S) Toluene-d8	*109*		*90.0-115*
(S) Dibromofluoromethane	*119*		*79.0-121*
(S) 4-Bromofluorobenzene	*97.6*		*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/01/16 08:59 • (LCSD) 02/01/16 09:18

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.134	0.123	107	98.5	28.7-175			8.20	20.9
Acrolein	0.125	0.116	0.106	92.4	85.2	40.4-172			8.17	20
Benzene	0.0250	0.0247	0.0251	98.9	100	73.0-122			1.33	20
Acrylonitrile	0.125	0.132	0.117	105	94.0	58.2-145			11.4	20
Bromobenzene	0.0250	0.0230	0.0236	91.9	94.4	81.5-115			2.73	20
Bromodichloromethane	0.0250	0.0253	0.0251	101	100	75.5-121			0.770	20
Bromoform	0.0250	0.0254	0.0251	101	100	71.5-131			0.950	20
Bromomethane	0.0250	0.0656	0.0698	262	279	22.4-187	J4	J4	6.13	20
n-Butylbenzene	0.0250	0.0235	0.0238	94.2	95.4	75.9-134			1.29	20
sec-Butylbenzene	0.0250	0.0232	0.0237	92.7	94.9	80.6-126			2.34	20
tert-Butylbenzene	0.0250	0.0223	0.0232	89.1	92.7	79.3-127			3.98	20
Carbon tetrachloride	0.0250	0.0254	0.0267	101	107	70.9-129			5.23	20
Chlorobenzene	0.0250	0.0236	0.0239	94.3	95.5	79.7-122			1.25	20
Chlorodibromomethane	0.0250	0.0251	0.0256	101	102	78.2-124			1.93	20
Chloroethane	0.0250	0.0453	0.0443	181	177	41.2-153	J4	J4	2.23	20
2-Chloroethyl vinyl ether	0.125	0.139	0.134	111	107	23.4-162			3.49	23.5
Chloroform	0.0250	0.0265	0.0265	106	106	73.2-125			0.0600	20
Chloromethane	0.0250	0.0218	0.0219	87.4	87.7	55.8-134			0.370	20
2-Chlorotoluene	0.0250	0.0241	0.0245	96.6	98.0	76.4-125			1.47	20
4-Chlorotoluene	0.0250	0.0239	0.0244	95.8	97.5	81.5-121			1.71	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0238	0.0216	95.2	86.2	64.8-131			9.89	20
1,2-Dibromoethane	0.0250	0.0243	0.0238	97.0	95.0	79.8-122			2.10	20
Dibromomethane	0.0250	0.0268	0.0263	107	105	79.5-118			1.72	20
1,2-Dichlorobenzene	0.0250	0.0231	0.0235	92.2	94.1	84.7-118			1.98	20
1,3-Dichlorobenzene	0.0250	0.0225	0.0231	90.0	92.3	77.6-127			2.52	20
1,4-Dichlorobenzene	0.0250	0.0238	0.0242	95.1	96.8	82.2-114			1.79	20
Dichlorodifluoromethane	0.0250	0.0272	0.0272	109	109	56.0-134			0.0100	20
1,2-Dichloroethane	0.0250	0.0291	0.0289	116	116	65.3-126			0.670	20
1,1-Dichloroethane	0.0250	0.0256	0.0259	103	104	71.7-127			1.01	20
1,1-Dichloroethene	0.0250	0.0263	0.0269	105	108	59.9-137			2.40	20
cis-1,2-Dichloroethene	0.0250	0.0241	0.0248	96.6	99.3	77.3-122			2.83	20
trans-1,2-Dichloroethene	0.0250	0.0246	0.0252	98.6	101	72.6-125			2.39	20
1,2-Dichloropropane	0.0250	0.0241	0.0241	96.5	96.3	77.4-125			0.230	20
1,1-Dichloropropene	0.0250	0.0277	0.0282	111	113	72.5-127			1.71	20
1,3-Dichloropropane	0.0250	0.0242	0.0239	96.7	95.5	80.6-115			1.21	20
cis-1,3-Dichloropropene	0.0250	0.0252	0.0249	101	99.4	77.7-124			1.24	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/01/16 08:59 • (LCSD) 02/01/16 09:18

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
trans-1,3-Dichloropropene	0.0250	0.0271	0.0268	108	107	73.5-127			0.990	20
2,2-Dichloropropane	0.0250	0.0260	0.0263	104	105	61.3-134			0.910	20
Di-isopropyl ether	0.0250	0.0243	0.0242	97.2	96.9	65.1-135			0.350	20
Ethylbenzene	0.0250	0.0223	0.0228	89.4	91.0	80.9-121			1.81	20
Hexachloro-1,3-butadiene	0.0250	0.0178	0.0182	71.4	72.9	73.7-133	J4	J4	2.14	20
Isopropylbenzene	0.0250	0.0220	0.0226	88.1	90.4	81.6-124			2.50	20
p-Isopropyltoluene	0.0250	0.0237	0.0244	94.7	97.4	77.6-129			2.77	20
2-Butanone (MEK)	0.125	0.141	0.129	113	103	46.4-155			9.07	20
Methyl tert-butyl ether	0.0250	0.0272	0.0268	109	107	70.1-125			1.33	20
Methylene Chloride	0.0250	0.0247	0.0246	98.7	98.5	69.5-120			0.220	20
4-Methyl-2-pentanone (MIBK)	0.125	0.129	0.117	103	93.9	63.3-138			9.36	20
Naphthalene	0.0250	0.0223	0.0223	89.1	89.4	69.7-134			0.350	20
n-Propylbenzene	0.0250	0.0229	0.0235	91.5	93.9	81.9-122			2.55	20
Styrene	0.0250	0.0235	0.0236	93.8	94.4	79.9-124			0.580	20
1,1,1,2-Tetrachloroethane	0.0250	0.0239	0.0239	95.6	95.7	78.5-125			0.120	20
1,1,2,2-Tetrachloroethane	0.0250	0.0239	0.0232	95.7	92.9	79.3-123			2.98	20
Tetrachloroethene	0.0250	0.0212	0.0218	84.8	87.2	73.5-130			2.82	20
Toluene	0.0250	0.0230	0.0230	92.2	92.0	77.9-116			0.150	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0268	0.0274	107	109	62.0-141			2.11	20
1,2,3-Trichlorobenzene	0.0250	0.0217	0.0224	86.8	89.4	75.7-134			3.03	20
1,2,4-Trichlorobenzene	0.0250	0.0219	0.0219	87.5	87.6	76.1-136			0.130	20
1,1,1-Trichloroethane	0.0250	0.0266	0.0265	106	106	71.1-129			0.270	20
1,1,2-Trichloroethane	0.0250	0.0225	0.0223	90.1	89.4	81.6-120			0.810	20
Trichloroethene	0.0250	0.0242	0.0244	96.7	97.5	79.5-121			0.750	20
Trichlorofluoromethane	0.0250	0.0322	0.0316	129	126	49.1-157			2.01	20
1,2,3-Trichloropropane	0.0250	0.0247	0.0240	98.7	95.9	74.9-124			2.86	20
1,2,3-Trimethylbenzene	0.0250	0.0240	0.0243	95.8	97.3	79.9-118			1.55	20
1,2,4-Trimethylbenzene	0.0250	0.0228	0.0237	91.2	94.9	79.0-122			3.98	20
1,3,5-Trimethylbenzene	0.0250	0.0230	0.0233	91.9	93.0	81.0-123			1.16	20
Xylenes, Total	0.0750	0.0687	0.0692	91.5	92.2	79.2-122			0.720	20
Vinyl chloride	0.0250	0.0269	0.0277	108	111	61.5-134			2.72	20
(S) Toluene-d8				*105*	*105*	*90.0-115*				
(S) Dibromofluoromethane				*116*	*117*	*79.0-121*				
(S) 4-Bromofluorobenzene				*97.0*	*98.2*	*80.1-120*				

L814707-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/01/16 13:03 • (MS) 02/01/16 11:07 • (MSD) 02/01/16 11:26

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	ND	0.0241	0.0241	96.3	96.3	1	58.6-133			0.0600	20
Acetone	0.125	0.000954	0.0633	0.0627	49.8	49.4	1	25.0-156			0.920	21.5
Acrolein	0.125	ND	0.117	0.116	93.4	92.8	1	34.0-194			0.640	21.5
Acrylonitrile	0.125	ND	0.128	0.128	102	102	1	55.9-161			0.420	20
Bromobenzene	0.0250	0.000216	0.0232	0.0229	91.7	90.6	1	70.6-125			1.27	20
Bromodichloromethane	0.0250	ND	0.0251	0.0243	100	97.1	1	69.2-127			3.28	20
Bromoform	0.0250	ND	0.0252	0.0255	101	102	1	66.3-140			1.40	20
Bromomethane	0.0250	0.000477	0.0596	0.0588	237	233	1	16.6-183	J5	J5	1.46	20.5
n-Butylbenzene	0.0250	ND	0.0228	0.0236	91.1	94.6	1	64.8-145			3.67	20
sec-Butylbenzene	0.0250	ND	0.0231	0.0234	92.2	93.5	1	66.8-139			1.41	20
tert-Butylbenzene	0.0250	ND	0.0227	0.0228	90.8	91.4	1	67.1-138			0.690	20
Carbon tetrachloride	0.0250	ND	0.0262	0.0261	105	104	1	60.6-139			0.310	20
Chlorobenzene	0.0250	ND	0.0232	0.0232	92.9	92.8	1	70.1-130			0.190	20
Chlorodibromomethane	0.0250	ND	0.0256	0.0254	102	102	1	71.6-132			0.520	20
Chloroethane	0.0250	ND	0.0416	0.0409	166	164	1	33.3-155	J5	J5	1.64	20
2-Chloroethyl vinyl ether	0.125	ND	0.0686	0.0199	54.9	15.9	1	5.00-149		J3	110	40
Chloroform	0.0250	ND	0.0264	0.0258	105	103	1	66.1-133			2.14	20
Chloromethane	0.0250	ND	0.0184	0.0177	73.5	70.9	1	40.7-139			3.57	20
2-Chlorotoluene	0.0250	ND	0.0239	0.0242	95.6	96.8	1	66.9-134			1.27	20
4-Chlorotoluene	0.0250	ND	0.0241	0.0237	96.4	94.7	1	66.8-134			1.77	20
1,2-Dibromo-3-Chloropropane	0.0250	ND	0.0238	0.0243	95.2	97.3	1	63.9-142			2.17	20.2
1,2-Dibromoethane	0.0250	ND	0.0240	0.0241	95.8	96.6	1	73.8-131			0.790	20
Dibromomethane	0.0250	ND	0.0261	0.0253	104	101	1	72.8-127			3.09	20
1,2-Dichlorobenzene	0.0250	ND	0.0224	0.0230	89.7	92.2	1	77.4-127			2.74	20
1,3-Dichlorobenzene	0.0250	ND	0.0227	0.0229	90.6	91.8	1	67.9-136			1.28	20
1,4-Dichlorobenzene	0.0250	ND	0.0235	0.0233	94.2	93.0	1	74.4-123			1.22	20
Dichlorodifluoromethane	0.0250	ND	0.0242	0.0233	96.8	93.4	1	42.2-146			3.58	20
1,2-Dichloroethane	0.0250	ND	0.0287	0.0287	115	115	1	60.7-132			0.150	20
1,1-Dichloroethane	0.0250	ND	0.0251	0.0251	101	101	1	64.0-134			0.0900	20
1,1-Dichloroethene	0.0250	ND	0.0254	0.0252	102	101	1	48.8-144			0.800	20
cis-1,2-Dichloroethene	0.0250	ND	0.0235	0.0234	94.0	93.5	1	60.6-136			0.550	20
trans-1,2-Dichloroethene	0.0250	ND	0.0230	0.0231	91.9	92.2	1	61.0-132			0.330	20
1,2-Dichloropropane	0.0250	ND	0.0235	0.0228	94.1	91.1	1	69.7-130			3.29	20
1,1-Dichloropropene	0.0250	ND	0.0266	0.0263	106	105	1	61.5-136			0.910	20
1,3-Dichloropropane	0.0250	ND	0.0239	0.0240	95.6	96.1	1	74.3-123			0.580	20
cis-1,3-Dichloropropene	0.0250	ND	0.0244	0.0243	97.7	97.0	1	71.1-129			0.740	20

L814707-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/01/16 13:03 • (MS) 02/01/16 11:07 • (MSD) 02/01/16 11:26

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Di-isopropyl ether	0.0250	ND	0.0239	0.0237	95.7	94.9	1	59.9-140			0.850	20
trans-1,3-Dichloropropene	0.0250	0.00116	0.0270	0.0261	103	99.9	1	66.3-136			3.23	20
2,2-Dichloropropane	0.0250	ND	0.0256	0.0255	103	102	1	54.9-142			0.580	20
Ethylbenzene	0.0250	ND	0.0225	0.0222	90.1	88.8	1	62.7-136			1.46	20
Hexachloro-1,3-butadiene	0.0250	ND	0.0180	0.0188	71.8	75.4	1	61.1-144			4.82	20.1
Isopropylbenzene	0.0250	ND	0.0222	0.0223	88.7	89.4	1	67.4-136			0.750	20
p-Isopropyltoluene	0.0250	ND	0.0236	0.0236	94.5	94.4	1	62.8-143			0.150	20
Methyl tert-butyl ether	0.0250	ND	0.0268	0.0274	107	109	1	61.4-136			1.94	20
2-Butanone (MEK)	0.125	ND	0.0956	0.0977	76.5	78.2	1	45.0-156			2.18	20.8
Methylene Chloride	0.0250	ND	0.0243	0.0236	97.3	94.5	1	61.5-125			2.88	20
4-Methyl-2-pentanone (MIBK)	0.125	ND	0.124	0.125	99.5	100	1	60.7-150			0.650	20
Naphthalene	0.0250	ND	0.0228	0.0238	91.3	95.4	1	61.8-143			4.40	20
n-Propylbenzene	0.0250	ND	0.0228	0.0228	91.3	91.2	1	63.2-139			0.130	20
Styrene	0.0250	ND	0.0230	0.0233	92.2	93.3	1	68.2-133			1.28	20
1,1,1,2-Tetrachloroethane	0.0250	ND	0.0237	0.0237	94.6	95.0	1	70.5-132			0.400	20
Toluene	0.0250	ND	0.0224	0.0221	89.7	88.6	1	67.8-124			1.31	20
1,1,2,2-Tetrachloroethane	0.0250	ND	0.0247	0.0246	98.8	98.6	1	64.9-145			0.200	20
Tetrachloroethene	0.0250	ND	0.0204	0.0209	81.7	83.6	1	57.4-141			2.28	20
1,1,2-Trichlorotrifluoroethane	0.0250	ND	0.0277	0.0271	111	108	1	53.7-150			2.18	20
1,2,3-Trichlorobenzene	0.0250	ND	0.0213	0.0223	85.3	89.1	1	65.7-143			4.26	20
1,2,4-Trichlorobenzene	0.0250	ND	0.0214	0.0220	85.6	88.1	1	67.0-146			2.86	20
1,1,1-Trichloroethane	0.0250	ND	0.0265	0.0260	106	104	1	58.7-134			1.88	20
1,1,2-Trichloroethane	0.0250	ND	0.0232	0.0227	92.9	90.8	1	74.1-130			2.25	20
Trichloroethene	0.0250	ND	0.0233	0.0228	93.3	91.0	1	48.9-148			2.53	20
Trichlorofluoromethane	0.0250	ND	0.0291	0.0291	116	117	1	39.9-165			0.130	20
1,2,3-Trichloropropane	0.0250	ND	0.0250	0.0250	100	100	1	71.5-134			0.170	20
1,2,3-Trimethylbenzene	0.0250	ND	0.0228	0.0236	91.1	94.4	1	62.7-133			3.54	20
1,2,4-Trimethylbenzene	0.0250	ND	0.0232	0.0229	92.6	91.6	1	60.5-137			1.09	20
1,3,5-Trimethylbenzene	0.0250	ND	0.0229	0.0224	91.6	89.7	1	67.9-134			2.07	20
Xylenes, Total	0.0750	ND	0.0673	0.0672	89.7	89.5	1	65.6-133			0.190	20
Vinyl chloride	0.0250	ND	0.0243	0.0234	97.4	93.5	1	44.3-143			4.04	20
(S) Toluene-d8					*105*	*104*		*90.0-115*				
(S) Dibromofluoromethane					*116*	*115*		*79.0-121*				
(S) 4-Bromofluorobenzene					*99.2*	*98.2*		*80.1-120*				

Method Blank (MB)

(MB) 02/02/16 01:10

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Acetone	ND		0.0500
Acrylonitrile	ND		0.0100
Benzene	ND		0.00100
Bromobenzene	ND		0.00100
Bromodichloromethane	ND		0.00100
Bromoform	ND		0.00100
Bromomethane	ND		0.00500
n-Butylbenzene	ND		0.00100
sec-Butylbenzene	ND		0.00100
tert-Butylbenzene	ND		0.00100
Carbon tetrachloride	ND		0.00100
Chlorobenzene	ND		0.00100
Chlorodibromomethane	ND		0.00100
Chloroethane	ND		0.00500
2-Chloroethyl vinyl ether	ND		0.0500
Chloroform	ND		0.00500
Chloromethane	ND		0.00250
2-Chlorotoluene	ND		0.00100
4-Chlorotoluene	ND		0.00100
1,2-Dibromo-3-Chloropropane	ND		0.00500
1,2-Dibromoethane	ND		0.00100
Dibromomethane	ND		0.00100
1,2-Dichlorobenzene	ND		0.00100
1,3-Dichlorobenzene	ND		0.00100
1,4-Dichlorobenzene	ND		0.00100
Dichlorodifluoromethane	ND		0.00500
1,1-Dichloroethane	ND		0.00100
1,2-Dichloroethane	ND		0.00100
1,1-Dichloroethene	ND		0.00100
cis-1,2-Dichloroethene	ND		0.00100
trans-1,2-Dichloroethene	ND		0.00100
1,2-Dichloropropane	ND		0.00100
1,1-Dichloropropene	ND		0.00100
1,3-Dichloropropane	ND		0.00100
cis-1,3-Dichloropropene	ND		0.00100
trans-1,3-Dichloropropene	ND		0.00100

Method Blank (MB)

(MB) 02/02/16 01:10

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
2,2-Dichloropropane	ND		0.00100
Di-isopropyl ether	ND		0.00100
Ethylbenzene	ND		0.00100
Hexachloro-1,3-butadiene	ND		0.00100
Isopropylbenzene	ND		0.00100
p-Isopropyltoluene	ND		0.00100
2-Butanone (MEK)	ND		0.0100
Methylene Chloride	ND		0.00500
4-Methyl-2-pentanone (MIBK)	ND		0.0100
Methyl tert-butyl ether	ND		0.00100
Naphthalene	ND		0.00500
n-Propylbenzene	ND		0.00100
Styrene	ND		0.00100
1,1,1,2-Tetrachloroethane	ND		0.00100
1,1,2,2-Tetrachloroethane	ND		0.00100
Tetrachloroethene	ND		0.00100
Toluene	ND		0.00500
1,1,2-Trichlorotrifluoroethane	ND		0.00100
1,2,3-Trichlorobenzene	ND		0.00100
1,2,4-Trichlorobenzene	ND		0.00100
1,1,1-Trichloroethane	ND		0.00100
1,1,2-Trichloroethane	ND		0.00100
Trichloroethene	ND		0.00100
Trichlorofluoromethane	ND		0.00500
1,2,3-Trichloropropane	ND		0.00250
1,2,3-Trimethylbenzene	ND		0.00100
1,2,4-Trimethylbenzene	ND		0.00100
1,3,5-Trimethylbenzene	ND		0.00100
Vinyl chloride	ND		0.00100
Xylenes, Total	ND		0.00300
(S) Toluene-d8	*103*		*88.7-115*
(S) Dibromofluoromethane	*95.0*		*76.3-123*
(S) 4-Bromofluorobenzene	*101*		*69.7-129*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/01/16 23:39 • (LCSD) 02/01/16 23:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.156	0.169	125	135	25.3-178			7.91	22.9
Acrylonitrile	0.125	0.126	0.129	101	103	57.8-143			2.35	20
Benzene	0.0250	0.0226	0.0228	90.3	91.1	72.6-120			0.780	20
Bromobenzene	0.0250	0.0249	0.0253	99.5	101	80.3-115			1.92	20
Bromodichloromethane	0.0250	0.0247	0.0247	98.7	99.0	75.3-119			0.260	20
Bromoform	0.0250	0.0256	0.0264	103	106	69.1-135			2.94	20
Bromomethane	0.0250	0.0227	0.0233	90.9	93.1	23.0-191			2.42	20
n-Butylbenzene	0.0250	0.0243	0.0262	97.3	105	74.2-134			7.51	20
sec-Butylbenzene	0.0250	0.0259	0.0270	103	108	77.8-129			4.14	20
tert-Butylbenzene	0.0250	0.0263	0.0270	105	108	77.2-129			2.68	20
Carbon tetrachloride	0.0250	0.0232	0.0226	92.6	90.5	69.4-129			2.28	20
Chlorobenzene	0.0250	0.0255	0.0254	102	101	78.9-122			0.540	20
Chlorodibromomethane	0.0250	0.0256	0.0258	102	103	76.4-126			0.710	20
Chloroethane	0.0250	0.0247	0.0239	98.7	95.7	47.2-147			3.10	20
2-Chloroethyl vinyl ether	0.125	0.143	0.143	115	114	16.7-162			0.280	23.7
Chloroform	0.0250	0.0244	0.0240	97.6	95.9	73.3-122			1.77	20
Chloromethane	0.0250	0.0225	0.0228	89.8	91.4	53.1-135			1.71	20
2-Chlorotoluene	0.0250	0.0272	0.0272	109	109	74.6-127			0.140	20
4-Chlorotoluene	0.0250	0.0262	0.0271	105	108	79.5-123			3.37	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0221	0.0240	88.3	96.0	64.9-131			8.37	20
1,2-Dibromoethane	0.0250	0.0259	0.0256	104	102	78.7-123			1.07	20
Dibromomethane	0.0250	0.0252	0.0255	101	102	78.5-117			1.29	20
1,2-Dichlorobenzene	0.0250	0.0239	0.0244	95.6	97.6	83.6-119			2.08	20
1,3-Dichlorobenzene	0.0250	0.0264	0.0264	106	106	75.9-129			0.0800	20
1,4-Dichlorobenzene	0.0250	0.0238	0.0233	95.2	93.1	81.0-115			2.28	20
Dichlorodifluoromethane	0.0250	0.0249	0.0247	99.6	98.8	50.9-139			0.860	20
1,1-Dichloroethane	0.0250	0.0239	0.0239	95.5	95.6	71.7-125			0.0800	20
1,2-Dichloroethane	0.0250	0.0236	0.0244	94.3	97.8	67.2-121			3.63	20
1,1-Dichloroethene	0.0250	0.0247	0.0247	98.9	98.9	60.6-133			0.0200	20
cis-1,2-Dichloroethene	0.0250	0.0247	0.0243	98.8	97.1	76.1-121			1.66	20
trans-1,2-Dichloroethene	0.0250	0.0232	0.0247	92.9	98.8	70.7-124			6.19	20
1,2-Dichloropropane	0.0250	0.0247	0.0243	98.9	97.3	76.9-123			1.64	20
1,1-Dichloropropene	0.0250	0.0242	0.0252	97.0	101	71.2-126			3.77	20
1,3-Dichloropropane	0.0250	0.0258	0.0253	103	101	80.3-114			2.28	20
cis-1,3-Dichloropropene	0.0250	0.0248	0.0253	99.2	101	77.3-123			1.79	20
trans-1,3-Dichloropropene	0.0250	0.0271	0.0264	108	105	73.0-127			2.63	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/01/16 23:39 • (LCSD) 02/01/16 23:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2,2-Dichloropropane	0.0250	0.0226	0.0231	90.4	92.4	61.9-132			2.24	20
Di-isopropyl ether	0.0250	0.0231	0.0233	92.4	93.1	67.2-131			0.780	20
Ethylbenzene	0.0250	0.0262	0.0260	105	104	78.6-124			0.650	20
Hexachloro-1,3-butadiene	0.0250	0.0238	0.0263	95.1	105	69.2-136			10.2	20
Isopropylbenzene	0.0250	0.0258	0.0268	103	107	79.4-126			3.78	20
p-Isopropyltoluene	0.0250	0.0279	0.0287	112	115	75.4-132			2.89	20
2-Butanone (MEK)	0.125	0.111	0.116	88.7	92.4	44.5-154			4.15	21.3
Methylene Chloride	0.0250	0.0223	0.0222	89.0	88.9	68.2-119			0.190	20
4-Methyl-2-pentanone (MIBK)	0.125	0.124	0.130	99.4	104	61.1-138			4.66	20
Methyl tert-butyl ether	0.0250	0.0235	0.0245	93.8	98.0	70.2-122			4.37	20
Naphthalene	0.0250	0.0219	0.0241	87.8	96.3	69.9-132			9.27	20
n-Propylbenzene	0.0250	0.0258	0.0271	103	108	80.2-124			4.99	20
Styrene	0.0250	0.0265	0.0270	106	108	79.4-124			1.89	20
1,1,1,2-Tetrachloroethane	0.0250	0.0266	0.0263	106	105	76.7-127			1.13	20
1,1,2,2-Tetrachloroethane	0.0250	0.0244	0.0259	97.5	104	78.8-124			6.20	20
Tetrachloroethene	0.0250	0.0261	0.0258	104	103	71.1-133			1.23	20
Toluene	0.0250	0.0235	0.0242	94.0	96.8	76.7-116			2.95	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0234	0.0237	93.6	94.8	62.6-138			1.32	20
1,2,3-Trichlorobenzene	0.0250	0.0232	0.0252	92.7	101	72.5-137			8.26	20
1,2,4-Trichlorobenzene	0.0250	0.0236	0.0256	94.6	103	74.0-137			8.15	20
1,1,1-Trichloroethane	0.0250	0.0232	0.0236	93.0	94.6	69.9-127			1.72	20
1,1,2-Trichloroethane	0.0250	0.0247	0.0250	98.8	100	81.9-119			1.40	20
Trichloroethene	0.0250	0.0249	0.0252	99.8	101	77.2-122			0.960	20
Trichlorofluoromethane	0.0250	0.0250	0.0262	100	105	51.5-151			4.38	20
1,2,3-Trichloropropane	0.0250	0.0249	0.0271	99.8	109	74.0-124			8.46	20
1,2,3-Trimethylbenzene	0.0250	0.0242	0.0243	96.8	97.1	79.4-118			0.330	20
1,2,4-Trimethylbenzene	0.0250	0.0267	0.0274	107	110	77.1-124			2.74	20
1,3,5-Trimethylbenzene	0.0250	0.0257	0.0270	103	108	79.0-125			4.81	20
Vinyl chloride	0.0250	0.0247	0.0252	98.7	101	58.4-134			2.11	20
Xylenes, Total	0.0750	0.0761	0.0783	101	104	78.1-123			2.89	20
(S) Toluene-d8				*104*	*102*	*88.7-115*				
(S) Dibromofluoromethane				*94.3*	*92.2*	*76.3-123*				
(S) 4-Bromofluorobenzene				*103*	*106*	*69.7-129*				

L814559-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/02/16 02:42 • (MS) 02/02/16 01:47 • (MSD) 02/02/16 02:05

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.191	4.24	4.25	92.5	92.9	35	10.0-130			0.410	31.5
Acrylonitrile	0.125	ND	3.97	4.07	90.8	93.0	35	39.3-152			2.42	27.2
Benzene	0.0250	0.0480	0.804	0.807	86.4	86.7	35	47.8-131			0.370	22.8
Bromobenzene	0.0250	0.00680	0.851	0.898	96.5	102	35	40.0-130			5.38	27.4
Bromodichloromethane	0.0250	0.00269	0.861	0.891	98.1	102	35	50.6-128			3.45	22.8
Bromoform	0.0250	ND	0.878	0.891	100	102	35	43.3-139			1.46	25.9
Bromomethane	0.0250	ND	0.405	0.394	46.3	45.0	35	5.00-189			2.76	26.7
n-Butylbenzene	0.0250	0.0153	0.950	0.962	107	108	35	23.6-146			1.27	39.2
sec-Butylbenzene	0.0250	0.00756	0.953	1.00	108	114	35	31.0-142			5.07	34.7
tert-Butylbenzene	0.0250	ND	0.985	0.982	113	112	35	36.9-142			0.300	31.7
Carbon tetrachloride	0.0250	ND	0.753	0.775	86.1	88.6	35	46.0-140			2.84	27.2
Chlorobenzene	0.0250	ND	0.911	0.924	104	106	35	44.1-134			1.37	25.7
Chlorodibromomethane	0.0250	ND	0.884	0.909	101	104	35	49.7-134			2.76	24
Chloroethane	0.0250	ND	0.389	0.399	44.4	45.6	35	5.00-164			2.57	28.4
2-Chloroethyl vinyl ether	0.125	ND	5.16	4.92	118	112	35	5.00-159			4.76	40
Chloroform	0.0250	ND	0.810	0.816	92.6	93.2	35	51.2-133			0.710	22.8
Chloromethane	0.0250	ND	0.591	0.608	67.6	69.5	35	31.4-141			2.75	24.6
2-Chlorotoluene	0.0250	ND	0.923	0.968	105	111	35	36.1-137			4.81	28.9
4-Chlorotoluene	0.0250	0.00144	0.906	0.943	103	108	35	35.4-137			3.94	29.8
1,2-Dibromo-3-Chloropropane	0.0250	ND	0.879	0.828	101	94.7	35	40.4-138			5.98	30.8
1,2-Dibromoethane	0.0250	ND	0.877	0.917	100	105	35	50.2-133			4.42	23.6
Dibromomethane	0.0250	ND	0.875	0.856	100	97.9	35	52.4-128			2.19	23
1,2-Dichlorobenzene	0.0250	ND	0.891	0.899	102	103	35	34.6-139			0.920	29.9
1,3-Dichlorobenzene	0.0250	ND	0.898	0.931	103	106	35	28.4-142			3.55	31.2
1,4-Dichlorobenzene	0.0250	ND	0.863	0.868	98.6	99.2	35	35.0-133			0.540	31.1
Dichlorodifluoromethane	0.0250	ND	0.696	0.690	79.6	78.9	35	31.2-144			0.860	30.2
1,1-Dichloroethane	0.0250	ND	0.777	0.815	88.8	93.2	35	49.1-136			4.84	22.9
1,2-Dichloroethane	0.0250	ND	0.823	0.794	94.1	90.8	35	47.1-129			3.55	22.7
1,1-Dichloroethene	0.0250	ND	0.533	0.610	60.9	69.8	35	36.1-142			13.6	25.6
cis-1,2-Dichloroethene	0.0250	ND	0.798	0.839	91.1	95.8	35	50.6-133			5.01	23
trans-1,2-Dichloroethene	0.0250	ND	0.739	0.770	84.5	88.0	35	43.8-135			4.04	24.8
1,2-Dichloropropane	0.0250	ND	0.849	0.846	97.1	96.6	35	50.3-134			0.450	22.7
1,1-Dichloropropene	0.0250	ND	0.767	0.812	87.7	92.8	35	43.0-137			5.70	26.4
1,3-Dichloropropane	0.0250	ND	0.870	0.915	99.5	105	35	51.4-127			4.97	23.1
cis-1,3-Dichloropropene	0.0250	ND	0.874	0.910	99.8	104	35	48.4-134			4.12	23.6
trans-1,3-Dichloropropene	0.0250	0.0228	0.911	0.889	102	99.0	35	46.6-135			2.46	25.3

L814559-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/02/16 02:42 • (MS) 02/02/16 01:47 • (MSD) 02/02/16 02:05

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
2,2-Dichloropropane	0.0250	ND	0.757	0.756	86.5	86.4	35	45.2-141			0.150	26.6
Di-isopropyl ether	0.0250	ND	0.831	0.827	95.0	94.5	35	46.7-140			0.500	23.5
Ethylbenzene	0.0250	0.122	1.03	1.06	104	107	35	44.8-135			2.71	26.9
Hexachloro-1,3-butadiene	0.0250	ND	0.876	0.881	100	101	35	10.0-149			0.600	40
Isopropylbenzene	0.0250	0.0123	0.929	0.967	105	109	35	41.9-139			4.03	29.3
p-Isopropyltoluene	0.0250	0.00908	1.01	1.02	114	116	35	27.3-146			1.13	35.1
2-Butanone (MEK)	0.125	0.127	3.60	3.55	79.4	78.3	35	23.9-170			1.32	28.3
Methylene Chloride	0.0250	ND	0.724	0.754	82.7	86.1	35	46.7-125			4.07	22.2
4-Methyl-2-pentanone (MIBK)	0.125	0.0104	4.64	4.48	106	102	35	42.4-146			3.64	26.7
Methyl tert-butyl ether	0.0250	0.0611	0.908	0.925	96.8	98.7	35	50.4-131			1.79	24.8
Naphthalene	0.0250	0.0936	0.990	0.989	102	102	35	18.4-145			0.160	34
n-Propylbenzene	0.0250	0.0418	0.931	0.972	102	106	35	35.2-139			4.26	31.9
Styrene	0.0250	0.00325	0.927	0.950	106	108	35	39.7-137			2.47	28.2
1,1,1,2-Tetrachloroethane	0.0250	ND	0.934	0.943	107	108	35	48.8-136			0.930	25.5
1,1,2,2-Tetrachloroethane	0.0250	0.00495	0.892	0.893	101	101	35	45.7-140			0.120	26.4
Tetrachloroethene	0.0250	ND	0.839	0.839	95.9	95.9	35	37.7-140			0.0200	29.2
Toluene	0.0250	0.119	0.895	0.934	88.7	93.1	35	47.8-127			4.22	24.3
1,1,2-Trichlorotrifluoroethane	0.0250	ND	0.562	0.618	64.2	70.6	35	35.7-146			9.54	28.8
1,2,3-Trichlorobenzene	0.0250	0.00537	0.920	0.880	105	100	35	10.0-150			4.42	38.5
1,2,4-Trichlorobenzene	0.0250	0.00430	0.911	0.937	104	107	35	10.0-153			2.81	39.3
1,1,1-Trichloroethane	0.0250	ND	0.789	0.799	90.1	91.3	35	49.0-138			1.27	25.3
1,1,2-Trichloroethane	0.0250	ND	0.861	0.878	98.4	100	35	52.3-132			1.91	23.4
Trichloroethene	0.0250	ND	0.844	0.847	96.5	96.7	35	48.0-132			0.270	24.8
Trichlorofluoromethane	0.0250	ND	0.577	0.608	66.0	69.4	35	12.8-169			5.14	29.7
1,2,3-Trichloropropane	0.0250	ND	0.886	0.908	101	104	35	44.4-138			2.55	26.3
1,2,3-Trimethylbenzene	0.0250	0.0810	0.965	0.980	101	103	35	41.0-133			1.51	27.6
1,2,4-Trimethylbenzene	0.0250	0.344	1.25	1.28	103	106	35	32.9-139			2.15	30.6
1,3,5-Trimethylbenzene	0.0250	0.0876	0.979	1.03	102	107	35	37.1-138			4.75	30.6
Vinyl chloride	0.0250	ND	0.694	0.674	79.3	77.0	35	32.0-146			2.93	26.3
Xylenes, Total	0.0750	0.473	3.09	3.15	99.8	102	35	42.7-135			1.90	26.6
(S) Toluene-d8					*103*	*102*		*88.7-115*				
(S) Dibromofluoromethane					*92.8*	*92.2*		*76.3-123*				
(S) 4-Bromofluorobenzene					*103*	*105*		*69.7-129*				

Method Blank (MB)

(MB) 02/03/16 16:27

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
TPH (GC/FID) High Fraction	ND		4.00
(S) o-Terphenyl	*79.9*		*50.0-150*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/03/16 16:38 • (LCSD) 02/03/16 16:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	60.0	36.6	44.6	61.1	74.3	50.0-150			19.6	20
(S) o-Terphenyl				*74.6*	*86.2*	*50.0-150*				

Method Blank (MB)

(MB) 02/05/16 13:19

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Anthracene	ND		0.00600
Acenaphthene	ND		0.00600
Acenaphthylene	ND		0.00600
Benzo(a)anthracene	ND		0.00600
Benzo(a)pyrene	ND		0.00600
Benzo(b)fluoranthene	ND		0.00600
Benzo(g,h,i)perylene	ND		0.00600
Benzo(k)fluoranthene	ND		0.00600
Chrysene	ND		0.00600
Dibenz(a,h)anthracene	ND		0.00600
Fluoranthene	ND		0.00600
Fluorene	ND		0.00600
Indeno(1,2,3-cd)pyrene	ND		0.00600
Naphthalene	ND		0.0200
Phenanthrene	ND		0.00600
Pyrene	ND		0.00600
1-Methylnaphthalene	ND		0.0200
2-Methylnaphthalene	ND		0.0200
2-Chloronaphthalene	ND		0.0200
(S) p-Terphenyl-d14	*72.0*		*32.2-131*
(S) Nitrobenzene-d5	*73.7*		*22.1-146*
(S) 2-Fluorobiphenyl	*85.8*		*40.6-122*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/05/16 12:37 • (LCSD) 02/05/16 12:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	0.0707	0.0706	88.4	88.2	50.3-130			0.190	20
Acenaphthene	0.0800	0.0699	0.0700	87.4	87.5	52.4-120			0.110	20
Acenaphthylene	0.0800	0.0713	0.0712	89.2	88.9	49.6-120			0.260	20
Benzo(a)anthracene	0.0800	0.0651	0.0634	81.4	79.2	46.7-125			2.76	20
Benzo(a)pyrene	0.0800	0.0570	0.0555	71.2	69.4	42.3-119			2.63	20
Benzo(b)fluoranthene	0.0800	0.0617	0.0597	77.1	74.7	43.6-124			3.17	20
Benzo(g,h,i)perylene	0.0800	0.0656	0.0639	82.0	79.9	45.1-132			2.62	20
Benzo(k)fluoranthene	0.0800	0.0722	0.0706	90.2	88.2	46.1-131			2.22	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/05/16 12:37 • (LCSD) 02/05/16 12:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chrysene	0.0800	0.0675	0.0664	84.4	83.0	49.5-131			1.64	20
Dibenz(a,h)anthracene	0.0800	0.0696	0.0681	87.0	85.2	44.8-133			2.15	20
Fluoranthene	0.0800	0.0694	0.0686	86.8	85.7	49.3-128			1.25	20
Fluorene	0.0800	0.0704	0.0697	88.0	87.2	50.6-121			1.01	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0703	0.0691	87.8	86.4	46.1-135			1.71	20
Naphthalene	0.0800	0.0705	0.0701	88.1	87.6	49.6-115			0.540	20
Phenanthrene	0.0800	0.0656	0.0647	82.0	80.9	48.8-121			1.37	20
Pyrene	0.0800	0.0663	0.0603	82.9	75.4	44.7-130			9.53	20
1-Methylnaphthalene	0.0800	0.0709	0.0705	88.6	88.2	50.6-122			0.490	20
2-Methylnaphthalene	0.0800	0.0706	0.0703	88.3	87.9	50.4-120			0.470	20
2-Chloronaphthalene	0.0800	0.0701	0.0696	87.6	87.0	53.9-121			0.610	20
(S) p-Terphenyl-d14				*77.6*	*72.1*	*32.2-131*				
(S) Nitrobenzene-d5				*68.8*	*70.8*	*22.1-146*				
(S) 2-Fluorobiphenyl				*83.2*	*83.5*	*40.6-122*				

L814812-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/05/16 18:17 • (MS) 02/05/16 18:38 • (MSD) 02/05/16 18:59

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	ND	0.0549	0.0622	68.6	77.8	1	26.5-141			12.6	21.2
Acenaphthene	0.0800	ND	0.0544	0.0598	68.0	74.8	1	31.9-130			9.48	20
Acenaphthylene	0.0800	ND	0.0568	0.0619	70.9	77.4	1	33.7-129			8.74	20
Benzo(a)anthracene	0.0800	ND	0.0468	0.0546	58.5	68.2	1	18.3-136			15.4	24.6
Benzo(a)pyrene	0.0800	ND	0.0502	0.0580	62.8	72.5	1	16.9-135			14.3	25.2
Benzo(b)fluoranthene	0.0800	ND	0.0462	0.0554	57.8	69.3	1	10.0-134			18.1	30.9
Benzo(g,h,i)perylene	0.0800	ND	0.0400	0.0453	50.0	56.6	1	14.1-140			12.4	25.5
Benzo(k)fluoranthene	0.0800	ND	0.0515	0.0577	64.4	72.1	1	18.2-138			11.2	25.6
Chrysene	0.0800	ND	0.0511	0.0585	63.8	73.1	1	17.1-145			13.5	24.2
Dibenz(a,h)anthracene	0.0800	ND	0.0419	0.0465	52.4	58.1	1	18.5-138			10.4	24.3
Fluoranthene	0.0800	ND	0.0497	0.0530	62.2	66.2	1	15.4-144			6.30	27.1
Fluorene	0.0800	ND	0.0544	0.0587	68.0	73.3	1	23.5-136			7.55	20
Indeno(1,2,3-cd)pyrene	0.0800	ND	0.0426	0.0479	53.2	59.8	1	14.5-142			11.7	25.8
Naphthalene	0.0800	ND	0.0582	0.0612	72.8	76.5	1	29.2-128			4.99	20
Phenanthrene	0.0800	ND	0.0494	0.0555	61.7	69.4	1	20.1-134			11.6	23.6
Pyrene	0.0800	ND	0.0449	0.0479	56.1	59.9	1	11.0-148			6.45	26.1

L814812-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/05/16 18:17 • (MS) 02/05/16 18:38 • (MSD) 02/05/16 18:59

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1-Methylnaphthalene	0.0800	ND	0.0576	0.0623	72.0	77.9	1	28.4-137			7.81	20
2-Methylnaphthalene	0.0800	ND	0.0578	0.0623	72.3	77.9	1	26.6-137			7.54	20
2-Chloronaphthalene	0.0800	ND	0.0636	0.0598	79.5	74.7	1	38.6-126			6.20	20
(S) p-Terphenyl-d14					*51.1*	*55.5*		*32.2-131*				
(S) Nitrobenzene-d5					*54.6*	*57.7*		*22.1-146*				
(S) 2-Fluorobiphenyl					*74.6*	*71.0*		*40.6-122*				

Method Blank (MB)

(MB) 02/05/16 06:16

Analyte	MB Result mg/l	MB Qualifier	MB RDL mg/l
Anthracene	ND		0.0000500
Acenaphthene	ND		0.0000500
Acenaphthylene	ND		0.0000500
Benzo(a)anthracene	ND		0.0000500
Benzo(a)pyrene	ND		0.0000500
Benzo(b)fluoranthene	ND		0.0000500
Benzo(g,h,i)perylene	ND		0.0000500
Benzo(k)fluoranthene	ND		0.0000500
Chrysene	ND		0.0000500
Dibenz(a,h)anthracene	ND		0.0000500
Fluoranthene	ND		0.0000500
Fluorene	ND		0.0000500
Indeno(1,2,3-cd)pyrene	ND		0.0000500
Naphthalene	ND		0.000250
Phenanthrene	ND		0.0000500
Pyrene	ND		0.0000500
1-Methylnaphthalene	ND		0.000250
2-Methylnaphthalene	ND		0.000250
2-Chloronaphthalene	ND		0.000250
(S) Nitrobenzene-d5	*96.8*		*33.8-179*
(S) 2-Fluorobiphenyl	*84.1*		*55.5-150*
(S) p-Terphenyl-d14	*75.5*		*46.2-163*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/05/16 05:33 • (LCSD) 02/05/16 05:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	0.00200	0.00161	0.00158	80.4	79.2	68.9-153			1.44	20
Acenaphthene	0.00200	0.00175	0.00170	87.3	84.9	67.7-153			2.81	20
Acenaphthylene	0.00200	0.00170	0.00167	85.2	83.5	66.9-141			2.02	20
Benzo(a)anthracene	0.00200	0.00149	0.00143	74.7	71.7	63.1-147			4.04	20
Benzo(a)pyrene	0.00200	0.00143	0.00136	71.4	67.8	62.2-150			5.20	20
Benzo(b)fluoranthene	0.00200	0.00147	0.00130	73.3	64.8	58.4-148			12.3	20
Benzo(g,h,i)perylene	0.00200	0.00154	0.00143	77.0	71.5	57.4-152			7.45	20
Benzo(k)fluoranthene	0.00200	0.00141	0.00142	70.5	71.0	60.5-154			0.690	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/05/16 05:33 • (LCSD) 02/05/16 05:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chrysene	0.00200	0.00148	0.00144	74.0	72.2	64.8-155			2.45	20
Dibenz(a,h)anthracene	0.00200	0.00159	0.00145	79.6	72.7	53.5-153			9.06	20
Fluoranthene	0.00200	0.00159	0.00153	79.7	76.7	68.6-153			3.73	20
Fluorene	0.00200	0.00167	0.00163	83.7	81.7	67.3-141			2.50	20
Indeno(1,2,3-cd)pyrene	0.00200	0.00156	0.00145	78.2	72.3	57.0-155			7.82	20
Naphthalene	0.00200	0.00173	0.00169	86.4	84.5	66.7-135			2.30	20
Phenanthrene	0.00200	0.00157	0.00155	78.6	77.6	64.3-143			1.32	20
Pyrene	0.00200	0.00150	0.00148	75.2	74.2	60.2-154			1.45	20
1-Methylnaphthalene	0.00200	0.00157	0.00154	78.3	77.2	68.3-144			1.52	20
2-Methylnaphthalene	0.00200	0.00158	0.00155	78.8	77.7	67.6-143			1.40	20
2-Chloronaphthalene	0.00200	0.00175	0.00172	87.3	85.9	69.7-140			1.65	20
(S) Nitrobenzene-d5				*95.5*	*94.5*	*33.8-179*				
(S) 2-Fluorobiphenyl				*83.2*	*80.9*	*55.5-150*				
(S) p-Terphenyl-d14				*71.6*	*68.0*	*46.2-163*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

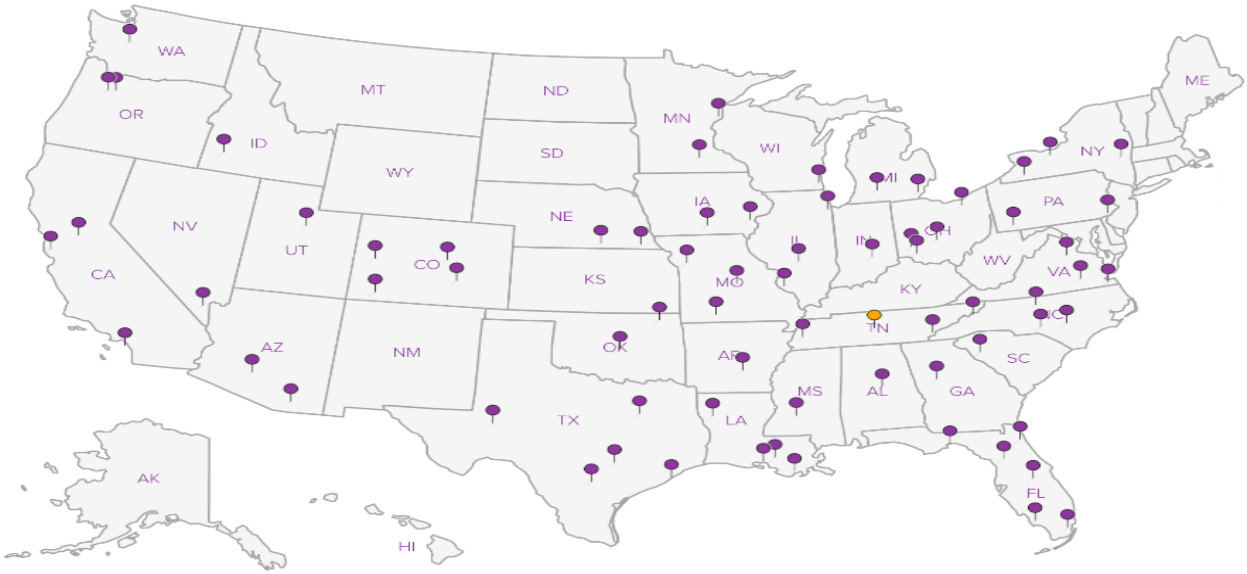
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA – ISO 17025 [5]	1461.02
Canada	1461.01
EPA–Crypto	TN00003
AIHA	100789
DOD	1461.01
USDA	S-67674

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



K152

Chain of Custody Page 1 of 1

ESC LAB SCIENCES
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Company Name/Address: TERRACON, 110 12th ST N, BIRMINGHAM, AL 35203

Billing Information: LISA SHARMAN, 110 12th St N, BHAM, AL 35203

Report to: TREY. NOLAND

Email to: TREY.NOLAND@TERRACON.COM

Project Description: EAST GLENN AVE LSE

City/Sate Collected: AUBURN, AL

Phone:

FAX:

Client Project #: E1167035

ESC Key:

Collected by: (print) M. DIGIORGIO

Site/Facility ID#:

P.O.#:

Collected by (signature): [signature]

Immediately Packed on Ice N ✓ Y

Rush? (Lab MUST Be Notified)
____ Same Day.....200%
____ Next Day.....100%
____ Two Day.....50%
____ Three Day.....25%

Date Results Needed:
Email? __No ✓Yes
FAX? __No__Yes

CoCode (lab use only)
Template/Prelogin
Shipped Via:

Analysis/Container/Preservat

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	VOCs 8260B 4oz clr jar	PAH 8270C-SIM 4oz AMB JAR	TCLP RCRA METALS 6010/7470	VOCs 8260B 40mL AMB VOA w/HCL	PAH 8270C-SIM 40mL AMB VOA No PRES	DISSOLVED LEAD 6010 500mL No PRES	TPH GO DRO	Remarks/Contaminant	Sample # (lab only)
DRUM COMPOSITE	COMP	SS	—	1/~~20~~29/16	0930	4	X	X	X				X		L814816-01/02
MW-1	GRAB	GW	—	1/~~20~~29/16	1310	6	X			X	X	X			03
MW-2	GRAB	GW	—	↓	1330	6	X			X	X	X			04
MW-3	GRAB	GW	—		1345	6	X			X	X	X			05
MW-4	GRAB	GW	—		1400	6				X	X	X			06
MW-5	GRAB	GW	—		1410	6				X	X	X			07

*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: 650371536717

pH _____ Temp _____
Flow _____ Other _____

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____	Condition: (lab use only) JW7
[signature]	1/30/16			Temp: 3.1	Bottles Received: 34+TB
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)		CoC Seals Intact ✓ Y ___ N ___ NA (OK)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 1-30-16	Time: 0900
				pH Checked:	NCF:

ANALYTICAL REPORT

February 29, 2016

Terracon Consultants - B-Ham AL.

Sample Delivery Group:	L817315
Samples Received:	01/29/2016
Project Number:	E1167035
Description:	East Glenn Ave LSI E1167035
Report To:	Trey Noland 110 12th Street North Birmingham, AL 35203

Entire Report Reviewed By:

Jimmy Hunt
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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SB-3 0-1.5FT L817315-01 Solid

Collected by	Collected date/time	Received date/time
M. DiGiorgio	01/27/16 13:45	01/29/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG846514	1	02/03/16 14:39	02/03/16 14:48	MEL
Wet Chemistry by Method 2580 B-2011	WG849225	1	02/15/16 10:37	02/15/16 11:30	SJM
Wet Chemistry by Method 3060A/7196A	WG849116	1	02/13/16 10:22	02/15/16 19:06	MAJ
Wet Chemistry by Method 9045D	WG848911	1	02/12/16 13:36	02/12/16 13:36	AMC

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jimmy Hunt
Technical Service Representative

Sample Handling and Receiving

The following samples were prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

ESC Sample ID	Project Sample ID	Method
L817315-01	SB-3_0-1.5FT	9045D

Total Solids by Method 2540 G-2011

Analyte	Result %	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	77.6		1	02/03/2016 14:48	WG846514

Wet Chemistry by Method 2580 B-2011

Analyte	Result mV	Qualifier	Dilution	Analysis date / time	Batch
ORP	116		1	02/15/2016 11:30	WG849225

Wet Chemistry by Method 3060A/7196A

Analyte	Result (dry) mg/kg	Qualifier	MDL mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chromium,Hexavalent	2.27	J	0.640	2.58	1	02/15/2016 19:06	WG849116

Wet Chemistry by Method 9045D

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
pH	7.19		1	02/12/2016 13:36	WG848911

Sample Narrative:

9045D L817315-01 WG848911: 7.19 at 23.7c

Method Blank (MB)

(MB) 02/03/16 14:47

Analyte	MB Result %	MB Qualifier	MB RDL %
Total Solids	0.000300		

L814859-01 Original Sample (OS) • Duplicate (DUP)

(OS) 02/03/16 14:47 • (DUP) 02/03/16 14:47

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	89.1	85.5	1	4.10		5

Laboratory Control Sample (LCS)

(LCS) 02/03/16 14:47

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

L815573-01 Original Sample (OS) • Duplicate (DUP)

(OS) 02/15/16 11:30 • (DUP) 02/15/16 11:30

Analyte	Original Result mV	DUP Result mV	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
ORP	66.0	62	1	6.25		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/15/16 11:30 • (LCSD) 02/15/16 11:30

Analyte	Spike Amount mV	LCS Result mV	LCSD Result mV	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
ORP	100	102	101	102	101	90.0-110			0.985	20

QUALITY CONTROL SUMMARY

L817315-01

Method Blank (MB)

(MB) 02/15/16 19:01

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chromium,Hexavalent	U		0.640	2.00

L817589-01 Original Sample (OS) • Duplicate (DUP)

(OS) 02/15/16 19:07 • (DUP) 02/15/16 19:07

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chromium,Hexavalent	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/15/16 19:02 • (LCSD) 02/15/16 19:02

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	97.4	88.4	88.8	91.0	91.0	80.0-120			0.000	20

L817589-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 02/15/16 19:07 • (MS) 02/15/16 19:09 • (MSD) 02/15/16 19:09

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Hexavalent	20.0	ND	16.4	16.4	82.0	82.0	1	75.0-125			0.000	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

L816560-06 Original Sample (OS) • Duplicate (DUP)

(OS) 02/12/16 13:36 • (DUP) 02/12/16 13:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	7.95	7.97	1	0.251		1

L817323-03 Original Sample (OS) • Duplicate (DUP)

(OS) 02/12/16 13:36 • (DUP) 02/12/16 13:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
pH	8.56	8.57	1	0.117		1

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 02/12/16 13:36 • (LCSD) 02/12/16 13:36

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	su	su	su	%	%	%			%	%
pH	6.72	6.68	6.67	99.4	99.3	98.5-102			0.150	1

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

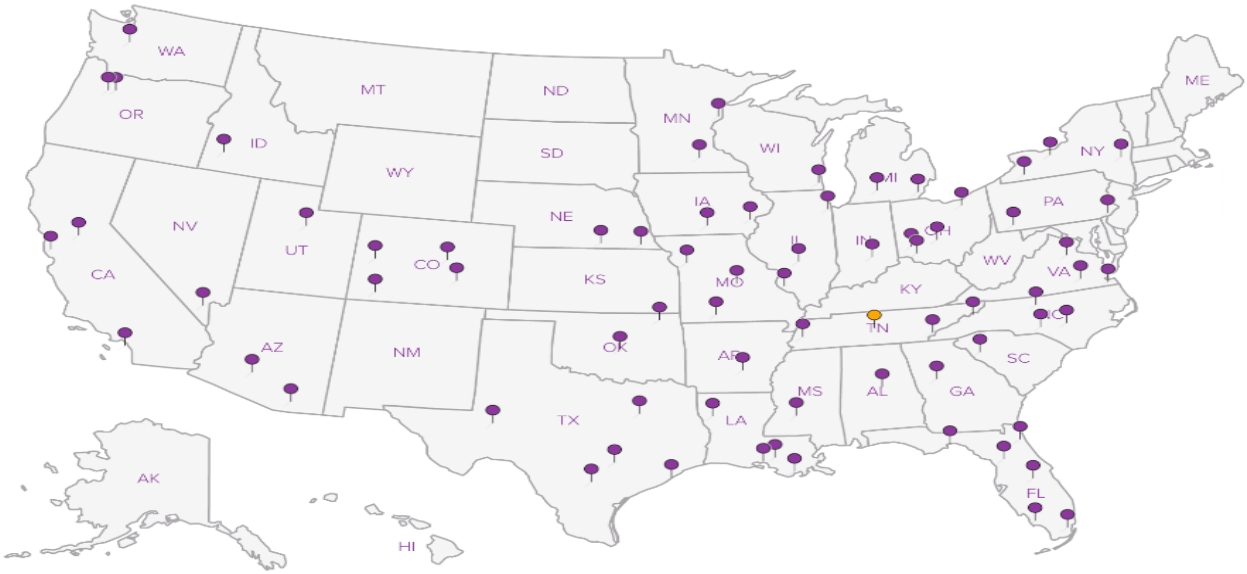
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA – ISO 17025 [5]	1461.02
Canada	1461.01
EPA–Crypto	TN00003
AIHA	100789
DOD	1461.01
USDA	S-67674

[1.] Drinking Water [2.] Underground Storage Tanks [3.] Aquatic Toxicity [4.] Chemical/Microbiological [5.] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Terracon Consultants - B-Ham AL.

110 12th Street North
Birmingham, AL 35203

Billing Information:
Lisa Sharman
110 12th Street North
Birmingham, AL 35203

Report to: TREY NOLAND

Email To: TREY.NOLAND@TERRACON.COM

Project Description: EAST GLENN AVE LSI E11167035

City/State Collected: AUBURN, AL

Phone: 205-942-1289
Fax: 205-443-1266

Client Project # E11167035

Lab Project #

Collected by (print): M. DIGIORGIO

Site/Facility ID #

P.O. #

Collected by (signature): [signature]

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LABS SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L814859

Table # E032

Acctnum: GALLET
Template: 817316
Prelogin:
TSR: 350 - Jimmy Hunt
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs 8260B	PAH 8270C-SIM	RCRA-8 METALS 7470/6010B							Rem./Contaminant	Sample # (lab only)
SB-1	COMP	SS	0-1.5	1/27/16	1300	2	X	X	X								-01
SB-1-2			1.5-5		1305	2	X	X	X								02
SB-2			0-1.5		1508	2	X	X	X								03
SB-2			15-20		1521	2	X	X	X								04
SB-3			0-1.5		1345	2	X	X	X								05
SB-3			15-20		1404	2	X	X	X							01	06
SB-4			0-1.5		1432	2	X	X	X								07
SB-4			10-15		1446	2	X	X	X								08
SB-5			0-1.5		1205	2	X	X	X								09
SB-5-5			15-20		1220	2											10

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: FG

pH _____ Temp _____
Flow _____ Other _____

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
[signature]	1/28/16		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)
			[signature]

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____

Temp: 3.2 °C Bottles Received: 15+TB

Date: 1/29/16 Time: 900

Hold #

Condition: (lab use only) GOOD

COC Seal Intact: ✓ Y ___N ___NA

pH Checked: NCF: YES

Matt Shacklock

From: Jason Romer
Sent: Thursday, February 11, 2016 11:00 AM
To: Login
Subject: L814859 - *GALLET* - relog for CR6SS

Per client request, please relog L814859-05 (SB-3 0-1.5FT) for CR6SS. Please transfer TS result accordingly. Log as R5 due Thursday, 02/18.

Thanks,
Jason

-----Original Message-----
From: Noland III, Trey G [mailto:Trey.Noland@terracon.com]
Sent: Wednesday, February 10, 2016 7:22 PM
To: Jason Romer
Cc: Jimmy Hunt
Subject: FW: ESC Lab Sciences Report for E1167035 East Glenn Ave LSI E1167035 L814859

Jason, forwarding to you per Jimmy's out-of-office reply. Thanks.

-----Original Message-----
From: Noland III, Trey G
Sent: Wednesday, February 10, 2016 7:01 PM
To: 'jhunt@esclabsciences.com'
Subject: RE: ESC Lab Sciences Report for E1167035 East Glenn Ave LSI E1167035 L814859

Jimmy,

Please run sample SB-3 0-1.5FT for hexavalent chromium. Thanks.

Trey G. Noland, P.G.
Project Geologist
Terracon
110 12th Street N I Birmingham, AL 35203 P (205) 942-1289 I F (205) 443-5302 I M (205) 441-5005
wgnoland@terracon.com I www.terracon.com

Notice: This communication and any attached files may contain privileged or other confidential information. If you have received this in error, please contact the sender immediately via reply email and immediately delete the message and any attachments without copying or disclosing the contents. Thank you.

ANALYTICAL REPORT

June 07, 2016

Terracon - B-Ham, AL

Sample Delivery Group:	L838521
Samples Received:	05/28/2016
Project Number:	E1167114
Description:	E Glenn Ave VCP
Site:	AUBURN, AL
Report To:	Trey Noland 110 12th Street North Birmingham, AL 35203

Entire Report Reviewed By:

Jimmy Hunt
Technical Service Representative

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MW-1 L838521-01 GW

Collected by: Brian Brown | Collected date/time: 05/26/16 14:12 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG877021	1	06/01/16 16:15	06/02/16 04:30	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG877077	1	06/01/16 21:35	06/02/16 08:58	FMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG876856	1	06/06/16 13:34	06/06/16 13:34	DWR

MW-2 L838521-02 GW

Collected by: Brian Brown | Collected date/time: 05/26/16 13:59 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG877021	1	06/01/16 16:15	06/02/16 04:33	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG877077	1	06/01/16 21:35	06/02/16 09:19	FMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG876856	1	06/06/16 13:51	06/06/16 13:51	DWR

MW-3 L838521-03 GW

Collected by: Brian Brown | Collected date/time: 05/26/16 13:47 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG877021	1	06/01/16 16:15	06/02/16 04:35	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG877077	1	06/01/16 21:35	06/02/16 09:41	FMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG876856	1	06/06/16 14:08	06/06/16 14:08	DWR

MW-4 L838521-04 GW

Collected by: Brian Brown | Collected date/time: 05/26/16 13:36 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG877021	1	06/01/16 16:15	06/02/16 04:38	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG877077	1	06/01/16 21:35	06/02/16 10:03	FMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG876856	1	06/06/16 14:26	06/06/16 14:26	DWR

MW-5 L838521-05 GW

Collected by: Brian Brown | Collected date/time: 05/26/16 13:23 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Metals (ICP) by Method 6010B	WG877021	1	06/01/16 16:15	06/02/16 04:41	LTB
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG877077	1	06/01/16 21:35	06/02/16 10:25	FMB
Volatile Organic Compounds (GC/MS) by Method 8260B	WG878176	1	06/07/16 02:34	06/07/16 02:34	DWR

DUPLICATE L838521-06 GW

Collected by: Brian Brown | Collected date/time: 05/26/16 00:00 | Received date/time: 05/28/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG878176	1	06/07/16 02:55	06/07/16 02:55	DWR

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jimmy Hunt
Technical Service Representative

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	ND		0.00500	1	06/02/2016 04:30	WG877021

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	06/06/2016 13:34	WG876856
Acrolein	ND		0.0500	1	06/06/2016 13:34	WG876856
Acrylonitrile	ND		0.0100	1	06/06/2016 13:34	WG876856
Benzene	ND		0.00100	1	06/06/2016 13:34	WG876856
Bromobenzene	ND		0.00100	1	06/06/2016 13:34	WG876856
Bromodichloromethane	ND		0.00100	1	06/06/2016 13:34	WG876856
Bromoform	ND		0.00100	1	06/06/2016 13:34	WG876856
Bromomethane	ND		0.00500	1	06/06/2016 13:34	WG876856
n-Butylbenzene	ND		0.00100	1	06/06/2016 13:34	WG876856
sec-Butylbenzene	ND		0.00100	1	06/06/2016 13:34	WG876856
tert-Butylbenzene	ND		0.00100	1	06/06/2016 13:34	WG876856
Carbon tetrachloride	ND		0.00100	1	06/06/2016 13:34	WG876856
Chlorobenzene	ND		0.00100	1	06/06/2016 13:34	WG876856
Chlorodibromomethane	ND		0.00100	1	06/06/2016 13:34	WG876856
Chloroethane	ND		0.00500	1	06/06/2016 13:34	WG876856
2-Chloroethyl vinyl ether	ND	J4	0.0500	1	06/06/2016 13:34	WG876856
Chloroform	ND		0.00500	1	06/06/2016 13:34	WG876856
Chloromethane	ND		0.00250	1	06/06/2016 13:34	WG876856
2-Chlorotoluene	ND		0.00100	1	06/06/2016 13:34	WG876856
4-Chlorotoluene	ND		0.00100	1	06/06/2016 13:34	WG876856
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/06/2016 13:34	WG876856
1,2-Dibromoethane	ND		0.00100	1	06/06/2016 13:34	WG876856
Dibromomethane	ND		0.00100	1	06/06/2016 13:34	WG876856
1,2-Dichlorobenzene	ND		0.00100	1	06/06/2016 13:34	WG876856
1,3-Dichlorobenzene	ND		0.00100	1	06/06/2016 13:34	WG876856
1,4-Dichlorobenzene	ND		0.00100	1	06/06/2016 13:34	WG876856
Dichlorodifluoromethane	ND		0.00500	1	06/06/2016 13:34	WG876856
1,1-Dichloroethane	ND		0.00100	1	06/06/2016 13:34	WG876856
1,2-Dichloroethane	ND		0.00100	1	06/06/2016 13:34	WG876856
1,1-Dichloroethene	ND		0.00100	1	06/06/2016 13:34	WG876856
cis-1,2-Dichloroethene	ND		0.00100	1	06/06/2016 13:34	WG876856
trans-1,2-Dichloroethene	ND		0.00100	1	06/06/2016 13:34	WG876856
1,2-Dichloropropane	ND		0.00100	1	06/06/2016 13:34	WG876856
1,1-Dichloropropene	ND		0.00100	1	06/06/2016 13:34	WG876856
1,3-Dichloropropane	ND		0.00100	1	06/06/2016 13:34	WG876856
cis-1,3-Dichloropropene	ND		0.00100	1	06/06/2016 13:34	WG876856
trans-1,3-Dichloropropene	ND		0.00100	1	06/06/2016 13:34	WG876856
2,2-Dichloropropane	ND		0.00100	1	06/06/2016 13:34	WG876856
Di-isopropyl ether	ND		0.00100	1	06/06/2016 13:34	WG876856
Ethylbenzene	ND		0.00100	1	06/06/2016 13:34	WG876856
Hexachloro-1,3-butadiene	ND		0.00100	1	06/06/2016 13:34	WG876856
Isopropylbenzene	ND		0.00100	1	06/06/2016 13:34	WG876856
p-Isopropyltoluene	ND		0.00100	1	06/06/2016 13:34	WG876856
2-Butanone (MEK)	ND		0.0100	1	06/06/2016 13:34	WG876856
Methylene Chloride	ND		0.00500	1	06/06/2016 13:34	WG876856
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/06/2016 13:34	WG876856
Methyl tert-butyl ether	ND		0.00100	1	06/06/2016 13:34	WG876856
Naphthalene	ND		0.00500	1	06/06/2016 13:34	WG876856
n-Propylbenzene	ND		0.00100	1	06/06/2016 13:34	WG876856
Styrene	ND		0.00100	1	06/06/2016 13:34	WG876856

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/06/2016 13:34	WG876856
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/06/2016 13:34	WG876856
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/06/2016 13:34	WG876856
Tetrachloroethene	ND		0.00100	1	06/06/2016 13:34	WG876856
Toluene	ND		0.00500	1	06/06/2016 13:34	WG876856
1,2,3-Trichlorobenzene	ND		0.00100	1	06/06/2016 13:34	WG876856
1,2,4-Trichlorobenzene	ND		0.00100	1	06/06/2016 13:34	WG876856
1,1,1-Trichloroethane	ND		0.00100	1	06/06/2016 13:34	WG876856
1,1,2-Trichloroethane	ND		0.00100	1	06/06/2016 13:34	WG876856
Trichloroethene	ND		0.00100	1	06/06/2016 13:34	WG876856
Trichlorofluoromethane	ND		0.00500	1	06/06/2016 13:34	WG876856
1,2,3-Trichloropropane	ND		0.00250	1	06/06/2016 13:34	WG876856
1,2,4-Trimethylbenzene	ND		0.00100	1	06/06/2016 13:34	WG876856
1,2,3-Trimethylbenzene	ND		0.00100	1	06/06/2016 13:34	WG876856
1,3,5-Trimethylbenzene	ND		0.00100	1	06/06/2016 13:34	WG876856
Vinyl chloride	ND		0.00100	1	06/06/2016 13:34	WG876856
Xylenes, Total	ND		0.00300	1	06/06/2016 13:34	WG876856
(S) Toluene-d8	*101*		*90.0-115*		*06/06/2016 13:34*	WG876856
(S) Dibromofluoromethane	*97.9*		*79.0-121*		*06/06/2016 13:34*	WG876856
(S) 4-Bromofluorobenzene	*105*		*80.1-120*		*06/06/2016 13:34*	WG876856

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0000500	1	06/02/2016 08:58	WG877077
Acenaphthene	ND		0.0000500	1	06/02/2016 08:58	WG877077
Acenaphthylene	ND		0.0000500	1	06/02/2016 08:58	WG877077
Benzo(a)anthracene	ND		0.0000500	1	06/02/2016 08:58	WG877077
Benzo(a)pyrene	ND		0.0000500	1	06/02/2016 08:58	WG877077
Benzo(b)fluoranthene	ND		0.0000500	1	06/02/2016 08:58	WG877077
Benzo(g,h,i)perylene	ND		0.0000500	1	06/02/2016 08:58	WG877077
Benzo(k)fluoranthene	ND		0.0000500	1	06/02/2016 08:58	WG877077
Chrysene	ND		0.0000500	1	06/02/2016 08:58	WG877077
Dibenz(a,h)anthracene	ND		0.0000500	1	06/02/2016 08:58	WG877077
Fluoranthene	ND		0.0000500	1	06/02/2016 08:58	WG877077
Fluorene	ND		0.0000500	1	06/02/2016 08:58	WG877077
Indeno(1,2,3-cd)pyrene	ND		0.0000500	1	06/02/2016 08:58	WG877077
Naphthalene	ND		0.000250	1	06/02/2016 08:58	WG877077
Phenanthrene	ND		0.0000500	1	06/02/2016 08:58	WG877077
Pyrene	ND		0.0000500	1	06/02/2016 08:58	WG877077
1-Methylnaphthalene	ND		0.000250	1	06/02/2016 08:58	WG877077
2-Methylnaphthalene	ND		0.000250	1	06/02/2016 08:58	WG877077
2-Chloronaphthalene	ND		0.000250	1	06/02/2016 08:58	WG877077
(S) Nitrobenzene-d5	*68.0*		*33.8-179*		*06/02/2016 08:58*	WG877077
(S) 2-Fluorobiphenyl	*92.9*		*55.5-150*		*06/02/2016 08:58*	WG877077
(S) p-Terphenyl-d14	*76.7*		*46.2-163*		*06/02/2016 08:58*	WG877077

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	ND		0.00500	1	06/02/2016 04:33	WG877021

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	06/06/2016 13:51	WG876856
Acrolein	ND		0.0500	1	06/06/2016 13:51	WG876856
Acrylonitrile	ND		0.0100	1	06/06/2016 13:51	WG876856
Benzene	ND		0.00100	1	06/06/2016 13:51	WG876856
Bromobenzene	ND		0.00100	1	06/06/2016 13:51	WG876856
Bromodichloromethane	ND		0.00100	1	06/06/2016 13:51	WG876856
Bromoform	ND		0.00100	1	06/06/2016 13:51	WG876856
Bromomethane	ND		0.00500	1	06/06/2016 13:51	WG876856
n-Butylbenzene	ND		0.00100	1	06/06/2016 13:51	WG876856
sec-Butylbenzene	ND		0.00100	1	06/06/2016 13:51	WG876856
tert-Butylbenzene	ND		0.00100	1	06/06/2016 13:51	WG876856
Carbon tetrachloride	ND		0.00100	1	06/06/2016 13:51	WG876856
Chlorobenzene	ND		0.00100	1	06/06/2016 13:51	WG876856
Chlorodibromomethane	ND		0.00100	1	06/06/2016 13:51	WG876856
Chloroethane	ND		0.00500	1	06/06/2016 13:51	WG876856
2-Chloroethyl vinyl ether	ND	J4	0.0500	1	06/06/2016 13:51	WG876856
Chloroform	ND		0.00500	1	06/06/2016 13:51	WG876856
Chloromethane	ND		0.00250	1	06/06/2016 13:51	WG876856
2-Chlorotoluene	ND		0.00100	1	06/06/2016 13:51	WG876856
4-Chlorotoluene	ND		0.00100	1	06/06/2016 13:51	WG876856
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/06/2016 13:51	WG876856
1,2-Dibromoethane	ND		0.00100	1	06/06/2016 13:51	WG876856
Dibromomethane	ND		0.00100	1	06/06/2016 13:51	WG876856
1,2-Dichlorobenzene	ND		0.00100	1	06/06/2016 13:51	WG876856
1,3-Dichlorobenzene	ND		0.00100	1	06/06/2016 13:51	WG876856
1,4-Dichlorobenzene	ND		0.00100	1	06/06/2016 13:51	WG876856
Dichlorodifluoromethane	ND		0.00500	1	06/06/2016 13:51	WG876856
1,1-Dichloroethane	ND		0.00100	1	06/06/2016 13:51	WG876856
1,2-Dichloroethane	ND		0.00100	1	06/06/2016 13:51	WG876856
1,1-Dichloroethene	ND		0.00100	1	06/06/2016 13:51	WG876856
cis-1,2-Dichloroethene	ND		0.00100	1	06/06/2016 13:51	WG876856
trans-1,2-Dichloroethene	ND		0.00100	1	06/06/2016 13:51	WG876856
1,2-Dichloropropane	ND		0.00100	1	06/06/2016 13:51	WG876856
1,1-Dichloropropene	ND		0.00100	1	06/06/2016 13:51	WG876856
1,3-Dichloropropane	ND		0.00100	1	06/06/2016 13:51	WG876856
cis-1,3-Dichloropropene	ND		0.00100	1	06/06/2016 13:51	WG876856
trans-1,3-Dichloropropene	ND		0.00100	1	06/06/2016 13:51	WG876856
2,2-Dichloropropane	ND		0.00100	1	06/06/2016 13:51	WG876856
Di-isopropyl ether	ND		0.00100	1	06/06/2016 13:51	WG876856
Ethylbenzene	ND		0.00100	1	06/06/2016 13:51	WG876856
Hexachloro-1,3-butadiene	ND		0.00100	1	06/06/2016 13:51	WG876856
Isopropylbenzene	ND		0.00100	1	06/06/2016 13:51	WG876856
p-Isopropyltoluene	ND		0.00100	1	06/06/2016 13:51	WG876856
2-Butanone (MEK)	ND		0.0100	1	06/06/2016 13:51	WG876856
Methylene Chloride	ND		0.00500	1	06/06/2016 13:51	WG876856
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/06/2016 13:51	WG876856
Methyl tert-butyl ether	ND		0.00100	1	06/06/2016 13:51	WG876856
Naphthalene	ND		0.00500	1	06/06/2016 13:51	WG876856
n-Propylbenzene	ND		0.00100	1	06/06/2016 13:51	WG876856
Styrene	ND		0.00100	1	06/06/2016 13:51	WG876856

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/06/2016 13:51	WG876856
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/06/2016 13:51	WG876856
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/06/2016 13:51	WG876856
Tetrachloroethene	ND		0.00100	1	06/06/2016 13:51	WG876856
Toluene	ND		0.00500	1	06/06/2016 13:51	WG876856
1,2,3-Trichlorobenzene	ND		0.00100	1	06/06/2016 13:51	WG876856
1,2,4-Trichlorobenzene	ND		0.00100	1	06/06/2016 13:51	WG876856
1,1,1-Trichloroethane	ND		0.00100	1	06/06/2016 13:51	WG876856
1,1,2-Trichloroethane	ND		0.00100	1	06/06/2016 13:51	WG876856
Trichloroethene	ND		0.00100	1	06/06/2016 13:51	WG876856
Trichlorofluoromethane	ND		0.00500	1	06/06/2016 13:51	WG876856
1,2,3-Trichloropropane	ND		0.00250	1	06/06/2016 13:51	WG876856
1,2,4-Trimethylbenzene	ND		0.00100	1	06/06/2016 13:51	WG876856
1,2,3-Trimethylbenzene	ND		0.00100	1	06/06/2016 13:51	WG876856
1,3,5-Trimethylbenzene	ND		0.00100	1	06/06/2016 13:51	WG876856
Vinyl chloride	ND		0.00100	1	06/06/2016 13:51	WG876856
Xylenes, Total	ND		0.00300	1	06/06/2016 13:51	WG876856
(S) Toluene-d8	*100*		*90.0-115*		*06/06/2016 13:51*	WG876856
(S) Dibromofluoromethane	*96.3*		*79.0-121*		*06/06/2016 13:51*	WG876856
(S) 4-Bromofluorobenzene	*105*		*80.1-120*		*06/06/2016 13:51*	WG876856

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0000500	1	06/02/2016 09:19	WG877077
Acenaphthene	ND		0.0000500	1	06/02/2016 09:19	WG877077
Acenaphthylene	ND		0.0000500	1	06/02/2016 09:19	WG877077
Benzo(a)anthracene	ND		0.0000500	1	06/02/2016 09:19	WG877077
Benzo(a)pyrene	ND		0.0000500	1	06/02/2016 09:19	WG877077
Benzo(b)fluoranthene	ND		0.0000500	1	06/02/2016 09:19	WG877077
Benzo(g,h,i)perylene	ND		0.0000500	1	06/02/2016 09:19	WG877077
Benzo(k)fluoranthene	ND		0.0000500	1	06/02/2016 09:19	WG877077
Chrysene	ND		0.0000500	1	06/02/2016 09:19	WG877077
Dibenz(a,h)anthracene	ND		0.0000500	1	06/02/2016 09:19	WG877077
Fluoranthene	ND		0.0000500	1	06/02/2016 09:19	WG877077
Fluorene	ND		0.0000500	1	06/02/2016 09:19	WG877077
Indeno(1,2,3-cd)pyrene	ND		0.0000500	1	06/02/2016 09:19	WG877077
Naphthalene	ND		0.000250	1	06/02/2016 09:19	WG877077
Phenanthrene	ND		0.0000500	1	06/02/2016 09:19	WG877077
Pyrene	ND		0.0000500	1	06/02/2016 09:19	WG877077
1-Methylnaphthalene	ND		0.000250	1	06/02/2016 09:19	WG877077
2-Methylnaphthalene	ND		0.000250	1	06/02/2016 09:19	WG877077
2-Chloronaphthalene	ND		0.000250	1	06/02/2016 09:19	WG877077
(S) Nitrobenzene-d5	*68.4*		*33.8-179*		*06/02/2016 09:19*	WG877077
(S) 2-Fluorobiphenyl	*93.2*		*55.5-150*		*06/02/2016 09:19*	WG877077
(S) p-Terphenyl-d14	*77.9*		*46.2-163*		*06/02/2016 09:19*	WG877077

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	ND		0.00500	1	06/02/2016 04:35	WG877021

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	06/06/2016 14:08	WG876856
Acrolein	ND		0.0500	1	06/06/2016 14:08	WG876856
Acrylonitrile	ND		0.0100	1	06/06/2016 14:08	WG876856
Benzene	ND		0.00100	1	06/06/2016 14:08	WG876856
Bromobenzene	ND		0.00100	1	06/06/2016 14:08	WG876856
Bromodichloromethane	ND		0.00100	1	06/06/2016 14:08	WG876856
Bromoform	ND		0.00100	1	06/06/2016 14:08	WG876856
Bromomethane	ND		0.00500	1	06/06/2016 14:08	WG876856
n-Butylbenzene	ND		0.00100	1	06/06/2016 14:08	WG876856
sec-Butylbenzene	ND		0.00100	1	06/06/2016 14:08	WG876856
tert-Butylbenzene	ND		0.00100	1	06/06/2016 14:08	WG876856
Carbon tetrachloride	ND		0.00100	1	06/06/2016 14:08	WG876856
Chlorobenzene	ND		0.00100	1	06/06/2016 14:08	WG876856
Chlorodibromomethane	ND		0.00100	1	06/06/2016 14:08	WG876856
Chloroethane	ND		0.00500	1	06/06/2016 14:08	WG876856
2-Chloroethyl vinyl ether	ND	J4	0.0500	1	06/06/2016 14:08	WG876856
Chloroform	ND		0.00500	1	06/06/2016 14:08	WG876856
Chloromethane	ND		0.00250	1	06/06/2016 14:08	WG876856
2-Chlorotoluene	ND		0.00100	1	06/06/2016 14:08	WG876856
4-Chlorotoluene	ND		0.00100	1	06/06/2016 14:08	WG876856
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/06/2016 14:08	WG876856
1,2-Dibromoethane	ND		0.00100	1	06/06/2016 14:08	WG876856
Dibromomethane	ND		0.00100	1	06/06/2016 14:08	WG876856
1,2-Dichlorobenzene	ND		0.00100	1	06/06/2016 14:08	WG876856
1,3-Dichlorobenzene	ND		0.00100	1	06/06/2016 14:08	WG876856
1,4-Dichlorobenzene	ND		0.00100	1	06/06/2016 14:08	WG876856
Dichlorodifluoromethane	ND		0.00500	1	06/06/2016 14:08	WG876856
1,1-Dichloroethane	ND		0.00100	1	06/06/2016 14:08	WG876856
1,2-Dichloroethane	ND		0.00100	1	06/06/2016 14:08	WG876856
1,1-Dichloroethene	ND		0.00100	1	06/06/2016 14:08	WG876856
cis-1,2-Dichloroethene	ND		0.00100	1	06/06/2016 14:08	WG876856
trans-1,2-Dichloroethene	ND		0.00100	1	06/06/2016 14:08	WG876856
1,2-Dichloropropane	ND		0.00100	1	06/06/2016 14:08	WG876856
1,1-Dichloropropene	ND		0.00100	1	06/06/2016 14:08	WG876856
1,3-Dichloropropane	ND		0.00100	1	06/06/2016 14:08	WG876856
cis-1,3-Dichloropropene	ND		0.00100	1	06/06/2016 14:08	WG876856
trans-1,3-Dichloropropene	ND		0.00100	1	06/06/2016 14:08	WG876856
2,2-Dichloropropane	ND		0.00100	1	06/06/2016 14:08	WG876856
Di-isopropyl ether	ND		0.00100	1	06/06/2016 14:08	WG876856
Ethylbenzene	ND		0.00100	1	06/06/2016 14:08	WG876856
Hexachloro-1,3-butadiene	ND		0.00100	1	06/06/2016 14:08	WG876856
Isopropylbenzene	ND		0.00100	1	06/06/2016 14:08	WG876856
p-Isopropyltoluene	ND		0.00100	1	06/06/2016 14:08	WG876856
2-Butanone (MEK)	ND		0.0100	1	06/06/2016 14:08	WG876856
Methylene Chloride	ND		0.00500	1	06/06/2016 14:08	WG876856
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/06/2016 14:08	WG876856
Methyl tert-butyl ether	ND		0.00100	1	06/06/2016 14:08	WG876856
Naphthalene	ND		0.00500	1	06/06/2016 14:08	WG876856
n-Propylbenzene	ND		0.00100	1	06/06/2016 14:08	WG876856
Styrene	ND		0.00100	1	06/06/2016 14:08	WG876856

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/06/2016 14:08	WG876856
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/06/2016 14:08	WG876856
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/06/2016 14:08	WG876856
Tetrachloroethene	ND		0.00100	1	06/06/2016 14:08	WG876856
Toluene	ND		0.00500	1	06/06/2016 14:08	WG876856
1,2,3-Trichlorobenzene	ND		0.00100	1	06/06/2016 14:08	WG876856
1,2,4-Trichlorobenzene	ND		0.00100	1	06/06/2016 14:08	WG876856
1,1,1-Trichloroethane	ND		0.00100	1	06/06/2016 14:08	WG876856
1,1,2-Trichloroethane	ND		0.00100	1	06/06/2016 14:08	WG876856
Trichloroethene	ND		0.00100	1	06/06/2016 14:08	WG876856
Trichlorofluoromethane	ND		0.00500	1	06/06/2016 14:08	WG876856
1,2,3-Trichloropropane	ND		0.00250	1	06/06/2016 14:08	WG876856
1,2,4-Trimethylbenzene	ND		0.00100	1	06/06/2016 14:08	WG876856
1,2,3-Trimethylbenzene	ND		0.00100	1	06/06/2016 14:08	WG876856
1,3,5-Trimethylbenzene	ND		0.00100	1	06/06/2016 14:08	WG876856
Vinyl chloride	ND		0.00100	1	06/06/2016 14:08	WG876856
Xylenes, Total	ND		0.00300	1	06/06/2016 14:08	WG876856
(S) Toluene-d8	*103*		*90.0-115*		*06/06/2016 14:08*	WG876856
(S) Dibromofluoromethane	*100*		*79.0-121*		*06/06/2016 14:08*	WG876856
(S) 4-Bromofluorobenzene	*105*		*80.1-120*		*06/06/2016 14:08*	WG876856

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0000500	1	06/02/2016 09:41	WG877077
Acenaphthene	0.0000668		0.0000500	1	06/02/2016 09:41	WG877077
Acenaphthylene	ND		0.0000500	1	06/02/2016 09:41	WG877077
Benzo(a)anthracene	ND		0.0000500	1	06/02/2016 09:41	WG877077
Benzo(a)pyrene	ND		0.0000500	1	06/02/2016 09:41	WG877077
Benzo(b)fluoranthene	ND		0.0000500	1	06/02/2016 09:41	WG877077
Benzo(g,h,i)perylene	ND		0.0000500	1	06/02/2016 09:41	WG877077
Benzo(k)fluoranthene	ND		0.0000500	1	06/02/2016 09:41	WG877077
Chrysene	ND		0.0000500	1	06/02/2016 09:41	WG877077
Dibenz(a,h)anthracene	ND		0.0000500	1	06/02/2016 09:41	WG877077
Fluoranthene	ND		0.0000500	1	06/02/2016 09:41	WG877077
Fluorene	ND		0.0000500	1	06/02/2016 09:41	WG877077
Indeno(1,2,3-cd)pyrene	ND		0.0000500	1	06/02/2016 09:41	WG877077
Naphthalene	ND		0.000250	1	06/02/2016 09:41	WG877077
Phenanthrene	ND		0.0000500	1	06/02/2016 09:41	WG877077
Pyrene	ND		0.0000500	1	06/02/2016 09:41	WG877077
1-Methylnaphthalene	ND		0.000250	1	06/02/2016 09:41	WG877077
2-Methylnaphthalene	ND		0.000250	1	06/02/2016 09:41	WG877077
2-Chloronaphthalene	ND		0.000250	1	06/02/2016 09:41	WG877077
(S) Nitrobenzene-d5	*65.8*		*33.8-179*		*06/02/2016 09:41*	WG877077
(S) 2-Fluorobiphenyl	*95.2*		*55.5-150*		*06/02/2016 09:41*	WG877077
(S) p-Terphenyl-d14	*78.9*		*46.2-163*		*06/02/2016 09:41*	WG877077

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	ND		0.00500	1	06/02/2016 04:38	WG877021

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	06/06/2016 14:26	WG876856
Acrolein	ND		0.0500	1	06/06/2016 14:26	WG876856
Acrylonitrile	ND		0.0100	1	06/06/2016 14:26	WG876856
Benzene	ND		0.00100	1	06/06/2016 14:26	WG876856
Bromobenzene	ND		0.00100	1	06/06/2016 14:26	WG876856
Bromodichloromethane	ND		0.00100	1	06/06/2016 14:26	WG876856
Bromoform	ND		0.00100	1	06/06/2016 14:26	WG876856
Bromomethane	ND		0.00500	1	06/06/2016 14:26	WG876856
n-Butylbenzene	ND		0.00100	1	06/06/2016 14:26	WG876856
sec-Butylbenzene	ND		0.00100	1	06/06/2016 14:26	WG876856
tert-Butylbenzene	ND		0.00100	1	06/06/2016 14:26	WG876856
Carbon tetrachloride	ND		0.00100	1	06/06/2016 14:26	WG876856
Chlorobenzene	ND		0.00100	1	06/06/2016 14:26	WG876856
Chlorodibromomethane	ND		0.00100	1	06/06/2016 14:26	WG876856
Chloroethane	ND		0.00500	1	06/06/2016 14:26	WG876856
2-Chloroethyl vinyl ether	ND	J4	0.0500	1	06/06/2016 14:26	WG876856
Chloroform	ND		0.00500	1	06/06/2016 14:26	WG876856
Chloromethane	ND		0.00250	1	06/06/2016 14:26	WG876856
2-Chlorotoluene	ND		0.00100	1	06/06/2016 14:26	WG876856
4-Chlorotoluene	ND		0.00100	1	06/06/2016 14:26	WG876856
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/06/2016 14:26	WG876856
1,2-Dibromoethane	ND		0.00100	1	06/06/2016 14:26	WG876856
Dibromomethane	ND		0.00100	1	06/06/2016 14:26	WG876856
1,2-Dichlorobenzene	ND		0.00100	1	06/06/2016 14:26	WG876856
1,3-Dichlorobenzene	ND		0.00100	1	06/06/2016 14:26	WG876856
1,4-Dichlorobenzene	ND		0.00100	1	06/06/2016 14:26	WG876856
Dichlorodifluoromethane	ND		0.00500	1	06/06/2016 14:26	WG876856
1,1-Dichloroethane	ND		0.00100	1	06/06/2016 14:26	WG876856
1,2-Dichloroethane	ND		0.00100	1	06/06/2016 14:26	WG876856
1,1-Dichloroethene	ND		0.00100	1	06/06/2016 14:26	WG876856
cis-1,2-Dichloroethene	ND		0.00100	1	06/06/2016 14:26	WG876856
trans-1,2-Dichloroethene	ND		0.00100	1	06/06/2016 14:26	WG876856
1,2-Dichloropropane	ND		0.00100	1	06/06/2016 14:26	WG876856
1,1-Dichloropropene	ND		0.00100	1	06/06/2016 14:26	WG876856
1,3-Dichloropropane	ND		0.00100	1	06/06/2016 14:26	WG876856
cis-1,3-Dichloropropene	ND		0.00100	1	06/06/2016 14:26	WG876856
trans-1,3-Dichloropropene	ND		0.00100	1	06/06/2016 14:26	WG876856
2,2-Dichloropropane	ND		0.00100	1	06/06/2016 14:26	WG876856
Di-isopropyl ether	0.00128		0.00100	1	06/06/2016 14:26	WG876856
Ethylbenzene	ND		0.00100	1	06/06/2016 14:26	WG876856
Hexachloro-1,3-butadiene	ND		0.00100	1	06/06/2016 14:26	WG876856
Isopropylbenzene	ND		0.00100	1	06/06/2016 14:26	WG876856
p-Isopropyltoluene	ND		0.00100	1	06/06/2016 14:26	WG876856
2-Butanone (MEK)	ND		0.0100	1	06/06/2016 14:26	WG876856
Methylene Chloride	ND		0.00500	1	06/06/2016 14:26	WG876856
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/06/2016 14:26	WG876856
Methyl tert-butyl ether	ND		0.00100	1	06/06/2016 14:26	WG876856
Naphthalene	ND		0.00500	1	06/06/2016 14:26	WG876856
n-Propylbenzene	ND		0.00100	1	06/06/2016 14:26	WG876856
Styrene	ND		0.00100	1	06/06/2016 14:26	WG876856

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/06/2016 14:26	WG876856
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/06/2016 14:26	WG876856
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/06/2016 14:26	WG876856
Tetrachloroethene	ND		0.00100	1	06/06/2016 14:26	WG876856
Toluene	ND		0.00500	1	06/06/2016 14:26	WG876856
1,2,3-Trichlorobenzene	ND		0.00100	1	06/06/2016 14:26	WG876856
1,2,4-Trichlorobenzene	ND		0.00100	1	06/06/2016 14:26	WG876856
1,1,1-Trichloroethane	ND		0.00100	1	06/06/2016 14:26	WG876856
1,1,2-Trichloroethane	ND		0.00100	1	06/06/2016 14:26	WG876856
Trichloroethene	ND		0.00100	1	06/06/2016 14:26	WG876856
Trichlorofluoromethane	ND		0.00500	1	06/06/2016 14:26	WG876856
1,2,3-Trichloropropane	ND		0.00250	1	06/06/2016 14:26	WG876856
1,2,4-Trimethylbenzene	ND		0.00100	1	06/06/2016 14:26	WG876856
1,2,3-Trimethylbenzene	ND		0.00100	1	06/06/2016 14:26	WG876856
1,3,5-Trimethylbenzene	ND		0.00100	1	06/06/2016 14:26	WG876856
Vinyl chloride	ND		0.00100	1	06/06/2016 14:26	WG876856
Xylenes, Total	ND		0.00300	1	06/06/2016 14:26	WG876856
(S) Toluene-d8	*102*		*90.0-115*		*06/06/2016 14:26*	WG876856
(S) Dibromofluoromethane	*98.9*		*79.0-121*		*06/06/2016 14:26*	WG876856
(S) 4-Bromofluorobenzene	*108*		*80.1-120*		*06/06/2016 14:26*	WG876856

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0000500	1	06/02/2016 10:03	WG877077
Acenaphthene	ND		0.0000500	1	06/02/2016 10:03	WG877077
Acenaphthylene	ND		0.0000500	1	06/02/2016 10:03	WG877077
Benzo(a)anthracene	ND		0.0000500	1	06/02/2016 10:03	WG877077
Benzo(a)pyrene	ND		0.0000500	1	06/02/2016 10:03	WG877077
Benzo(b)fluoranthene	ND		0.0000500	1	06/02/2016 10:03	WG877077
Benzo(g,h,i)perylene	ND		0.0000500	1	06/02/2016 10:03	WG877077
Benzo(k)fluoranthene	ND		0.0000500	1	06/02/2016 10:03	WG877077
Chrysene	ND		0.0000500	1	06/02/2016 10:03	WG877077
Dibenz(a,h)anthracene	ND		0.0000500	1	06/02/2016 10:03	WG877077
Fluoranthene	ND		0.0000500	1	06/02/2016 10:03	WG877077
Fluorene	ND		0.0000500	1	06/02/2016 10:03	WG877077
Indeno(1,2,3-cd)pyrene	ND		0.0000500	1	06/02/2016 10:03	WG877077
Naphthalene	ND		0.000250	1	06/02/2016 10:03	WG877077
Phenanthrene	ND		0.0000500	1	06/02/2016 10:03	WG877077
Pyrene	ND		0.0000500	1	06/02/2016 10:03	WG877077
1-Methylnaphthalene	ND		0.000250	1	06/02/2016 10:03	WG877077
2-Methylnaphthalene	ND		0.000250	1	06/02/2016 10:03	WG877077
2-Chloronaphthalene	ND		0.000250	1	06/02/2016 10:03	WG877077
(S) Nitrobenzene-d5	*64.0*		*33.8-179*		*06/02/2016 10:03*	WG877077
(S) 2-Fluorobiphenyl	*89.6*		*55.5-150*		*06/02/2016 10:03*	WG877077
(S) p-Terphenyl-d14	*76.0*		*46.2-163*		*06/02/2016 10:03*	WG877077

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	ND		0.00500	1	06/02/2016 04:41	WG877021

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	06/07/2016 02:34	WG878176
Acrolein	ND		0.0500	1	06/07/2016 02:34	WG878176
Acrylonitrile	ND		0.0100	1	06/07/2016 02:34	WG878176
Benzene	ND		0.00100	1	06/07/2016 02:34	WG878176
Bromobenzene	ND		0.00100	1	06/07/2016 02:34	WG878176
Bromodichloromethane	ND		0.00100	1	06/07/2016 02:34	WG878176
Bromoform	ND		0.00100	1	06/07/2016 02:34	WG878176
Bromomethane	ND		0.00500	1	06/07/2016 02:34	WG878176
n-Butylbenzene	ND		0.00100	1	06/07/2016 02:34	WG878176
sec-Butylbenzene	ND		0.00100	1	06/07/2016 02:34	WG878176
tert-Butylbenzene	ND		0.00100	1	06/07/2016 02:34	WG878176
Carbon tetrachloride	ND	J4	0.00100	1	06/07/2016 02:34	WG878176
Chlorobenzene	ND		0.00100	1	06/07/2016 02:34	WG878176
Chlorodibromomethane	ND		0.00100	1	06/07/2016 02:34	WG878176
Chloroethane	ND		0.00500	1	06/07/2016 02:34	WG878176
2-Chloroethyl vinyl ether	ND		0.0500	1	06/07/2016 02:34	WG878176
Chloroform	ND		0.00500	1	06/07/2016 02:34	WG878176
Chloromethane	ND		0.00250	1	06/07/2016 02:34	WG878176
2-Chlorotoluene	ND		0.00100	1	06/07/2016 02:34	WG878176
4-Chlorotoluene	ND		0.00100	1	06/07/2016 02:34	WG878176
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/07/2016 02:34	WG878176
1,2-Dibromoethane	ND		0.00100	1	06/07/2016 02:34	WG878176
Dibromomethane	ND		0.00100	1	06/07/2016 02:34	WG878176
1,2-Dichlorobenzene	ND		0.00100	1	06/07/2016 02:34	WG878176
1,3-Dichlorobenzene	ND		0.00100	1	06/07/2016 02:34	WG878176
1,4-Dichlorobenzene	ND		0.00100	1	06/07/2016 02:34	WG878176
Dichlorodifluoromethane	ND		0.00500	1	06/07/2016 02:34	WG878176
1,1-Dichloroethane	ND		0.00100	1	06/07/2016 02:34	WG878176
1,2-Dichloroethane	ND		0.00100	1	06/07/2016 02:34	WG878176
1,1-Dichloroethene	ND		0.00100	1	06/07/2016 02:34	WG878176
cis-1,2-Dichloroethene	ND		0.00100	1	06/07/2016 02:34	WG878176
trans-1,2-Dichloroethene	ND		0.00100	1	06/07/2016 02:34	WG878176
1,2-Dichloropropane	ND		0.00100	1	06/07/2016 02:34	WG878176
1,1-Dichloropropene	ND		0.00100	1	06/07/2016 02:34	WG878176
1,3-Dichloropropane	ND		0.00100	1	06/07/2016 02:34	WG878176
cis-1,3-Dichloropropene	ND		0.00100	1	06/07/2016 02:34	WG878176
trans-1,3-Dichloropropene	ND		0.00100	1	06/07/2016 02:34	WG878176
2,2-Dichloropropane	ND		0.00100	1	06/07/2016 02:34	WG878176
Di-isopropyl ether	ND		0.00100	1	06/07/2016 02:34	WG878176
Ethylbenzene	ND		0.00100	1	06/07/2016 02:34	WG878176
Hexachloro-1,3-butadiene	ND		0.00100	1	06/07/2016 02:34	WG878176
Isopropylbenzene	ND		0.00100	1	06/07/2016 02:34	WG878176
p-Isopropyltoluene	ND		0.00100	1	06/07/2016 02:34	WG878176
2-Butanone (MEK)	ND		0.0100	1	06/07/2016 02:34	WG878176
Methylene Chloride	ND		0.00500	1	06/07/2016 02:34	WG878176
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/07/2016 02:34	WG878176
Methyl tert-butyl ether	ND		0.00100	1	06/07/2016 02:34	WG878176
Naphthalene	ND		0.00500	1	06/07/2016 02:34	WG878176
n-Propylbenzene	ND		0.00100	1	06/07/2016 02:34	WG878176
Styrene	ND		0.00100	1	06/07/2016 02:34	WG878176

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/07/2016 02:34	WG878176
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/07/2016 02:34	WG878176
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/07/2016 02:34	WG878176
Tetrachloroethene	ND		0.00100	1	06/07/2016 02:34	WG878176
Toluene	ND		0.00500	1	06/07/2016 02:34	WG878176
1,2,3-Trichlorobenzene	ND		0.00100	1	06/07/2016 02:34	WG878176
1,2,4-Trichlorobenzene	ND		0.00100	1	06/07/2016 02:34	WG878176
1,1,1-Trichloroethane	ND		0.00100	1	06/07/2016 02:34	WG878176
1,1,2-Trichloroethane	ND		0.00100	1	06/07/2016 02:34	WG878176
Trichloroethene	ND		0.00100	1	06/07/2016 02:34	WG878176
Trichlorofluoromethane	ND		0.00500	1	06/07/2016 02:34	WG878176
1,2,3-Trichloropropane	ND		0.00250	1	06/07/2016 02:34	WG878176
1,2,4-Trimethylbenzene	ND		0.00100	1	06/07/2016 02:34	WG878176
1,2,3-Trimethylbenzene	ND		0.00100	1	06/07/2016 02:34	WG878176
1,3,5-Trimethylbenzene	ND		0.00100	1	06/07/2016 02:34	WG878176
Vinyl chloride	ND		0.00100	1	06/07/2016 02:34	WG878176
Xylenes, Total	ND		0.00300	1	06/07/2016 02:34	WG878176
(S) Toluene-d8	*97.1*		*90.0-115*		*06/07/2016 02:34*	WG878176
(S) Dibromofluoromethane	*90.7*		*79.0-121*		*06/07/2016 02:34*	WG878176
(S) 4-Bromofluorobenzene	*87.7*		*80.1-120*		*06/07/2016 02:34*	WG878176

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	ND		0.0000500	1	06/02/2016 10:25	WG877077
Acenaphthene	ND		0.0000500	1	06/02/2016 10:25	WG877077
Acenaphthylene	ND		0.0000500	1	06/02/2016 10:25	WG877077
Benzo(a)anthracene	ND		0.0000500	1	06/02/2016 10:25	WG877077
Benzo(a)pyrene	ND		0.0000500	1	06/02/2016 10:25	WG877077
Benzo(b)fluoranthene	ND		0.0000500	1	06/02/2016 10:25	WG877077
Benzo(g,h,i)perylene	ND		0.0000500	1	06/02/2016 10:25	WG877077
Benzo(k)fluoranthene	ND		0.0000500	1	06/02/2016 10:25	WG877077
Chrysene	ND		0.0000500	1	06/02/2016 10:25	WG877077
Dibenz(a,h)anthracene	ND		0.0000500	1	06/02/2016 10:25	WG877077
Fluoranthene	ND		0.0000500	1	06/02/2016 10:25	WG877077
Fluorene	ND		0.0000500	1	06/02/2016 10:25	WG877077
Indeno(1,2,3-cd)pyrene	ND		0.0000500	1	06/02/2016 10:25	WG877077
Naphthalene	ND		0.000250	1	06/02/2016 10:25	WG877077
Phenanthrene	ND		0.0000500	1	06/02/2016 10:25	WG877077
Pyrene	ND		0.0000500	1	06/02/2016 10:25	WG877077
1-Methylnaphthalene	ND		0.000250	1	06/02/2016 10:25	WG877077
2-Methylnaphthalene	ND		0.000250	1	06/02/2016 10:25	WG877077
2-Chloronaphthalene	ND		0.000250	1	06/02/2016 10:25	WG877077
(S) Nitrobenzene-d5	*75.4*		*33.8-179*		*06/02/2016 10:25*	WG877077
(S) 2-Fluorobiphenyl	*97.8*		*55.5-150*		*06/02/2016 10:25*	WG877077
(S) p-Terphenyl-d14	*81.2*		*46.2-163*		*06/02/2016 10:25*	WG877077

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	ND		0.0500	1	06/07/2016 02:55	WG878176
Acrolein	ND		0.0500	1	06/07/2016 02:55	WG878176
Acrylonitrile	ND		0.0100	1	06/07/2016 02:55	WG878176
Benzene	ND		0.00100	1	06/07/2016 02:55	WG878176
Bromobenzene	ND		0.00100	1	06/07/2016 02:55	WG878176
Bromodichloromethane	ND		0.00100	1	06/07/2016 02:55	WG878176
Bromoform	ND		0.00100	1	06/07/2016 02:55	WG878176
Bromomethane	ND		0.00500	1	06/07/2016 02:55	WG878176
n-Butylbenzene	ND		0.00100	1	06/07/2016 02:55	WG878176
sec-Butylbenzene	ND		0.00100	1	06/07/2016 02:55	WG878176
tert-Butylbenzene	ND		0.00100	1	06/07/2016 02:55	WG878176
Carbon tetrachloride	ND	J4	0.00100	1	06/07/2016 02:55	WG878176
Chlorobenzene	ND		0.00100	1	06/07/2016 02:55	WG878176
Chlorodibromomethane	ND		0.00100	1	06/07/2016 02:55	WG878176
Chloroethane	ND		0.00500	1	06/07/2016 02:55	WG878176
2-Chloroethyl vinyl ether	ND		0.0500	1	06/07/2016 02:55	WG878176
Chloroform	ND		0.00500	1	06/07/2016 02:55	WG878176
Chloromethane	ND		0.00250	1	06/07/2016 02:55	WG878176
2-Chlorotoluene	ND		0.00100	1	06/07/2016 02:55	WG878176
4-Chlorotoluene	ND		0.00100	1	06/07/2016 02:55	WG878176
1,2-Dibromo-3-Chloropropane	ND		0.00500	1	06/07/2016 02:55	WG878176
1,2-Dibromoethane	ND		0.00100	1	06/07/2016 02:55	WG878176
Dibromomethane	ND		0.00100	1	06/07/2016 02:55	WG878176
1,2-Dichlorobenzene	ND		0.00100	1	06/07/2016 02:55	WG878176
1,3-Dichlorobenzene	ND		0.00100	1	06/07/2016 02:55	WG878176
1,4-Dichlorobenzene	ND		0.00100	1	06/07/2016 02:55	WG878176
Dichlorodifluoromethane	ND		0.00500	1	06/07/2016 02:55	WG878176
1,1-Dichloroethane	ND		0.00100	1	06/07/2016 02:55	WG878176
1,2-Dichloroethane	ND		0.00100	1	06/07/2016 02:55	WG878176
1,1-Dichloroethene	ND		0.00100	1	06/07/2016 02:55	WG878176
cis-1,2-Dichloroethene	ND		0.00100	1	06/07/2016 02:55	WG878176
trans-1,2-Dichloroethene	ND		0.00100	1	06/07/2016 02:55	WG878176
1,2-Dichloropropane	ND		0.00100	1	06/07/2016 02:55	WG878176
1,1-Dichloropropene	ND		0.00100	1	06/07/2016 02:55	WG878176
1,3-Dichloropropane	ND		0.00100	1	06/07/2016 02:55	WG878176
cis-1,3-Dichloropropene	ND		0.00100	1	06/07/2016 02:55	WG878176
trans-1,3-Dichloropropene	ND		0.00100	1	06/07/2016 02:55	WG878176
2,2-Dichloropropane	ND		0.00100	1	06/07/2016 02:55	WG878176
Di-isopropyl ether	0.00149		0.00100	1	06/07/2016 02:55	WG878176
Ethylbenzene	ND		0.00100	1	06/07/2016 02:55	WG878176
Hexachloro-1,3-butadiene	ND		0.00100	1	06/07/2016 02:55	WG878176
Isopropylbenzene	ND		0.00100	1	06/07/2016 02:55	WG878176
p-Isopropyltoluene	ND		0.00100	1	06/07/2016 02:55	WG878176
2-Butanone (MEK)	ND		0.0100	1	06/07/2016 02:55	WG878176
Methylene Chloride	ND		0.00500	1	06/07/2016 02:55	WG878176
4-Methyl-2-pentanone (MIBK)	ND		0.0100	1	06/07/2016 02:55	WG878176
Methyl tert-butyl ether	ND		0.00100	1	06/07/2016 02:55	WG878176
Naphthalene	ND		0.00500	1	06/07/2016 02:55	WG878176
n-Propylbenzene	ND		0.00100	1	06/07/2016 02:55	WG878176
Styrene	ND		0.00100	1	06/07/2016 02:55	WG878176
1,1,1,2-Tetrachloroethane	ND		0.00100	1	06/07/2016 02:55	WG878176
1,1,2,2-Tetrachloroethane	ND		0.00100	1	06/07/2016 02:55	WG878176
1,1,2-Trichlorotrifluoroethane	ND		0.00100	1	06/07/2016 02:55	WG878176
Tetrachloroethene	ND		0.00100	1	06/07/2016 02:55	WG878176
Toluene	ND		0.00500	1	06/07/2016 02:55	WG878176
1,2,3-Trichlorobenzene	ND		0.00100	1	06/07/2016 02:55	WG878176

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	ND		0.00100	1	06/07/2016 02:55	WG878176
1,1,1-Trichloroethane	ND		0.00100	1	06/07/2016 02:55	WG878176
1,1,2-Trichloroethane	ND		0.00100	1	06/07/2016 02:55	WG878176
Trichloroethene	ND		0.00100	1	06/07/2016 02:55	WG878176
Trichlorofluoromethane	ND		0.00500	1	06/07/2016 02:55	WG878176
1,2,3-Trichloropropane	ND		0.00250	1	06/07/2016 02:55	WG878176
1,2,4-Trimethylbenzene	ND		0.00100	1	06/07/2016 02:55	WG878176
1,2,3-Trimethylbenzene	ND		0.00100	1	06/07/2016 02:55	WG878176
1,3,5-Trimethylbenzene	ND		0.00100	1	06/07/2016 02:55	WG878176
Vinyl chloride	ND		0.00100	1	06/07/2016 02:55	WG878176
Xylenes, Total	ND		0.00300	1	06/07/2016 02:55	WG878176
(S) Toluene-d8	*96.1*		*90.0-115*		*06/07/2016 02:55*	WG878176
(S) Dibromofluoromethane	*91.9*		*79.0-121*		*06/07/2016 02:55*	WG878176
(S) 4-Bromofluorobenzene	*88.1*		*80.1-120*		*06/07/2016 02:55*	WG878176

Method Blank (MB)

(MB) R3141028-1 06/02/16 03:21

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Lead,Dissolved	0.00759		0.0019	0.00500

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3141028-2 06/02/16 03:23 • (LCSD) R3141028-3 06/02/16 03:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Lead,Dissolved	1.00	1.03	1.02	103	102	80-120			1	20

L838498-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838498-01 06/02/16 03:29 • (MS) R3141028-5 06/02/16 03:34 • (MSD) R3141028-6 06/02/16 03:36

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead,Dissolved	1.00	ND	0.968	1.00	97	100	1	75-125			3	20

Method Blank (MB)

(MB) R3141855-3 06/06/16 08:58

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	0.0500
Acrolein	U		0.00887	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromobenzene	U		0.000352	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
2-Chloroethyl vinyl ether	U		0.00301	0.0500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
2-Chlorotoluene	U		0.000375	0.00100
4-Chlorotoluene	U		0.000351	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500
1,2-Dibromoethane	U		0.000381	0.00100
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
1,1-Dichloropropene	U		0.000352	0.00100
1,3-Dichloropropane	U		0.000366	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
2,2-Dichloropropane	U		0.000321	0.00100
Di-isopropyl ether	U		0.000320	0.00100
Ethylbenzene	U		0.000384	0.00100

Method Blank (MB)

(MB) R3141855-3 06/06/16 08:58

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hexachloro-1,3-butadiene	U		0.000256	0.00100
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	0.00100
Styrene	U		0.000307	0.00100
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000780	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100
1,2,3-Trichlorobenzene	U		0.000230	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100
Trichlorofluoromethane	U		0.00120	0.00500
1,2,3-Trichloropropane	U		0.000807	0.00250
1,2,3-Trimethylbenzene	U		0.000321	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*103*			*90.0-115*
(S) Dibromofluoromethane	*99.7*			*79.0-121*
(S) 4-Bromofluorobenzene	*111*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3141855-1 06/06/16 07:49 • (LCSD) R3141855-2 06/06/16 08:06

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.0928	0.0921	74.2	73.7	28.7-175			0.730	20.9
Acrolein	0.125	0.149	0.157	120	126	40.4-172			5.13	20
Acrylonitrile	0.125	0.0994	0.104	79.5	83.3	58.2-145			4.64	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3141855-1 06/06/16 07:49 • (LCSD) R3141855-2 06/06/16 08:06

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0216	0.0212	86.5	84.8	73.0-122			1.96	20
Bromobenzene	0.0250	0.0234	0.0229	93.5	91.6	81.5-115			2.01	20
Bromodichloromethane	0.0250	0.0226	0.0224	90.6	89.4	75.5-121			1.28	20
Bromoform	0.0250	0.0260	0.0258	104	103	71.5-131			0.830	20
Bromomethane	0.0250	0.0252	0.0248	101	99.1	22.4-187			1.76	20
n-Butylbenzene	0.0250	0.0211	0.0208	84.3	83.2	75.9-134			1.23	20
sec-Butylbenzene	0.0250	0.0263	0.0256	105	102	80.6-126			2.50	20
tert-Butylbenzene	0.0250	0.0270	0.0263	108	105	79.3-127			2.85	20
Carbon tetrachloride	0.0250	0.0207	0.0198	82.8	79.4	70.9-129			4.19	20
Chlorobenzene	0.0250	0.0271	0.0258	108	103	79.7-122			4.59	20
Chlorodibromomethane	0.0250	0.0262	0.0258	105	103	78.2-124			1.47	20
Chloroethane	0.0250	0.0231	0.0225	92.4	90.0	41.2-153			2.64	20
2-Chloroethyl vinyl ether	0.125	0.0239	0.0239	19.1	19.1	23.4-162	J4	J4	0.180	23.5
Chloroform	0.0250	0.0219	0.0214	87.6	85.5	73.2-125			2.53	20
Chloromethane	0.0250	0.0208	0.0202	83.0	80.7	55.8-134			2.78	20
2-Chlorotoluene	0.0250	0.0264	0.0262	105	105	76.4-125			0.750	20
4-Chlorotoluene	0.0250	0.0246	0.0244	98.3	97.6	81.5-121			0.780	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0213	0.0226	85.4	90.5	64.8-131			5.87	20
1,2-Dibromoethane	0.0250	0.0259	0.0252	103	101	79.8-122			2.68	20
Dibromomethane	0.0250	0.0227	0.0229	90.8	91.8	79.5-118			1.08	20
1,2-Dichlorobenzene	0.0250	0.0231	0.0232	92.2	92.7	84.7-118			0.580	20
1,3-Dichlorobenzene	0.0250	0.0256	0.0258	102	103	77.6-127			0.960	20
1,4-Dichlorobenzene	0.0250	0.0221	0.0222	88.6	88.7	82.2-114			0.160	20
Dichlorodifluoromethane	0.0250	0.0295	0.0285	118	114	56.0-134			3.58	20
1,1-Dichloroethane	0.0250	0.0214	0.0210	85.7	84.0	71.7-127			2.02	20
1,2-Dichloroethane	0.0250	0.0208	0.0202	83.0	80.7	65.3-126			2.88	20
1,1-Dichloroethene	0.0250	0.0227	0.0218	90.6	87.1	59.9-137			4.00	20
cis-1,2-Dichloroethene	0.0250	0.0229	0.0226	91.8	90.3	77.3-122			1.65	20
trans-1,2-Dichloroethene	0.0250	0.0237	0.0230	94.7	92.2	72.6-125			2.68	20
1,2-Dichloropropane	0.0250	0.0215	0.0212	86.2	84.8	77.4-125			1.60	20
1,1-Dichloropropene	0.0250	0.0230	0.0219	92.0	87.6	72.5-127			4.90	20
1,3-Dichloropropane	0.0250	0.0254	0.0240	102	95.9	80.6-115			5.84	20
cis-1,3-Dichloropropene	0.0250	0.0227	0.0224	90.7	89.7	77.7-124			1.12	20
trans-1,3-Dichloropropene	0.0250	0.0226	0.0222	90.4	88.9	73.5-127			1.75	20
2,2-Dichloropropane	0.0250	0.0196	0.0193	78.4	77.2	61.3-134			1.50	20
Di-isopropyl ether	0.0250	0.0183	0.0182	73.0	72.7	65.1-135			0.370	20
Ethylbenzene	0.0250	0.0264	0.0251	106	100	80.9-121			5.23	20
Hexachloro-1,3-butadiene	0.0250	0.0228	0.0232	91.2	92.7	73.7-133			1.66	20
Isopropylbenzene	0.0250	0.0269	0.0258	108	103	81.6-124			4.45	20
p-Isopropyltoluene	0.0250	0.0265	0.0262	106	105	77.6-129			1.18	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3141855-1 06/06/16 07:49 • (LCSD) R3141855-2 06/06/16 08:06

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Butanone (MEK)	0.125	0.0800	0.0817	64.0	65.3	46.4-155			2.02	20
Methylene Chloride	0.0250	0.0215	0.0215	86.2	85.9	69.5-120			0.360	20
4-Methyl-2-pentanone (MIBK)	0.125	0.107	0.113	85.5	90.0	63.3-138			5.22	20
Methyl tert-butyl ether	0.0250	0.0196	0.0200	78.4	80.1	70.1-125			2.12	20
Naphthalene	0.0250	0.0210	0.0230	84.1	92.0	69.7-134			8.88	20
n-Propylbenzene	0.0250	0.0263	0.0252	105	101	81.9-122			4.26	20
Styrene	0.0250	0.0265	0.0253	106	101	79.9-124			4.85	20
1,1,1,2-Tetrachloroethane	0.0250	0.0253	0.0246	101	98.6	78.5-125			2.50	20
1,1,2,2-Tetrachloroethane	0.0250	0.0241	0.0245	96.5	97.8	79.3-123			1.32	20
Tetrachloroethene	0.0250	0.0292	0.0271	117	109	73.5-130			7.47	20
Toluene	0.0250	0.0237	0.0229	94.6	91.6	77.9-116			3.23	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0255	0.0240	102	96.1	62.0-141			5.98	20
1,2,3-Trichlorobenzene	0.0250	0.0217	0.0230	86.8	91.8	75.7-134			5.64	20
1,2,4-Trichlorobenzene	0.0250	0.0214	0.0223	85.8	89.0	76.1-136			3.72	20
1,1,1-Trichloroethane	0.0250	0.0234	0.0227	93.4	90.9	71.1-129			2.71	20
1,1,2-Trichloroethane	0.0250	0.0253	0.0244	101	97.5	81.6-120			3.66	20
Trichloroethene	0.0250	0.0264	0.0254	106	102	79.5-121			3.79	20
Trichlorofluoromethane	0.0250	0.0235	0.0224	94.0	89.7	49.1-157			4.70	20
1,2,3-Trichloropropane	0.0250	0.0271	0.0275	108	110	74.9-124			1.44	20
1,2,3-Trimethylbenzene	0.0250	0.0220	0.0216	87.9	86.5	79.9-118			1.70	20
1,2,4-Trimethylbenzene	0.0250	0.0253	0.0251	101	100	79.0-122			0.830	20
1,3,5-Trimethylbenzene	0.0250	0.0256	0.0251	102	100	81.0-123			2.12	20
Vinyl chloride	0.0250	0.0241	0.0229	96.3	91.8	61.5-134			4.82	20
Xylenes, Total	0.0750	0.0797	0.0756	106	101	79.2-122			5.21	20
(S) Toluene-d8				*102*	*103*	*90.0-115*				
(S) Dibromofluoromethane				*97.4*	*97.9*	*79.0-121*				
(S) 4-Bromofluorobenzene				*103*	*104*	*80.1-120*				

L838117-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838117-02 06/06/16 10:07 • (MS) R3141855-4 06/06/16 09:15 • (MSD) R3141855-5 06/06/16 09:33

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	U	0.0555	0.0538	44.4	43.1	1	25.0-156			2.98	21.5
Acrolein	0.125	U	0.153	0.145	123	116	1	34.0-194			5.43	21.5
Acrylonitrile	0.125	U	0.0972	0.0936	77.8	74.9	1	55.9-161			3.78	20
Benzene	0.0250	U	0.0190	0.0187	76.0	75.0	1	58.6-133			1.36	20
Bromobenzene	0.0250	U	0.0221	0.0221	88.3	88.4	1	70.6-125			0.0900	20
Bromodichloromethane	0.0250	U	0.0212	0.0210	84.7	84.1	1	69.2-127			0.740	20

L838117-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838117-02 06/06/16 10:07 • (MS) R3141855-4 06/06/16 09:15 • (MSD) R3141855-5 06/06/16 09:33

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromoform	0.0250	U	0.0250	0.0246	100	98.3	1	66.3-140			1.78	20
Bromomethane	0.0250	U	0.0196	0.0193	78.2	77.2	1	16.6-183			1.29	20.5
n-Butylbenzene	0.0250	U	0.0196	0.0196	78.3	78.3	1	64.8-145			0.0100	20
sec-Butylbenzene	0.0250	U	0.0241	0.0242	96.5	96.6	1	66.8-139			0.180	20
tert-Butylbenzene	0.0250	U	0.0247	0.0247	98.9	98.9	1	67.1-138			0.0200	20
Carbon tetrachloride	0.0250	U	0.0177	0.0174	70.6	69.4	1	60.6-139			1.73	20
Chlorobenzene	0.0250	U	0.0242	0.0243	96.7	97.3	1	70.1-130			0.620	20
Chlorodibromomethane	0.0250	U	0.0245	0.0248	97.8	99.2	1	71.6-132			1.43	20
Chloroethane	0.0250	U	0.0186	0.0186	74.3	74.3	1	33.3-155			0.130	20
2-Chloroethyl vinyl ether	0.125	U	0.00533	ND	4.27	0.000	1	5.00-149	J6	J3 J6	200	40
Chloroform	0.0250	U	0.0203	0.0199	81.0	79.6	1	66.1-133			1.73	20
Chloromethane	0.0250	U	0.0150	0.0148	59.9	59.4	1	40.7-139			0.930	20
2-Chlorotoluene	0.0250	U	0.0249	0.0251	99.4	100	1	66.9-134			1.03	20
4-Chlorotoluene	0.0250	U	0.0236	0.0236	94.3	94.3	1	66.8-134			0.0500	20
1,2-Dibromo-3-Chloropropane	0.0250	U	0.0199	0.0200	79.8	80.0	1	63.9-142			0.270	20.2
1,2-Dibromoethane	0.0250	U	0.0233	0.0231	93.2	92.5	1	73.8-131			0.780	20
Dibromomethane	0.0250	U	0.0211	0.0206	84.4	82.4	1	72.8-127			2.36	20
1,2-Dichlorobenzene	0.0250	U	0.0223	0.0221	89.1	88.3	1	77.4-127			0.930	20
1,3-Dichlorobenzene	0.0250	U	0.0253	0.0252	101	101	1	67.9-136			0.590	20
1,4-Dichlorobenzene	0.0250	U	0.0215	0.0212	86.2	84.9	1	74.4-123			1.56	20
Dichlorodifluoromethane	0.0250	U	0.0192	0.0195	76.8	78.0	1	42.2-146			1.55	20
1,1-Dichloroethane	0.0250	U	0.0191	0.0189	76.5	75.7	1	64.0-134			1.00	20
1,2-Dichloroethane	0.0250	U	0.0191	0.0188	76.5	75.0	1	60.7-132			1.98	20
1,1-Dichloroethene	0.0250	U	0.0185	0.0184	74.2	73.8	1	48.8-144			0.550	20
cis-1,2-Dichloroethene	0.0250	U	0.0210	0.0209	83.9	83.4	1	60.6-136			0.550	20
trans-1,2-Dichloroethene	0.0250	U	0.0202	0.0197	80.8	78.9	1	61.0-132			2.35	20
1,2-Dichloropropane	0.0250	U	0.0196	0.0194	78.4	77.4	1	69.7-130			1.30	20
1,1-Dichloropropene	0.0250	U	0.0190	0.0188	76.0	75.0	1	61.5-136			1.32	20
1,3-Dichloropropane	0.0250	U	0.0227	0.0227	91.0	90.7	1	74.3-123			0.230	20
cis-1,3-Dichloropropene	0.0250	U	0.0208	0.0208	83.3	83.3	1	71.1-129			0.0200	20
trans-1,3-Dichloropropene	0.0250	U	0.0209	0.0206	83.6	82.5	1	66.3-136			1.31	20
2,2-Dichloropropane	0.0250	U	0.0186	0.0186	74.5	74.5	1	54.9-142			0.0300	20
Di-isopropyl ether	0.0250	U	0.0175	0.0172	70.0	68.7	1	59.9-140			1.82	20
Ethylbenzene	0.0250	U	0.0226	0.0230	90.4	92.0	1	62.7-136			1.77	20
Hexachloro-1,3-butadiene	0.0250	U	0.0215	0.0213	86.0	85.4	1	61.1-144			0.720	20.1
Isopropylbenzene	0.0250	U	0.0240	0.0241	95.8	96.2	1	67.4-136			0.440	20
p-Isopropyltoluene	0.0250	U	0.0249	0.0250	99.6	100	1	62.8-143			0.450	20
2-Butanone (MEK)	0.125	U	0.0609	0.0592	48.7	47.4	1	45.0-156			2.81	20.8
Methylene Chloride	0.0250	U	0.0197	0.0193	78.8	77.1	1	61.5-125			2.17	20
4-Methyl-2-pentanone (MIBK)	0.125	U	0.104	0.0991	83.5	79.3	1	60.7-150			5.19	20

L838117-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838117-02 06/06/16 10:07 • (MS) R3141855-4 06/06/16 09:15 • (MSD) R3141855-5 06/06/16 09:33

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methyl tert-butyl ether	0.0250	U	0.0193	0.0187	77.3	74.9	1	61.4-136			3.24	20
Naphthalene	0.0250	U	0.0205	0.0209	82.1	83.6	1	61.8-143			1.82	20
n-Propylbenzene	0.0250	U	0.0237	0.0238	94.9	95.0	1	63.2-139			0.120	20
Styrene	0.0250	U	0.0238	0.0241	95.3	96.3	1	68.2-133			1.02	20
1,1,1,2-Tetrachloroethane	0.0250	U	0.0239	0.0238	95.4	95.3	1	70.5-132			0.0900	20
1,1,2,2-Tetrachloroethane	0.0250	U	0.0243	0.0236	97.1	94.5	1	64.9-145			2.70	20
Tetrachloroethene	0.0250	U	0.0242	0.0243	96.7	97.2	1	57.4-141			0.570	20
Toluene	0.0250	U	0.0206	0.0205	82.2	82.0	1	67.8-124			0.350	20
1,1,2-Trichlorotrifluoroethane	0.0250	U	0.0220	0.0214	88.1	85.5	1	53.7-150			2.99	20
1,2,3-Trichlorobenzene	0.0250	U	0.0219	0.0221	87.5	88.4	1	65.7-143			1.01	20
1,2,4-Trichlorobenzene	0.0250	U	0.0224	0.0221	89.7	88.5	1	67.0-146			1.33	20
1,1,1-Trichloroethane	0.0250	U	0.0211	0.0207	84.2	82.8	1	58.7-134			1.67	20
1,1,2-Trichloroethane	0.0250	U	0.0230	0.0234	92.1	93.8	1	74.1-130			1.83	20
Trichloroethene	0.0250	U	0.0219	0.0223	87.7	89.0	1	48.9-148			1.46	20
Trichlorofluoromethane	0.0250	U	0.0208	0.0203	83.2	81.2	1	39.9-165			2.37	20
1,2,3-Trichloropropane	0.0250	U	0.0263	0.0257	105	103	1	71.5-134			2.29	20
1,2,3-Trimethylbenzene	0.0250	U	0.0202	0.0201	80.8	80.5	1	62.7-133			0.320	20
1,2,4-Trimethylbenzene	0.0250	U	0.0240	0.0240	96.1	96.1	1	60.5-137			0.0800	20
1,3,5-Trimethylbenzene	0.0250	U	0.0236	0.0237	94.4	94.8	1	67.9-134			0.500	20
Vinyl chloride	0.0250	U	0.0178	0.0180	71.4	71.8	1	44.3-143			0.640	20
Xylenes, Total	0.0750	U	0.0703	0.0708	93.7	94.4	1	65.6-133			0.740	20
(S) Toluene-d8					*104*	*103*		*90.0-115*				
(S) Dibromofluoromethane					*100*	*98.8*		*79.0-121*				
(S) 4-Bromofluorobenzene					*107*	*107*		*80.1-120*				

Method Blank (MB)

(MB) R3141962-3 06/06/16 22:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	0.0500
Acrolein	U		0.00887	0.0500
Acrylonitrile	U		0.00187	0.0100
Benzene	U		0.000331	0.00100
Bromobenzene	U		0.000352	0.00100
Bromodichloromethane	U		0.000380	0.00100
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
2-Chloroethyl vinyl ether	U		0.00301	0.0500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
2-Chlorotoluene	U		0.000375	0.00100
4-Chlorotoluene	U		0.000351	0.00100
1,2-Dibromo-3-Chloropropane	U		0.00133	0.00500
1,2-Dibromoethane	U		0.000381	0.00100
Dibromomethane	U		0.000346	0.00100
1,2-Dichlorobenzene	U		0.000349	0.00100
1,3-Dichlorobenzene	U		0.000220	0.00100
1,4-Dichlorobenzene	U		0.000274	0.00100
Dichlorodifluoromethane	U		0.000551	0.00500
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
1,1-Dichloropropene	U		0.000352	0.00100
1,3-Dichloropropane	U		0.000366	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
2,2-Dichloropropane	U		0.000321	0.00100
Di-isopropyl ether	U		0.000320	0.00100
Ethylbenzene	U		0.000384	0.00100

Method Blank (MB)

(MB) R3141962-3 06/06/16 22:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hexachloro-1,3-butadiene	U		0.000256	0.00100
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
Methyl tert-butyl ether	U		0.000367	0.00100
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Naphthalene	U		0.00100	0.00500
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
n-Propylbenzene	U		0.000349	0.00100
Tetrachloroethene	U		0.000372	0.00100
Styrene	U		0.000307	0.00100
1,1,1,2-Tetrachloroethane	U		0.000385	0.00100
Toluene	U		0.000780	0.00500
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100
1,1,2-Trichlorotrifluoroethane	U		0.000303	0.00100
1,2,3-Trichlorobenzene	0.000250	J	0.000230	0.00100
Trichloroethene	U		0.000398	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.00100
Trichlorofluoromethane	U		0.00120	0.00500
1,2,3-Trichloropropane	U		0.000807	0.00250
1,2,3-Trimethylbenzene	U		0.000321	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
Vinyl chloride	U		0.000259	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*96.1*			*90.0-115*
(S) Dibromofluoromethane	*93.5*			*79.0-121*
(S) 4-Bromofluorobenzene	*87.8*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3141962-1 06/06/16 20:49 • (LCSD) R3141962-2 06/06/16 21:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.0654	0.0657	52.3	52.5	28.7-175			0.420	20.9
Acrolein	0.125	0.0880	0.0859	70.4	68.7	40.4-172			2.50	20
Acrylonitrile	0.125	0.123	0.126	98.8	101	58.2-145			2.04	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3141962-1 06/06/16 20:49 • (LCSD) R3141962-2 06/06/16 21:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.0250	0.0231	0.0225	92.6	89.9	73.0-122			2.92	20
Bromobenzene	0.0250	0.0243	0.0236	97.0	94.5	81.5-115			2.62	20
Bromodichloromethane	0.0250	0.0236	0.0232	94.6	92.8	75.5-121			1.95	20
Bromoform	0.0250	0.0322	0.0322	129	129	71.5-131			0.0100	20
Bromomethane	0.0250	0.0306	0.0293	122	117	22.4-187			4.03	20
n-Butylbenzene	0.0250	0.0237	0.0228	94.9	91.3	75.9-134			3.82	20
sec-Butylbenzene	0.0250	0.0251	0.0240	100	96.0	80.6-126			4.41	20
tert-Butylbenzene	0.0250	0.0260	0.0248	104	99.4	79.3-127			4.44	20
Carbon tetrachloride	0.0250	0.0189	0.0177	75.7	70.6	70.9-129		J4	6.88	20
Chlorobenzene	0.0250	0.0288	0.0281	115	112	79.7-122			2.61	20
Chlorodibromomethane	0.0250	0.0290	0.0287	116	115	78.2-124			1.14	20
Chloroethane	0.0250	0.0285	0.0272	114	109	41.2-153			4.57	20
2-Chloroethyl vinyl ether	0.125	0.185	0.183	148	146	23.4-162			1.35	23.5
Chloroform	0.0250	0.0219	0.0211	87.7	84.5	73.2-125			3.72	20
Chloromethane	0.0250	0.0244	0.0234	97.4	93.6	55.8-134			4.06	20
2-Chlorotoluene	0.0250	0.0285	0.0274	114	110	76.4-125			3.88	20
4-Chlorotoluene	0.0250	0.0250	0.0244	100	97.7	81.5-121			2.40	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0293	0.0288	117	115	64.8-131			1.88	20
1,2-Dibromoethane	0.0250	0.0282	0.0280	113	112	79.8-122			0.470	20
1,2-Dichlorobenzene	0.0250	0.0266	0.0262	107	105	84.7-118			1.64	20
Dibromomethane	0.0250	0.0258	0.0251	103	101	79.5-118			2.66	20
1,3-Dichlorobenzene	0.0250	0.0274	0.0266	110	106	77.6-127			3.08	20
1,4-Dichlorobenzene	0.0250	0.0271	0.0262	108	105	82.2-114			3.32	20
Dichlorodifluoromethane	0.0250	0.0251	0.0249	100	99.4	56.0-134			0.900	20
1,1-Dichloroethane	0.0250	0.0231	0.0221	92.4	88.4	71.7-127			4.37	20
1,2-Dichloroethane	0.0250	0.0205	0.0200	82.1	80.1	65.3-126			2.39	20
1,1-Dichloroethene	0.0250	0.0219	0.0207	87.4	82.9	59.9-137			5.30	20
cis-1,2-Dichloroethene	0.0250	0.0242	0.0231	96.6	92.5	77.3-122			4.32	20
trans-1,2-Dichloroethene	0.0250	0.0239	0.0225	95.5	90.0	72.6-125			6.02	20
1,2-Dichloropropane	0.0250	0.0262	0.0260	105	104	77.4-125			0.750	20
1,1-Dichloropropene	0.0250	0.0238	0.0228	95.3	91.3	72.5-127			4.32	20
1,3-Dichloropropane	0.0250	0.0281	0.0280	112	112	80.6-115			0.150	20
cis-1,3-Dichloropropene	0.0250	0.0268	0.0261	107	104	77.7-124			2.76	20
trans-1,3-Dichloropropene	0.0250	0.0262	0.0256	105	103	73.5-127			2.29	20
2,2-Dichloropropane	0.0250	0.0238	0.0204	95.1	81.5	61.3-134			15.4	20
Di-isopropyl ether	0.0250	0.0217	0.0211	86.7	84.4	65.1-135			2.76	20
Ethylbenzene	0.0250	0.0274	0.0264	110	106	80.9-121			3.67	20
Hexachloro-1,3-butadiene	0.0250	0.0277	0.0264	111	106	73.7-133			4.82	20
Isopropylbenzene	0.0250	0.0259	0.0248	104	99.4	81.6-124			4.23	20
p-Isopropyltoluene	0.0250	0.0262	0.0255	105	102	77.6-129			2.53	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3141962-1 06/06/16 20:49 • (LCSD) R3141962-2 06/06/16 21:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Butanone (MEK)	0.125	0.106	0.106	84.9	84.4	46.4-155			0.610	20
Methylene Chloride	0.0250	0.0229	0.0222	91.5	88.7	69.5-120			3.10	20
4-Methyl-2-pentanone (MIBK)	0.125	0.139	0.140	111	112	63.3-138			0.380	20
Methyl tert-butyl ether	0.0250	0.0209	0.0205	83.7	82.0	70.1-125			2.15	20
Naphthalene	0.0250	0.0248	0.0241	99.0	96.2	69.7-134			2.87	20
n-Propylbenzene	0.0250	0.0261	0.0253	104	101	81.9-122			3.06	20
Styrene	0.0250	0.0276	0.0270	110	108	79.9-124			2.32	20
1,1,1,2-Tetrachloroethane	0.0250	0.0286	0.0272	115	109	78.5-125			4.99	20
1,1,2,2-Tetrachloroethane	0.0250	0.0274	0.0268	109	107	79.3-123			2.19	20
Tetrachloroethene	0.0250	0.0296	0.0285	118	114	73.5-130			3.78	20
Toluene	0.0250	0.0249	0.0241	99.5	96.5	77.9-116			3.05	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0241	0.0214	96.5	85.5	62.0-141			12.1	20
1,2,3-Trichlorobenzene	0.0250	0.0265	0.0255	106	102	75.7-134			4.06	20
1,1,1-Trichloroethane	0.0250	0.0204	0.0191	81.7	76.4	71.1-129			6.65	20
1,2,4-Trichlorobenzene	0.0250	0.0271	0.0264	108	105	76.1-136			2.75	20
1,1,2-Trichloroethane	0.0250	0.0273	0.0269	109	107	81.6-120			1.51	20
Trichloroethene	0.0250	0.0271	0.0263	108	105	79.5-121			2.93	20
Trichlorofluoromethane	0.0250	0.0244	0.0232	97.5	92.8	49.1-157			4.95	20
1,2,3-Trichloropropane	0.0250	0.0266	0.0265	106	106	74.9-124			0.210	20
1,2,3-Trimethylbenzene	0.0250	0.0240	0.0231	95.8	92.6	79.9-118			3.46	20
1,2,4-Trimethylbenzene	0.0250	0.0249	0.0241	99.4	96.4	79.0-122			3.09	20
1,3,5-Trimethylbenzene	0.0250	0.0246	0.0238	98.6	95.2	81.0-123			3.49	20
Vinyl chloride	0.0250	0.0248	0.0241	99.0	96.4	61.5-134			2.70	20
Xylenes, Total	0.0750	0.0813	0.0789	108	105	79.2-122			2.97	20
(S) Toluene-d8				*96.6*	*97.3*	*90.0-115*				
(S) Dibromofluoromethane				*91.1*	*90.8*	*79.0-121*				
(S) 4-Bromofluorobenzene				*86.1*	*86.3*	*80.1-120*				

L838397-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838397-07 06/07/16 00:52 • (MS) R3141962-4 06/06/16 22:30 • (MSD) R3141962-5 06/06/16 22:50

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	U	0.0431	0.0462	34.5	36.9	1	25.0-156			6.96	21.5
Acrolein	0.125	U	0.106	0.116	84.7	92.6	1	34.0-194			8.85	21.5
Acrylonitrile	0.125	U	0.124	0.135	98.8	108	1	55.9-161			8.75	20
Benzene	0.0250	U	0.0204	0.0209	81.4	83.5	1	58.6-133			2.54	20
Bromobenzene	0.0250	U	0.0217	0.0224	86.9	89.5	1	70.6-125			2.91	20
Bromodichloromethane	0.0250	U	0.0217	0.0219	86.8	87.6	1	69.2-127			0.830	20

L838397-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838397-07 06/07/16 00:52 • (MS) R3141962-4 06/06/16 22:30 • (MSD) R3141962-5 06/06/16 22:50

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromoform	0.0250	U	0.0303	0.0317	121	127	1	66.3-140			4.60	20
Bromomethane	0.0250	U	0.0232	0.0241	92.7	96.5	1	16.6-183			3.98	20.5
n-Butylbenzene	0.0250	U	0.0214	0.0223	85.7	89.1	1	64.8-145			3.92	20
sec-Butylbenzene	0.0250	U	0.0218	0.0234	87.1	93.4	1	66.8-139			6.99	20
tert-Butylbenzene	0.0250	U	0.0226	0.0242	90.4	96.8	1	67.1-138			6.80	20
Carbon tetrachloride	0.0250	U	0.0166	0.0175	66.3	70.0	1	60.6-139			5.38	20
Chlorobenzene	0.0250	U	0.0254	0.0258	101	103	1	70.1-130			1.75	20
Chlorodibromomethane	0.0250	U	0.0267	0.0274	107	110	1	71.6-132			2.50	20
Chloroethane	0.0250	U	0.0226	0.0235	90.4	93.9	1	33.3-155			3.81	20
2-Chloroethyl vinyl ether	0.125	U	0.0192	0.00859	15.3	6.87	1	5.00-149		J3	76.2	40
Chloroform	0.0250	U	0.0200	0.0205	79.8	81.9	1	66.1-133			2.49	20
Chloromethane	0.0250	U	0.0176	0.0183	70.4	73.4	1	40.7-139			4.04	20
2-Chlorotoluene	0.0250	U	0.0249	0.0264	99.7	106	1	66.9-134			5.88	20
4-Chlorotoluene	0.0250	U	0.0223	0.0231	89.2	92.3	1	66.8-134			3.46	20
1,2-Dibromo-3-Chloropropane	0.0250	U	0.0285	0.0304	114	121	1	63.9-142			6.21	20.2
1,2-Dibromoethane	0.0250	U	0.0262	0.0265	105	106	1	73.8-131			0.840	20
1,2-Dichlorobenzene	0.0250	U	0.0244	0.0254	97.7	101	1	77.4-127			3.80	20
Dibromomethane	0.0250	U	0.0235	0.0241	94.2	96.5	1	72.8-127			2.42	20
1,3-Dichlorobenzene	0.0250	U	0.0249	0.0257	99.8	103	1	67.9-136			3.15	20
1,4-Dichlorobenzene	0.0250	U	0.0246	0.0254	98.6	101	1	74.4-123			2.85	20
Dichlorodifluoromethane	0.0250	U	0.0199	0.0203	79.6	81.4	1	42.2-146			2.14	20
1,1-Dichloroethane	0.0250	U	0.0204	0.0212	81.8	84.6	1	64.0-134			3.41	20
1,2-Dichloroethane	0.0250	U	0.0186	0.0193	74.6	77.2	1	60.7-132			3.44	20
1,1-Dichloroethene	0.0250	U	0.0179	0.0181	71.4	72.6	1	48.8-144			1.62	20
cis-1,2-Dichloroethene	0.0250	U	0.0214	0.0222	85.8	88.7	1	60.6-136			3.32	20
trans-1,2-Dichloroethene	0.0250	U	0.0198	0.0200	79.4	79.9	1	61.0-132			0.680	20
1,2-Dichloropropane	0.0250	U	0.0236	0.0246	94.3	98.2	1	69.7-130			4.08	20
1,1-Dichloropropene	0.0250	U	0.0201	0.0207	80.4	82.8	1	61.5-136			3.01	20
1,3-Dichloropropane	0.0250	U	0.0263	0.0265	105	106	1	74.3-123			0.840	20
cis-1,3-Dichloropropene	0.0250	U	0.0245	0.0242	98.0	96.8	1	71.1-129			1.26	20
trans-1,3-Dichloropropene	0.0250	0.000578	0.0245	0.0243	95.6	94.7	1	66.3-136			0.930	20
2,2-Dichloropropane	0.0250	U	0.0213	0.0216	85.0	86.6	1	54.9-142			1.81	20
Di-isopropyl ether	0.0250	U	0.0197	0.0211	78.7	84.5	1	59.9-140			7.08	20
Ethylbenzene	0.0250	U	0.0238	0.0242	95.3	97.0	1	62.7-136			1.74	20
Hexachloro-1,3-butadiene	0.0250	U	0.0255	0.0263	102	105	1	61.1-144			3.19	20.1
Isopropylbenzene	0.0250	U	0.0222	0.0236	88.7	94.4	1	67.4-136			6.26	20
p-Isopropyltoluene	0.0250	U	0.0231	0.0247	92.2	98.9	1	62.8-143			6.99	20
2-Butanone (MEK)	0.125	U	0.0841	0.0895	67.3	71.6	1	45.0-156			6.17	20.8
Methylene Chloride	0.0250	U	0.0199	0.0208	79.4	83.1	1	61.5-125			4.55	20
4-Methyl-2-pentanone (MIBK)	0.125	U	0.131	0.139	104	111	1	60.7-150			6.28	20

L838397-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838397-07 06/07/16 00:52 • (MS) R3141962-4 06/06/16 22:30 • (MSD) R3141962-5 06/06/16 22:50

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methyl tert-butyl ether	0.0250	U	0.0195	0.0210	78.0	84.2	1	61.4-136			7.59	20
Naphthalene	0.0250	U	0.0238	0.0256	95.0	103	1	61.8-143			7.56	20
n-Propylbenzene	0.0250	U	0.0230	0.0240	92.0	95.9	1	63.2-139			4.14	20
Styrene	0.0250	U	0.0248	0.0250	99.0	100	1	68.2-133			0.950	20
1,1,1,2-Tetrachloroethane	0.0250	U	0.0250	0.0267	100	107	1	70.5-132			6.47	20
1,1,2,2-Tetrachloroethane	0.0250	U	0.0260	0.0279	104	112	1	64.9-145			7.03	20
Tetrachloroethene	0.0250	U	0.0251	0.0252	101	101	1	57.4-141			0.160	20
Toluene	0.0250	U	0.0220	0.0219	88.0	87.6	1	67.8-124			0.410	20
1,1,2-Trichlorotrifluoroethane	0.0250	U	0.0217	0.0223	86.9	89.2	1	53.7-150			2.57	20
1,2,3-Trichlorobenzene	0.0250	U	0.0249	0.0268	99.8	107	1	65.7-143			7.28	20
1,1,1-Trichloroethane	0.0250	U	0.0182	0.0192	72.8	76.8	1	58.7-134			5.27	20
1,2,4-Trichlorobenzene	0.0250	U	0.0255	0.0268	102	107	1	67.0-146			5.06	20
1,1,2-Trichloroethane	0.0250	U	0.0256	0.0260	102	104	1	74.1-130			1.60	20
Trichloroethene	0.0250	U	0.0233	0.0232	93.3	92.6	1	48.9-148			0.780	20
Trichlorofluoromethane	0.0250	U	0.0203	0.0213	81.0	85.3	1	39.9-165			5.18	20
1,2,3-Trichloropropane	0.0250	U	0.0260	0.0272	104	109	1	71.5-134			4.63	20
1,2,3-Trimethylbenzene	0.0250	U	0.0213	0.0222	85.4	88.7	1	62.7-133			3.86	20
1,2,4-Trimethylbenzene	0.0250	U	0.0219	0.0233	87.7	93.3	1	60.5-137			6.18	20
1,3,5-Trimethylbenzene	0.0250	U	0.0214	0.0227	85.4	90.7	1	67.9-134			6.01	20
Vinyl chloride	0.0250	U	0.0189	0.0199	75.7	79.5	1	44.3-143			4.87	20
Xylenes, Total	0.0750	U	0.0714	0.0722	95.2	96.3	1	65.6-133			1.14	20
(S) Toluene-d8					*97.1*	*96.0*		*90.0-115*				
(S) Dibromofluoromethane					*92.5*	*93.6*		*79.0-121*				
(S) 4-Bromofluorobenzene					*86.3*	*87.6*		*80.1-120*				

Method Blank (MB)

(MB) R3141199-3 06/02/16 03:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Anthracene	U		0.0000140	0.0000500
Acenaphthene	U		0.0000100	0.0000500
Acenaphthylene	U		0.0000120	0.0000500
Benzo(a)anthracene	U		0.00000410	0.0000500
Benzo(a)pyrene	U		0.0000116	0.0000500
Benzo(b)fluoranthene	U		0.00000212	0.0000500
Benzo(g,h,i)perylene	U		0.00000227	0.0000500
Benzo(k)fluoranthene	U		0.0000136	0.0000500
Chrysene	U		0.0000108	0.0000500
Dibenz(a,h)anthracene	U		0.00000396	0.0000500
Fluoranthene	U		0.0000157	0.0000500
Fluorene	U		0.00000850	0.0000500
Indeno(1,2,3-cd)pyrene	U		0.0000148	0.0000500
Naphthalene	0.0000206	J	0.0000198	0.000250
Phenanthrene	U		0.00000820	0.0000500
Pyrene	U		0.0000117	0.0000500
1-Methylnaphthalene	U		0.00000821	0.000250
2-Methylnaphthalene	U		0.00000902	0.000250
2-Chloronaphthalene	U		0.00000647	0.000250
(S) Nitrobenzene-d5	*69.1*			*33.8-179*
(S) 2-Fluorobiphenyl	*94.9*			*55.5-150*
(S) p-Terphenyl-d14	*79.4*			*46.2-163*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3141199-1 06/02/16 03:09 • (LCSD) R3141199-2 06/02/16 03:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	0.00200	0.00182	0.00179	91.1	89.7	68.9-153			1.53	20
Acenaphthene	0.00200	0.00175	0.00171	87.4	85.4	67.7-153			2.28	20
Acenaphthylene	0.00200	0.00171	0.00168	85.4	84.0	66.9-141			1.63	20
Benzo(a)anthracene	0.00200	0.00169	0.00162	84.6	80.9	63.1-147			4.52	20
Benzo(a)pyrene	0.00200	0.00179	0.00180	89.6	90.0	62.2-150			0.530	20
Benzo(b)fluoranthene	0.00200	0.00170	0.00151	84.9	75.7	58.4-148			11.4	20
Benzo(g,h,i)perylene	0.00200	0.00172	0.00164	85.8	82.2	57.4-152			4.32	20
Benzo(k)fluoranthene	0.00200	0.00151	0.00171	75.7	85.3	60.5-154			11.9	20
Chrysene	0.00200	0.00172	0.00170	85.8	85.1	64.8-155			0.880	20
Dibenz(a,h)anthracene	0.00200	0.00168	0.00160	83.8	80.2	53.5-153			4.35	20
Fluoranthene	0.00200	0.00196	0.00189	97.9	94.5	68.6-153			3.56	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3141199-1 06/02/16 03:09 • (LCSD) R3141199-2 06/02/16 03:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Fluorene	0.00200	0.00172	0.00172	86.1	86.0	67.3-141			0.130	20
Indeno(1,2,3-cd)pyrene	0.00200	0.00173	0.00166	86.7	82.9	57.0-155			4.53	20
Naphthalene	0.00200	0.00165	0.00165	82.6	82.3	66.7-135			0.400	20
Phenanthrene	0.00200	0.00164	0.00159	81.9	79.5	64.3-143			2.90	20
Pyrene	0.00200	0.00186	0.00180	93.0	90.1	60.2-154			3.20	20
1-Methylnaphthalene	0.00200	0.00195	0.00195	97.3	97.3	68.3-144			0.0300	20
2-Methylnaphthalene	0.00200	0.00192	0.00192	96.2	96.1	67.6-143			0.140	20
2-Chloronaphthalene	0.00200	0.00179	0.00175	89.5	87.5	69.7-140			2.35	20
(S) Nitrobenzene-d5				*70.5*	*71.6*	*33.8-179*				
(S) 2-Fluorobiphenyl				*93.4*	*91.4*	*55.5-150*				
(S) p-Terphenyl-d14				*79.8*	*77.1*	*46.2-163*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

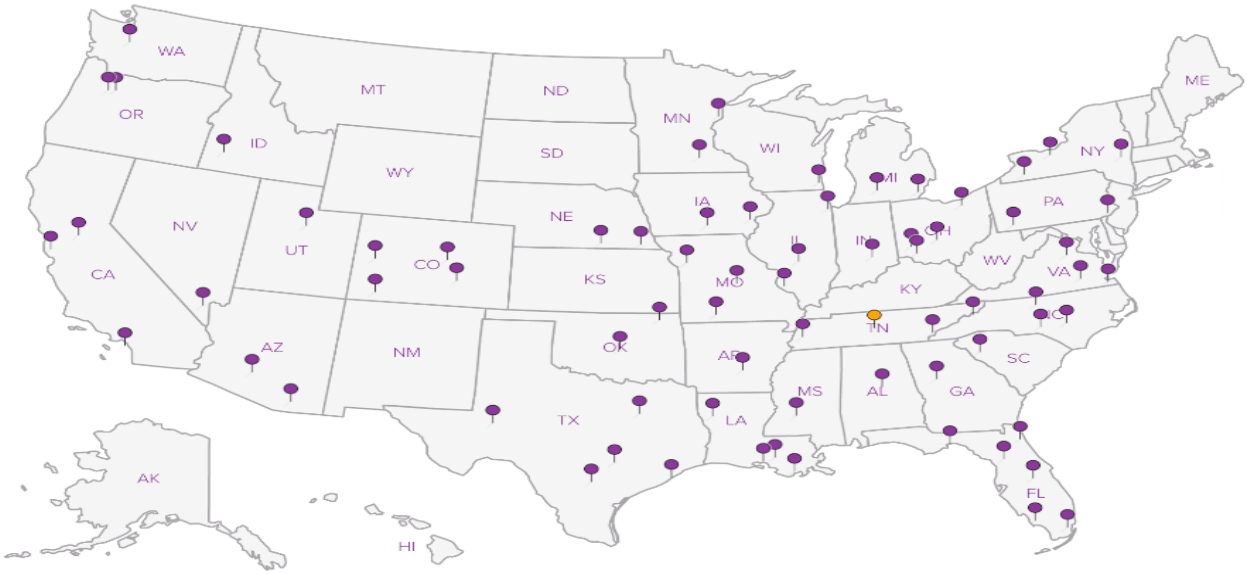
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA – ISO 17025 [5]	1461.02
Canada	1461.01
EPA–Crypto	TN00003
AIHA	100789
DOD	1461.01
USDA	S-67674

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Terracon

Terracon Consultants, Inc.
110 12th Street North • Birmingham, AL 35203
Phone (205) 942-1289 • Fax (205) 942-1266

Laboratory: ESC Lab Sciences
Address: Mt. Juliet, Tennessee

GAI-

Project Name: East Glenn Ave VCP
Project #: E1167114
Facility Location (City, St): Auburn, Alabama
Project Manager: William Noland
Sampler Sign/Print: [signature] / Brian Brown

Field Sample ID	Lab#	#CONTAINERS	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	NaOH	ICE	unpreserved	other (specify)	Sampling: DATE	TIME
MW-1	838521-01	6	X					X				X			5/26/16	1412
MW-2	02	6	X					X				X			5/26/16	1359
MW-3	03	6	X					X				X			5/26/16	1347
MW-4	04	6	X					X				X			5/26/16	1336
MW-5	05	6	X					X				X			5/26/16	1323
Duplicate	06	2	X					X				X			5/26/16	

ANALYSIS REQUEST

Field Sample ID	Type G=Grab C=Composite D=Discrete	BTEX☐ MTBE☐ IPE☐ Method	GRO☐ OA-1☐ Method / TPH Low☐ MASS VPH☐ Other☐	DRO☐ OA-2☐ TPH High☐ / TN EPH☐ MASS EPH☐ Other☐	TPH☐	Oil and Grease Method	Lead Total☐ Dissolved☒ Method 6010	Metals Total☐ Dissolved☐ Method	PAH Method 8270	VOA☐ VOC☒ Method 8260	PCB's Method	Pesticides, Organochlorine Method	Pesticides, Organophosphorus Method	Herbicides Method	TCLP ☐Metals only ☐Full / ☐VOC/SVOC ☐Full Less Pest & Herb	Reactivity☐ Corrosivity☐ Ignitability☐	TOC Method
MW-1	G						X		X	X							
MW-2	G						X		X	X							
MW-3	G						X		X	X							
MW-4	G						X		X	X							
MW-5	G						X		X	X							
Duplicate	G									X							

TOTAL# Bottles/Analysis

REMARKS

	Date	Time		Date	Time
Relinquished by Sampler: [signature]	5/27/16	11:30	Received by: [signature] ESC	5/27/16	11:30
Relinquished by:			Received by: [signature]	5-28-16	9:00
Relinquished by:			Received by Laboratory:		900
Airbill No:			Temperature Received: 3.7		

5851 4709 1384

WHITE - Original YELLOW - Lab PINK - Gallet Copy

Total = 32

ANALYTICAL REPORT

May 27, 2016

Terracon - B-Ham, AL

Sample Delivery Group:	L837346
Samples Received:	05/24/2016
Project Number:	E1167114
Description:	E Glenn Ave LSI
Report To:	Trey Noland 110 12th Street North Birmingham, AL 35203

Entire Report Reviewed By:

Jimmy Hunt
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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[8]Al: Accreditations & Locations 8

[9]Sc: Chain of Custody 9

SB-2 4-6FT L837346-01 Solid

Collected by	Collected date/time	Received date/time
Meghan DiGiorgio	05/23/16 07:45	05/24/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Wet Chemistry by Method D2974	WG875245	1	05/27/16 13:49	05/27/16 13:49	MMF

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jimmy Hunt
Technical Service Representative

Wet Chemistry by Method D2974

Analyte	Result	Units	Qualifier	Dilution	Analysis date / time	Batch
Fractional Organic Carbon	0.00290	g C/g soil		1	05/27/2016 13:49	WG875245
Fractional Organic Matter	0.500	%		1	05/27/2016 13:49	WG875245

Method Blank (MB)

(MB) R3140234-1 05/27/16 13:47

Analyte	MB Result g C/g soil	MB Qualifier	MB MDL g C/g soil	MB RDL g C/g soil
Fractional Organic Carbon	0.000			
Fractional Organic Matter	0.000			

L835229-03 Original Sample (OS) • Duplicate (DUP)

(OS) L835229-03 05/27/16 13:47 • (DUP) R3140234-2 05/27/16 13:48

Analyte	Original Result g C/g soil	DUP Result g C/g soil	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Fractional Organic Carbon	0.00318	0.00302	1	5.36		20
Fractional Organic Matter	0.549	0.520	1	5.36		20

L835883-17 Original Sample (OS) • Duplicate (DUP)

(OS) L835883-17 05/27/16 13:51 • (DUP) R3140234-3 05/27/16 13:50

Analyte	Original Result g C/g soil	DUP Result g C/g soil	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Fractional Organic Carbon	0.00365	0.00344	1	5.76		20
Fractional Organic Matter	0.629	0.594	1	5.76		20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.

Qualifier	Description
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Conneticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1]	90010
Kentucky [2]	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [2]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee [1 4]	2006
Texas	T 104704245-07-TX
Texas [5]	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

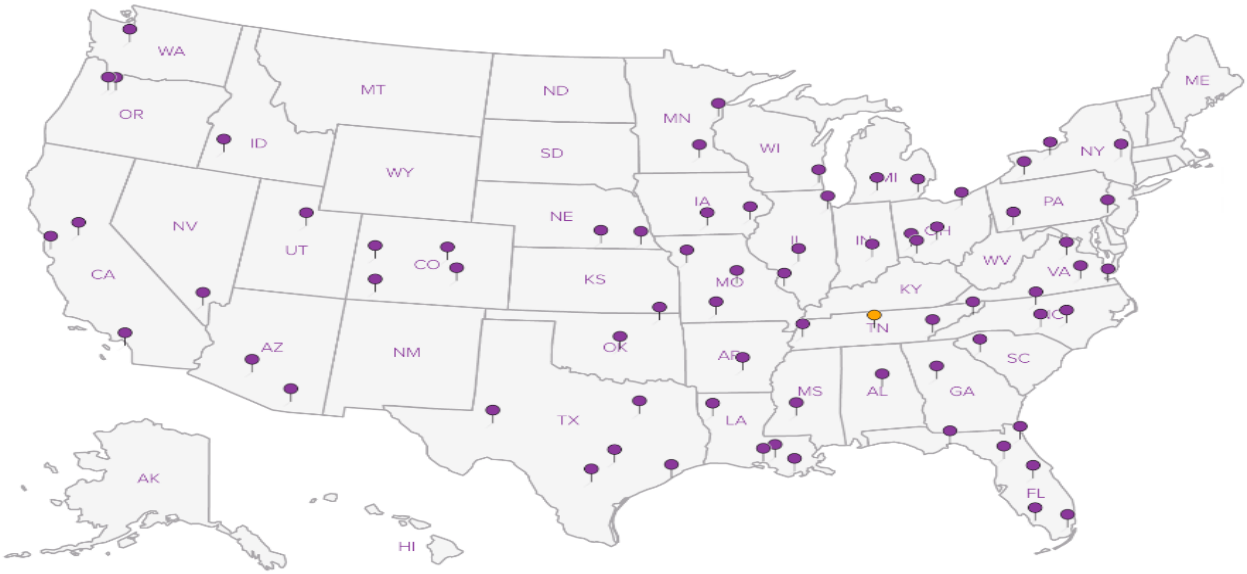
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01
A2LA – ISO 17025 [5]	1461.02
Canada	1461.01
EPA–Crypto	TN00003
AIHA	100789
DOD	1461.01
USDA	S-67674

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



G035

Terracon

Terracon Consultants, Inc.
110 12th Street North • Birmingham, AL 35203
Phone (205) 942-1289 • Fax (205) 942-1266

Laboratory: ESC
Address:

GAI- L837346

Project Name: E Glenn Ave LSI
Project #: E1167114
Facility Location (City, St): Auburn, AL
Project Manager: Trey Noland trey.noland@terracon.com
Sampler Sign/Print: Meghan DiGiorgio

ANALYSIS REQUEST

Field Sample ID	Lab#	#CONTAINERS	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	NaOH	ICE	unpreserved	other (specify)	Sampling: DATE	TIME	Type G=Grab C=Composite D=Discrete	BTEX☐ MTBE☐ IPE ☐ Method	GRO ☐ OA-1☐ Method	TPH Low☐ MASS VPH☐ Other ☐	DRO ☐ OA-2☐ TPH High☐	TN EPH☐ MASS EPH☐ Other☐	TPH ☐	Oil and Grease Method	Lead Total☐ Dissolved☐ Method	Metals Total☐ Dissolved☐ Method	PAH Method	VOA ☐ VOC ☐ Method	PCB's Method	Pesticides, Organochlorine Method	Pesticides, Organophosphorus Method	Herbicides Method	TCLP ☐Metals only ☐Full ☐VOC/SVOC ☐Full Less Pest & Herb	Reactivity☐ Corrosivity☐ Ignitability☐	TOC Method	FOC					
SB-2 4-6'		1		X											5/23/16	0745																			X						-01
TOTAL# Bottles/Analysis																																									

REMARKS

Relinquinshed by Sampler: Meghan DiGiorgio	Date 5/23/16	Time 11:00	Received by:	Date 5/23/16	Time 11:00 OK
Relinquinshed by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by Laboratory: Gary Deem	Date 5-24-16	Time 9:0
Airbill No:			Temperature Received: 3.3		

WHITE - Original YELLOW - Lab PINK - Gallet Copy

GDA

APPENDIX D

ENVIRONMENTAL COMPLIANCE SERVICES, INC.

7856 Westside Park Drive, Suite G, Mobile, AL 36695 tel 251.607.1161 fax 251.607.1161 www.ecsconsult.com

November 23, 2015

Mr. Daniel Fields
ADEM, UST Corrective Action Section
Groundwater Branch, Land Division
1400 Coliseum Boulevard
Montgomery, Alabama 36130-1463

RE: MEME and Groundwater Monitoring Report
Circle K Site No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
Facility ID No. 22502-081-011783; UST Incident No. UST11-01-02
Cost Proposal No. 18
ECS Project No. 30-223216.00/18

Dear Mr. Fields:

On behalf of Circle K Stores Inc. (Circle K), Environmental Compliance Services, Inc. (ECS), is pleased to submit the following Mobile-Enhanced Multiphase Extraction (MEME) event summary and Groundwater Monitoring Report for the above-referenced site for your review and approval. This report summarizes the 24-hour MEME event conducted on August 31, 2015, by Brown Remediation and groundwater sampling activities conducted by ECS on October 7, 2015, in accordance with the above-mentioned approved cost proposal(s).

If you have any questions or comments regarding this submittal, please contact Paul Naman at 251.607.1161, or by email at pnaman@ecsconsult.com.

Sincerely,

ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Paul M. Naman, P.G.
Project Manager

Thomas W. Garrison, III
Program Manager

c: Scott Janashak, Circle K Stores Inc.

ENVIRONMENTAL COMPLIANCE SERVICES, INC.

7856 Westside Park Drive, Suite G, Mobile, AL 36695 tel 251.607.1161 fax 251.607.1161 www.ecsconsult.com

November 23, 2015

Ms. Mary Dell
First Baptist Church
128 East Glenn Avenue
Auburn, Alabama 36830

RE: MEME and Groundwater Monitoring Report
Circle K Site No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
Facility ID No. 22502-081-011783; UST Incident No. UST11-01-02
Cost Proposal No. 18
ECS Project No. 30-223216.00/18

Dear Ms. Dell:

On behalf of Circle K Stores Inc. (Circle K), Environmental Compliance Services, Inc. (ECS), is pleased to submit the following copy of the Mobile-Enhanced Multiphase Extraction (MEME) event summary and Groundwater Monitoring Report for the above-referenced site.

If you have any questions or comments regarding this submittal, please contact Paul Naman at 251.607.1161, or by email at pnaman@ecsconsult.com.

Sincerely,

ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Paul M. Naman, P.G.
Project Manager

Thomas W. Garrison, III
Program Manager

c: Scott Janashak, Circle K Stores Inc.

ENVIRONMENTAL COMPLIANCE SERVICES, INC.

7856 Westside Park Drive, Suite G, Mobile, AL 36695 tel 251.607.1161 fax 251.607.1161 www.ecsconsult.com

November 23, 2015

Mr. Rodney Jones
516 East Glenn Avenue
Auburn, Alabama 36830

RE: MEME and Groundwater Monitoring Report
Circle K Site No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
Facility ID No. 22502-081-011783; UST Incident No. UST11-01-02
Cost Proposal No. 18
ECS Project No. 30-223216.00/18

Dear Mr. Jones:

On behalf of Circle K Stores Inc. (Circle K), Environmental Compliance Services, Inc. (ECS), is pleased to submit the following copy of the Mobile-Enhanced Multiphase Extraction (MEME) event summary and Groundwater Monitoring Report for the above-referenced site.

If you have any questions or comments regarding this submittal, please contact Paul Naman at 251.607.1161, or by email at pnaman@ecsconsult.com.

Sincerely,

ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Paul M. Naman, P.G.
Project Manager

Thomas W. Garrison, III
Program Manager

c: Scott Janashak, Circle K Stores Inc.

ENVIRONMENTAL COMPLIANCE SERVICES, INC.

7856 Westside Park Drive, Suite G, Mobile, AL 36695 tel 251.607.1161 fax 251.607.1161 www.ecsconsult.com

November 23, 2015

Mr. James Sprayberry
P.O. Drawer 2429
Auburn, Alabama 36831-2429

RE: MEME and Groundwater Monitoring Report
Circle K Site No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
Facility ID No. 22502-081-011783; UST Incident No. UST11-01-02
Cost Proposal No. 18
ECS Project No. 30-223216.00/18

Dear Mr. Sprayberry:

On behalf of Circle K Stores Inc. (Circle K), Environmental Compliance Services, Inc. (ECS), is pleased to submit the following copy of the Mobile-Enhanced Multiphase Extraction (MEME) event summary and Groundwater Monitoring Report for the above-referenced site.

If you have any questions or comments regarding this submittal, please contact Paul Naman at 251.607.1161, or by email at pnaman@ecsconsult.com.

Sincerely,

ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Paul M. Naman, P.G.
Project Manager

Thomas W. Garrison, III
Program Manager

c: Scott Janashak, Circle K Stores Inc.

ENVIRONMENTAL COMPLIANCE SERVICES, INC.

7856 Westside Park Drive, Suite G, Mobile, AL 36695 tel 251.607.1161 fax 251.607.1161 www.ecsconsult.com

November 23, 2015

Mr. Kamal H. Choudury
Veereka Food Solutions, LLC
206 North Gay Street
Auburn, Alabama 36830

RE: MEME and Groundwater Monitoring Report
Circle K Site No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
Facility ID No. 22502-081-011783; UST Incident No. UST11-01-02
Cost Proposal No. 18
ECS Project No. 30-223216.00/18

Dear Mr. Choudury:

On behalf of Circle K Stores Inc. (Circle K), Environmental Compliance Services, Inc. (ECS), is pleased to submit the following copy of the Mobile-Enhanced Multiphase Extraction (MEME) event summary and Groundwater Monitoring Report for the above-referenced site.

If you have any questions or comments regarding this submittal, please contact Paul Naman at 251.607.1161, or by email at pnaman@ecsconsult.com.

Sincerely,

ENVIRONMENTAL COMPLIANCE SERVICES, INC.

Paul M. Naman, P.G.
Project Manager

Thomas W. Garrison, III
Program Manager

c: Scott Janashak, Circle K Stores Inc.

WHERE BUSINESS AND THE ENVIRONMENT CONVERGE

MOBILE-ENHANCED MULTIPHASE EXTRACTION AND GROUNDWATER MONITORING REPORT

AS APPROVED IN
COST PROPOSAL NO. 18

CIRCLE K SITE NO. 2706682
171 EAST GLENN AVENUE
LEE COUNTY
AUBURN, ALABAMA

ADEM FACILITY NO.
22502-081-011783
UST INCIDENT NO. UST11-01-02

Prepared for:
Circle K Stores Inc.
25 West Cedar Street
Suite M
Pensacola, FL 32502

Project No. 30-223216.00/18
November 23, 2015

Prepared by:
ECS
7856 Westside Park Drive, Suite G
Mobile, Alabama 36695
tel 251.607.1161 fax 251.607.1161
www.ecsconsult.com

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APPENDICES

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Appendix B Air Division Approval Letter
Appendix C NAMR Form(s)
Appendix D Laboratory Analytical Report & Chain of Custody Form(s)

GROUNDWATER MONITORING REPORT

SUBMITTAL DATE:

11/23/15

FACILITY NAME: Circle K Store No. 2706682

FACILITY ADDRESS: 171 East Glenn Avenue, Auburn, Alabama

FACILITY I.D. NO.: 22502-081-011783

UST OR AST INCIDENT NO.: UST11-01-02

BRIEFLY ANSWER THE FOLLOWING QUESTIONS REGARDING THIS SITE:

Number of monitoring wells (MWs) at the site?	15
Number of MWs containing Free Product?	0
Number of MWs with dissolved constituents above CALs?	9 (of 15 sampled)
Number of MWs with dissolved constituents below CALs?	6 (of 15 sampled)
Are free product recovery activities currently in progress?	Yes
If yes, what date did recovery activities commence?	

Are free product recovery reports being submitted to the UST Corrective Action Unit? YES X NO

If yes, please indicate the submittal date of the most recent recovery report. August 2015

If no, please indicate reason (i.e. recently discovered or observed) and complete the following information: _____

Monitoring wells containing free product: Identify and indicate well diameter and product thickness (ex. MW-2 /2 inch/ 4.0 inches) for this event:

_____ _____

Are assessment activities currently being conducted on the site? If yes, indicate status of assessment activities. No

Is the site currently in remediation (approved CAP)? If yes, indicate status of remediation activities (ex. received approval to implement CAP, evaluating effectiveness of remediation system):

No. Remedial Alternatives Evaluation Report submitted to ADEM in June 2015

Miscellaneous information not directly requested:

SUBMIT THIS FORM WITH THE FOLLOWING ATTACHMENTS:

- Scaled site map identifying: all monitoring wells, groundwater elevations, groundwater elevation contours, and primary groundwater flow direction
- Scaled site map identifying: all monitoring wells, free product thickness, and total dissolved BTEX for each monitoring well
- Scaled site map identifying: all monitoring wells, Benzene levels, MTBE levels (if applicable for each monitoring well), or other appropriate constituents detected at this site
- Table containing: historical groundwater elevations, depth to groundwater and depth to top of screen for each of the monitoring wells.
- Table containing: historical free product thickness, Benzene levels, MTBE levels (if applicable), Ethylbenzene, Toluene, Xylenes, total BTEX levels and other appropriate constituents detected at this site for each of the monitoring wells
- Copies of lab analysis sheets for this sampling event for each of the monitoring wells
- Copies of chain of custody documentation for this sampling event
- Brief narrative description of procedures utilized to obtain groundwater sampling data

Signature of Preparer of this Report: Paul M. Naman

Type or print Name: Paul M. Naman, P.G.

Company Name: Environmental Compliance Services, Inc.

Company Address: 7856 Westside Park Drive, Ste. G

Mobile, Alabama 36695

SITE INFORMATION

Date of Report: November 23, 2015

SITE IDENTIFICATION

Facility ID: 22502-081-011783
UST Incident No: UST11-01-02

Agency Contact: Daniel Fields, ADEM, UST Corrective Action Unit

Site Name: Circle K No. 6682
Site Street Address: 171 East Glenn Avenue
Auburn, Lee County, Alabama

Latitude / Longitude: 32° 36' 34" / (-) 85° 28' 49"

SITE CONTACT INFORMATION

UST Owner/Operator: Circle K Stores Inc.
Address: 25 W. Cedar Street, Suite M, Pensacola, FL 32502
Telephone: (850) 549-2879
Contact: Scott Janashak, Environmental Manager

Property Owner: Circle K Stores Inc.
Address: 25 W. Cedar Street, Suite M, Pensacola, FL 32502
Telephone: (850) 549-2879

Consultant/Contractor: Environmental Compliance Services, Inc.
Address: 7856 Westside Park Drive, Mobile, AL 36695
Telephone: (251) 607-1161
Contact Name: Paul M. Naman

Analytical Laboratory: Accutest Laboratories
Address: 500 Ambassador Caffery, Scott, LA 70583
Telephone: (337) 237-4775

INFORMATION ABOUT CURRENT RELEASE

Date Discovered: 2011

Estimated Quantity of Release: Unknown

Source of Release: Unknown

Current UST(s) Size & Contents: (1) 12,000-gallon Gasoline; (1) 8,000-gallon Gasoline

REPORT CERTIFICATION

I, certify under penalty of law that I am an Alabama Licensed Geologist or Alabama Registered Professional Engineer experienced in hydrogeological investigations. The investigation described in this report was performed by a Geologist(s) or Alabama Registered Professional Engineer(s) experienced in hydrogeological investigations. The information submitted herein, to the best of my knowledge and belief, is true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Paul M. Naman, P.G.
Professional Geologist
Alabama Seal No. 560

Date: 11/23/15

EXECUTIVE SUMMARY

The following executive summary provides the most pertinent information for this monitoring report. For additional information please refer to subsequent sections of this report.

- As approved in Cost Proposal No. 18 (CP-18), a 24-hour mobile-enhanced multiphase extraction (MEME) event and groundwater sampling event were conducted at this facility. The MEME event was conducted by Brown Remediation on August 31, 2015. Wells MW-4, MW-5, and MW-7 were utilized as extraction wells during the first half of the 24-hour event and wells MW-2, MW-3, and RW-2 were utilized as extraction wells during the second half of the 24-hour event. Non-aqueous phase liquid (NAPL) was detected at a thickness of 0.08 feet in MW-5 and 0.08 feet in MW-3 prior to the beginning of the event. NAPL was not detected in any of the wells gauged immediately following the completion of the event. Approximately 16.13 pounds of hydrocarbons (2.61 equivalent gallons) were recovered and approximately 950 gallons of petroleum-contact water (PCW) were collected during this event.

- Environmental Compliance Services, Inc. (ECS), personnel conducted the groundwater monitoring event on October 7, 2015. Samples were collected following ECS sampling protocol in accordance with industry standard decontamination and sample collection techniques as discussed in subsequent sections of this report. Following purging, groundwater samples were placed in laboratory-provided containers for laboratory analyses of a limited list of volatile organic compounds (VOCs) by Environmental Protection Agency (EPA) Method 8260B.

  During the October 2015 sampling event, all of site monitoring wells were located and observed to be in good condition. LNAPL was not detected in any site wells during this monitoring event.

- On November 11, 2015, ECS mobilized to the site along with Walker Hill Environmental Drilling to properly abandon off-site monitoring well MW-9 at the request of Mr. Daniel Fields of ADEM. Upon reaching the site, it was noted that monitoring well MW-9 had already been filled with concrete by the on-site contractor, D&J Enterprises. ECS directed the contractor to remove the well pad and the top ten feet of well material. Mr. Fields of ADEM was informed of these activities.

- Based on the recent laboratory analytical results, the samples collected from wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-9, MW-11, MW-13, and RW-2 contained a level of benzene in excess of the applicable site-specific target levels (SSTL). The sample collected from MW-2 contained a level of toluene in excess of the applicable SSTL. The sample collected from MW-1 contained a level of methyl tertiary-butyl ether (MTBE) in excess of the applicable SSTL. The sample collected from MW-11 contained a level of naphthalene in excess of the applicable SSTL. Analytical results are summarized in **Table 2**.

- Future activities are currently not scheduled for the site. A Remedial Alternatives Evaluation (RAE) Report was submitted to ADEM in June 2015. Upon approval of the RAE approach, corrective action at the site will be modified.

1.0 INTRODUCTION

This MEME and Groundwater Monitoring Report presents a summary of the 24-hour MEME event conducted on August 31, 2015, by Brown Remediation, and also includes the results of the groundwater monitoring event conducted on October 7, 2015, by ECS. The Circle K Site No. 2706682 facility is located at 171 East Glenn Avenue in Auburn, Lee County, Alabama, and the site location is illustrated on **Figure 1** (henceforth referred to as the "site"). The site is developed with a one-story building, two underground storage tanks (USTs), and associated fuel canopies with dispensers. The existing UST information is summarized in the site information section of this report with locations illustrated on the Site Map presented as **Figure 2**.

The activities summarized in this report were conducted in accordance with CP-18, as approved by ADEM in correspondence dated April 28, 2015. The tables, figures, report, and site data contained in this report were prepared and interpreted by Mr. Paul M. Naman, P.G., Project Manager, ECS, for this scope of work.

2.0 SITE HISTORY AND CHARACTERIZATION

In January 2011, a release was reported to ADEM based on UST closure activities at the site. ADEM issues notice to conduct investigative actions in February 2011.

In December 2011, free product was detected in MW-2, MW-3, and MW-4. Free product recovery including bailing and MEME events was initiated in December 2011. Between December 2011 and December 2014 a total of approximately 522 equivalent gallons of hydrocarbons were recovered at the site.

On May 13, 2015, Brown Remediation conducted a 24-hour MEME event from wells MW-4, MW-5, and MW-7. Approximately 85.71 pounds of hydrocarbons (13.89 equivalent gallons) were recovered and approximately 1,000 gallons of PCW were collected during this event.

- On November 11, 2015, ECS mobilized to the site along with Walker Hill Environmental Drilling to properly abandon off-site monitoring well MW-9 at the request of Mr. Daniel Fields of ADEM. Upon reaching the site, it was noted that monitoring well MW-9 had already been filled with concrete by the on-site contractor, D&J Enterprises. ECS directed the contractor to remove the well pad and the top 10 feet of well material. Mr. Fields of ADEM was informed of these activities.

3.0 MOBILE-ENHANCED MULTIPHASE RECOVERY EVENT

On August 31, 2015, Brown Remediation personnel conducted a 24-hour MEME event at the site. Wells MW-4, MW-5, and MW-7 were utilized as extraction wells during the first half of the 24-hour event and wells MW-2, MW-3, and RW-2 were utilized as extraction wells during the second half of the 24-hour event. The MEME event was performed utilizing a trailer-mounted MEME system, using a high-vacuum remediation (HVR) service. During the event, Brown personnel monitored liquid levels in the target well(s); and measured vacuum influence, vacuum pressures, vapor flow rates, extracted vapor concentrations, mass removal of NAPL, and the total volume of liquids recovered.

Prior to the August 31, 2015, MEME event, NAPL was detected at a thickness of 0.08 feet in MW-5 and 0.08 feet in MW-3. NAPL was not detected in any of the wells gauged immediately following the completion of the MEME event. Approximately 16.13 pounds of hydrocarbons (2.61 equivalent gallons) were recovered and approximately 950 gallons of PCW were collected during this event.

During the MEME event, the off-gas was treated using a thermal-oxidizer unit capable of a destructive efficiency of 99.9 percent. This ensures that off-gas emissions remain below maximum allowed discharge levels. All PCW generated during the MEME events was disposed of at Aqua Terra Recycling and Treatment located in Oxford, Georgia.

The MEME Summary Report for the August 31, 2015, event, including the waste manifest for liquid disposal, is included in **Appendix A**. Additionally, a copy of the ADEM Air Division review and approval letter is included in **Appendix B**.

4.0 CURRENT ASSESSMENT INFORMATION

4.1 Groundwater Gauging and Sampling Procedures

Prior to purging and sampling activities on October 7, 2015, static water levels were measured in monitoring wells MW-1 through MW-7, MW-8D, MW-9 through MW-13, RW-1, RW-2, and AS-1 using an electronic optical interface probe (IP) capable of distinguishing NAPL from water. Liquid levels were measured to the nearest 0.01 foot from the top of each well casing for comparison to a common datum. The liquid level measurements included depth to water, depth to NAPL (where present), and depth to the bottom of the well. LNAPL was not observed in any wells gauged during this monitoring event.

Casing elevations, depths to water, and groundwater elevations are summarized in **Table 1**, and on the Natural Attenuation Monitoring Report (NAMR) forms presented in **Appendix C**. A

potentiometric surface map for both the previous gauging event (April 2015) and the October 7, 2015, gauging event are included as **Figure 3A** and **Figure 3B**.

Following liquid level measurements, monitoring wells MW-1 through MW-7, MW-8D, MW-9 through MW-13, RW-1, and RW-2 were purged of at least three well volumes of groundwater or until dry. During well purging activities, remediation by natural attenuation (RNA) field measurements, including groundwater pH, temperature, conductivity, dissolved oxygen, and oxidation reduction potential, were collected and are summarized on the NAMR forms presented in **Appendix C**. Following RNA measurements and groundwater recharge, samples were collected using dedicated, disposable bailers. All samples were logged using proper chain of custody protocol and submitted to Accutest Laboratories in Orlando, Florida, for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX), MTBE, and naphthalene, in accordance with EPA Method 8260B.

4.2 Investigation-Derived Wastes

On October 7, 2015, monitoring well purging volumes were recorded as follows:

Well Number	Date of Purging	Method of Purging	Volume Removed (Gallons)
MW-1	10/07/15	Bailer	6.5
MW-2	10/07/15	Bailer	7.0
MW-3	10/07/15	Bailer	6.0
MW-4	10/07/15	Bailer	8.0
MW-5	10/07/15	Bailer	7.0
MW-6	10/07/15	Bailer	11.0
MW-7	10/07/15	Bailer	7.0
MW-8D	10/07/15	Bailer	14.0
MW-9	10/07/15	Bailer	8.5
MW-10	10/07/15	Bailer	5.5
MW-11	10/07/15	Bailer	6.0
MW-12	10/07/15	Bailer	5.5
MW-13	10/07/15	Bailer	5.5
RW-1	10/07/15	Bailer	38.0
RW-2	10/07/15	Bailer	26.0
		Total This Event	161.5

Well Development or Purge Water:

1. Temporary Storage at this location: Yes
2. Discharge to Sanitary Sewer at this location: No
3. Containerized and left on site to be picked up by: Domermuth Environmental Services

- MEME Vendor name*: N/A Date picked up*: N/A
- Waste Hauler name*: N/A Date picked up*: N/A

4. Treated on site using carbon: No (sample analysis must be included in report)
5. Treated on site through groundwater treatment system: No
6. Final disposal facility name and location*: Domermuth Environmental Services, Knoxville, Tennessee
   Date of Delivery to Disposal Facility*: TBA

*Invoice and manifest documentation must be included in the associated report and payment request.

Three 55-gallon drums of sampling purge water was generated during the course of this periods activities and is stored at the site. Domermuth Environmental Services (Domermuth) is scheduled to transport these three drums to their Knoxville, Tennessee Facility in November 2105. Disposal documentation will be forwarded to ADEM upon receipt from Domermuth.

5.0 SITE MONITORING RESULTS

5.1 Groundwater Analytical Results

Laboratory analytical results for the groundwater samples collected on October 7, 2015, with a breakdown of individual BTEX, MTBE, and naphthalene components, including historical analytical results, are summarized in **Table 2**, and on the NAMR forms presented in **Appendix C**. Isoconcentration maps showing the distribution of dissolved-phase benzene for the July 2015 and October 2015 sampling events are included as **Figure 4A** and **Figure 4B**. Isoconcentration maps showing the distribution of dissolved-phase MTBE for the July 2015 and October 2015 sampling events are included as **Figure 5A** and **Figure 5B**. Isoconcentration maps showing the distribution of dissolved-phase naphthalene for the July 2015 and October 2015 sampling events are included as **Figure 6A** and **Figure 6B**. Laboratory analytical reports for the groundwater samples collected on October 7, 2015, are included in **Appendix D**.

A review of **Table 2** indicates the following information about chemicals of concern (COCs) in groundwater associated with this site based on samples collected in October 7, 2015:

- Benzene was detected above the laboratory-reporting limit in fourteen of the fifteen samples analyzed for this constituent. Nine of these samples exceeded the applicable SSTLs for benzene, established in the ARBCA Tier I/Tier II evaluation of the site approved by ADEM in April 2013, with concentrations ranging from 0.128 milligrams per liter (mg/L) in MW-11 to 15.5 mg/L in MW-2.

- Toluene was detected above the laboratory-reporting limit in thirteen of the fifteen samples analyzed for this constituent. One of these samples exceeded the applicable SSTL for toluene with a concentration of 35.1 mg/L in MW-2.

- Ethylbenzene was detected above the laboratory-reporting limit in thirteen of the fifteen samples analyzed for this constituent. However, none of these samples exceeded the applicable SSTLs for ethylbenzene

- Total xylenes were detected above the laboratory-reporting limit in fourteen of the fifteen samples analyzed for this constituent. However, none of these samples exceeded the applicable SSTLs for total xylenes.

- MTBE was detected above the laboratory-reporting limit in ten of the fifteen samples analyzed for this constituent. One of these samples exceeded the applicable SSTL for MTBE with a concentration of 0.741 mg/L in MW-1.

- Naphthalene was detected above the laboratory-reporting limit in thirteen of the fifteen samples analyzed for this constituent. One of these samples exceeded the applicable SSTL for naphthalene with a concentration of 0.262 mg/L in MW-11.

6.0 CONCLUSIONS

A review of **Table 1** indicates that LNAPL was not present in any site wells during the gauging event conducted on October 7, 2015. A review of **Table 2** indicates that dissolved-phase BTEX, MTBE, and naphthalene concentrations have remained relatively stable or fluctuated slightly in all monitoring wells at the site.

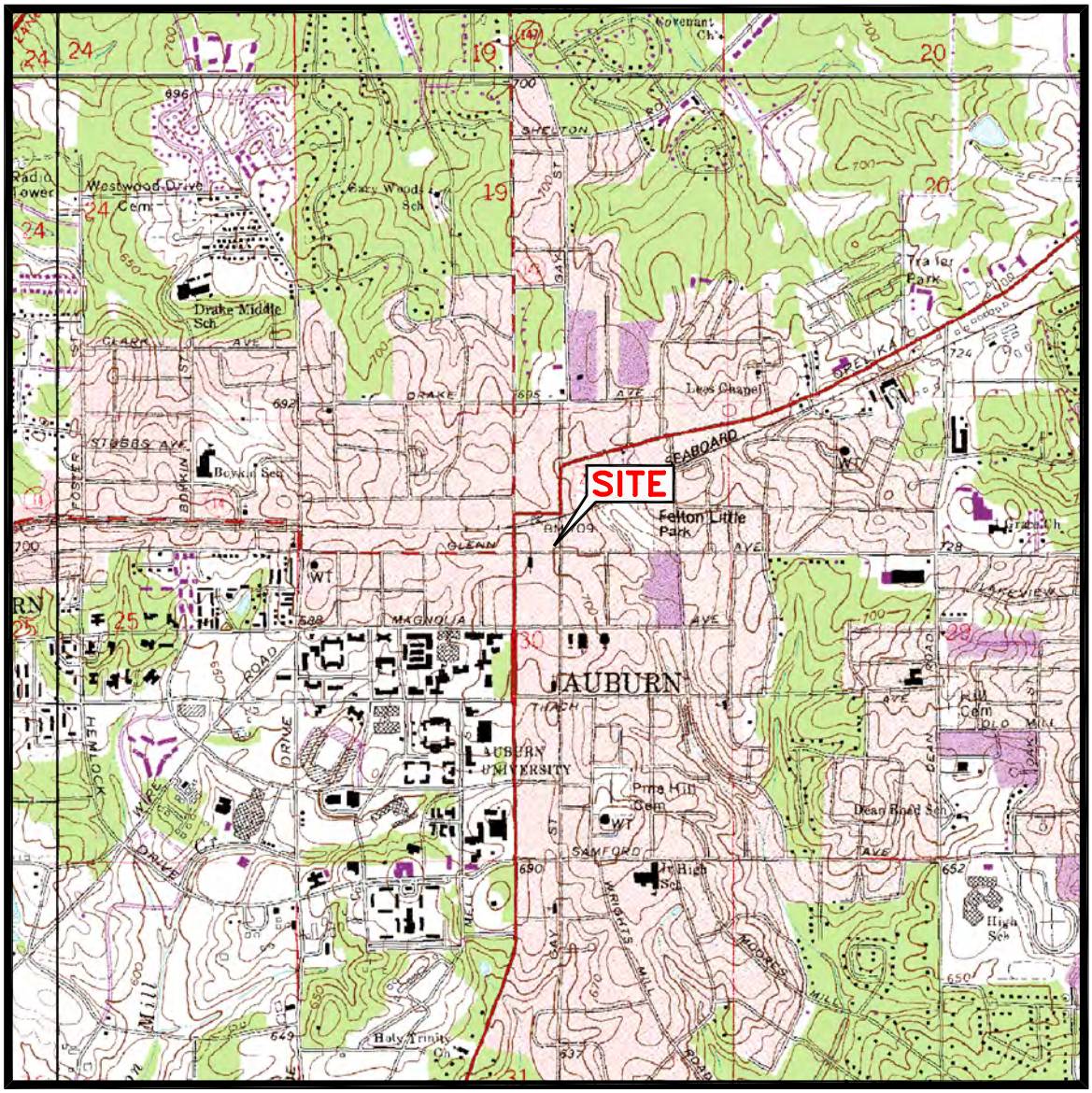
During the October 2015 sampling event, established SSTLs for benzene were exceeded in nine wells (MW-1, MW-2, MW-3, MW-4, MW-5, MW-9, MW-11, MW-13, and RW-2), the established SSTL for toluene was exceeded in one well (MW-2), the established SSTL for MTBE was exceeded in one well (MW-1), and the SSTL for naphthalene was exceeded in one well (MW-11).

During the August 31, 2015, MEME event, approximately 16.13 pounds of hydrocarbons (2.61 equivalent gallons) were recovered and approximately 950 gallons of PCW were collected.

7.0 FUTURE ACTIVITIES

Future activities are currently not scheduled for the site. A RAE Report was submitted to ADEM in June 2015. Upon approval of the RAE approach, corrective action at the site will be modified.

FIGURES



SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLE MAP

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MAP SOURCE: 7.5 MINUTE SERIES, OPELIKA WEST, ALABAMA, 1983
MAP SOURCE: 7.5 MINUTE SERIES, WAVERLY, ALABAMA, 1981
MAP SOURCE: 7.5 MINUTE SERIES, LEACHAPOKE, ALABAMA, 1998

QUAD LOCATION

SCALE 1:24,000

0 2,000 4,000

SCALE FEET

N

ecs
9674 Main Street, Suite 100, Woodstock, Ga. 30188
Phone: 770-926-8883 Fax: 770-926-5383
ecsconsult.com

PROJECT:

CIRCLE K #2706682
171 EAST GLENN AVENUE
AUBURN, ALABAMA

TITLE:

SITE LOCATION MAP

COMPUTER CADFILE : CK-2706682-8.5x11quad

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SCALE:	DATE:	JOB NO.:	FIGURE NO.:
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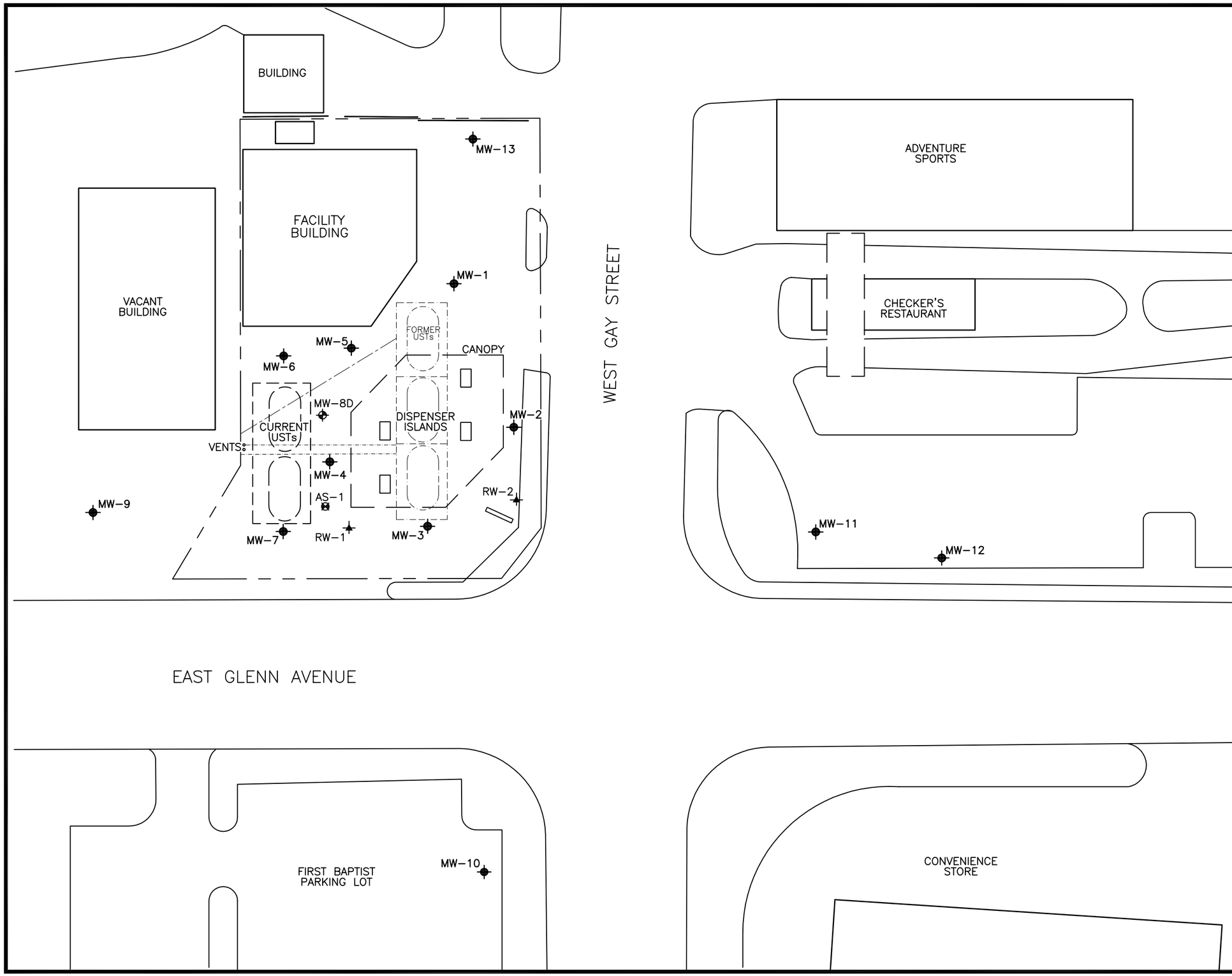

LEGEND

- MONITORING WELL LOCATION
- DEEP MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- AIR SPARGE WELL LOCATION
- PROPERTY LINE
- FORMER PRODUCT PIPING
- CURRENT PRODUCT PIPING

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ecsconsult.com

PROJECT:

CIRCLE K #2706682

171 EAST GLENN AVENUE
AUBURN, ALABAMA

TITLE:

SITE MAP

CLIENT:

CIRCLE K STORES

GRAPHIC SCALE: 30 15 0 15 30

COMPUTER CADFILE : CK-2706682-SIT

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
EL	KP	KP	DM
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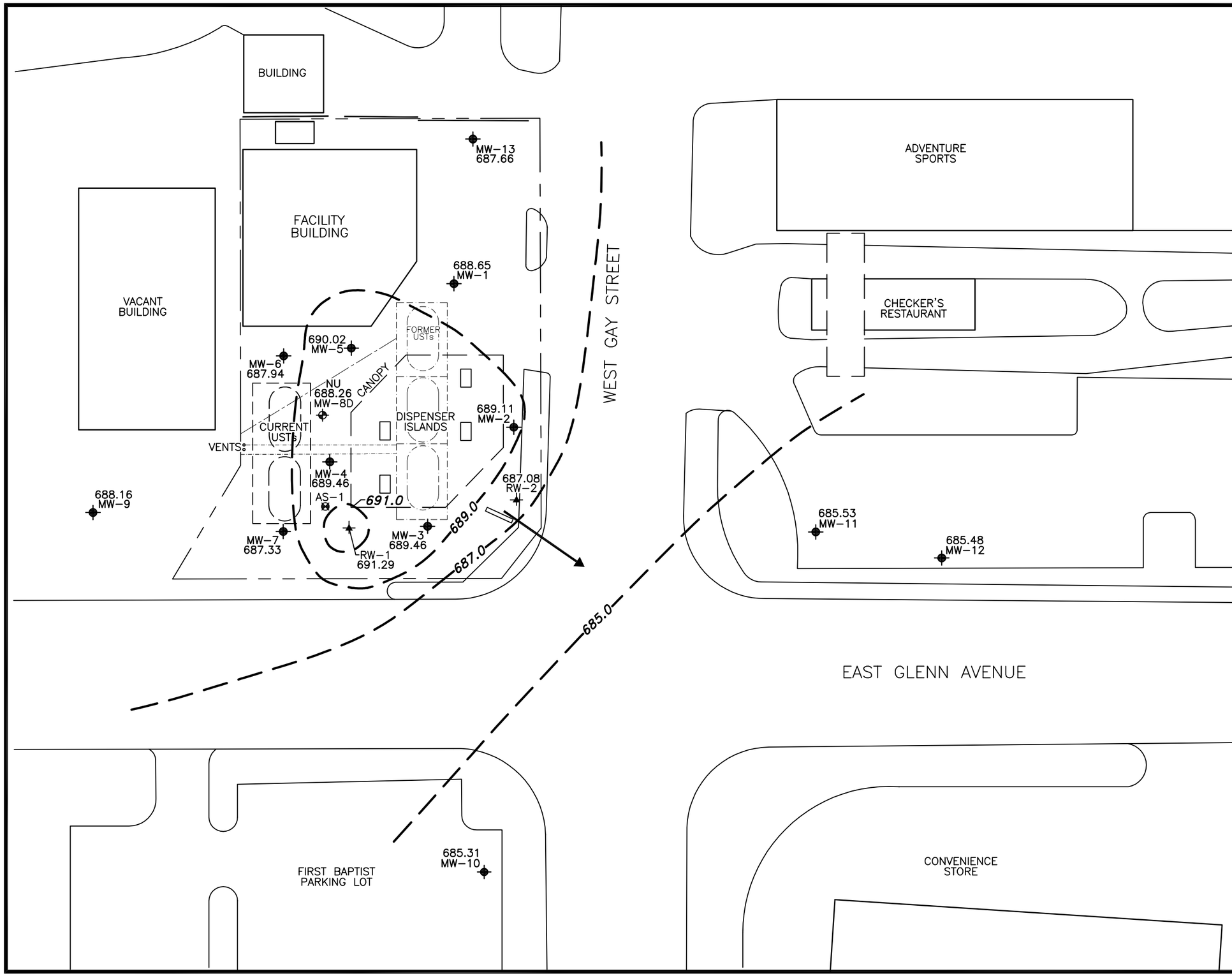

LEGEND

- MONITORING WELL LOCATION
- DEEP MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- AIR SPARGE WELL LOCATION
- PROPERTY LINE
- FORMER PRODUCT PIPING
- CURRENT PRODUCT PIPING
- NU — NOT USED IN CONTOURING
- 685.53 — GROUNDWATER ELEVATION IN FEET RELATIVE TO A COMMON DATUM
- 685.0 — CONTOUR LINE OF ESTIMATED EQUAL GROUNDWATER ELEVATION IN FEET RELATIVE TO A COMMON DATUM
- APPROXIMATE GROUNDWATER FLOW DIRECTION

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PROJECT:
CIRCLE K #2706682
171 EAST GLENN AVENUE
AUBURN, ALABAMA

TITLE: POTENTIOMETRIC SURFACE MAP for JULY 1, 2015

CLIENT: **CIRCLE K STORES**

GRAPHIC SCALE: 30 15 0 15 30

COMPUTER CADFILE : CK-2706682-POT715

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
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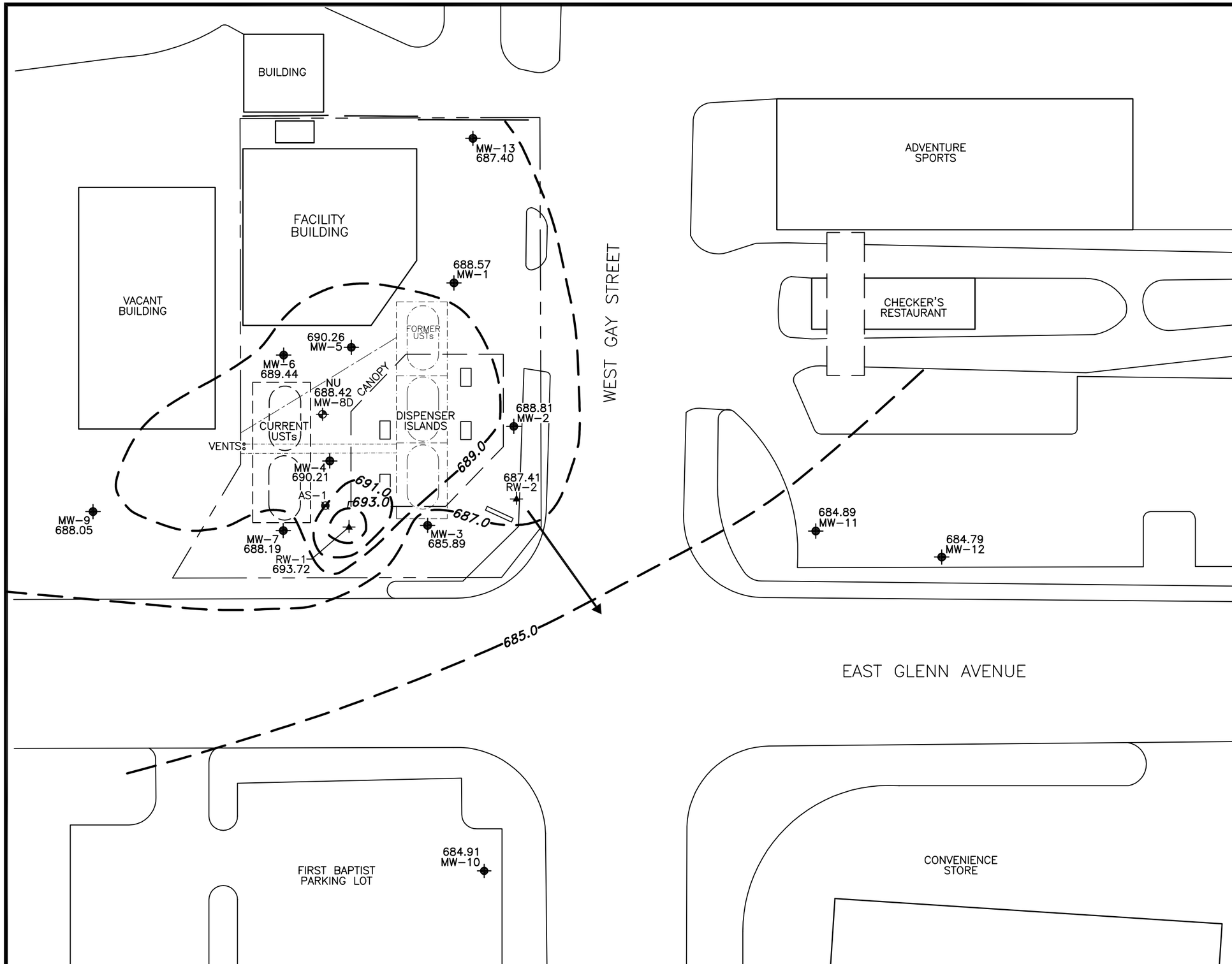

LEGEND

- MONITORING WELL LOCATION
- DEEP MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- AIR SPARGE WELL LOCATION
- PROPERTY LINE
- FORMER PRODUCT PIPING
- CURRENT PRODUCT PIPING
- NU — NOT USED IN CONTOURING
- 684.79 — GROUNDWATER ELEVATION IN FEET RELATIVE TO A COMMON DATUM
- 685.0 — CONTOUR LINE OF ESTIMATED EQUAL GROUNDWATER ELEVATION IN FEET RELATIVE TO A COMMON DATUM
- APPROXIMATE GROUNDWATER FLOW DIRECTION

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PROJECT:
CIRCLE K #2706682
171 EAST GLENN AVENUE
AUBURN, ALABAMA

TITLE: POTENTIOMETRIC SURFACE MAP for OCTOBER 7, 2015

CLIENT: **CIRCLE K STORES**

GRAPHIC SCALE: 30 15 0 15 30

COMPUTER CADFILE : CK-2706682-POT1015

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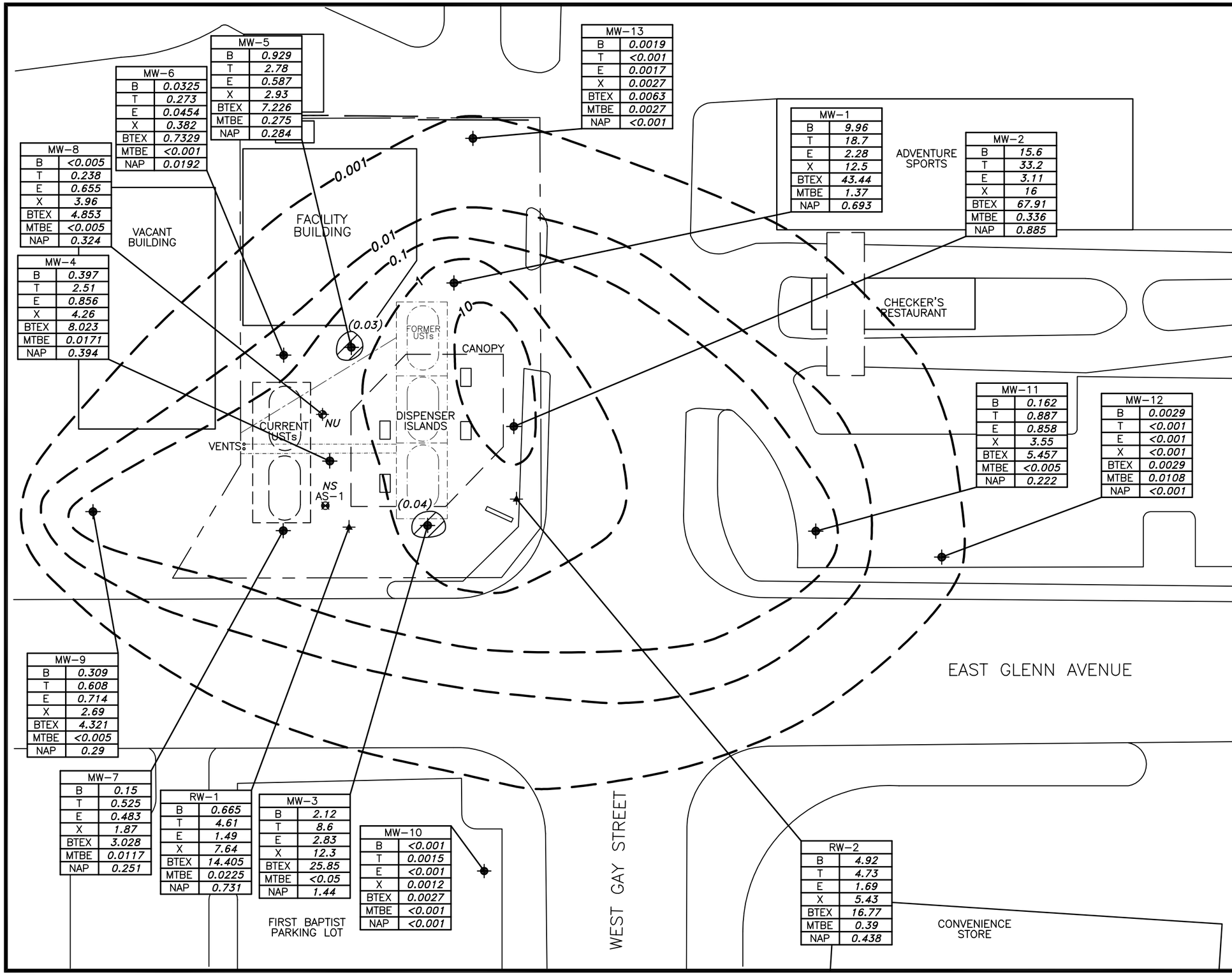

LEGEND

- MONITORING WELL LOCATION
- DEEP MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- AIR SPARGE WELL LOCATION
- PROPERTY LINE
- FORMER PRODUCT PIPING
- CURRENT PRODUCT PIPING

MW-12		SAMPLE ID
B	0.0029	BENZENE CONCENTRATION IN mg/L
T	<0.001	TOLUENE CONCENTRATION IN mg/L
E	<0.001	ETHYLBENZENE CONCENTRATION IN mg/L
X	<0.001	XYLENES CONCENTRATION IN mg/L
BTEX	0.0029	TOTAL BTEX CONCENTRATION IN mg/L
MTBE	0.0108	MTBE CONCENTRATION IN mg/L
NAP	<0.001	NAPHTHALENE CONCENTRATION IN mg/L

BTEX BENZENE TOLUENE ETHYLBENZENE XYLENE

MTBE METHYL TERTIARY BUTYL ETHER

mg/L MILLIGRAMS PER LITER

NU NOT USED IN CONTOURING

NS NOT SAMPLED

(0.04) NAPL THICKNESS IN FEET

NAPL NON-AQUEOUS PHASE LIQUID

ESTIMATED HORIZONTAL EXTENT OF NAPL

0.1 ESTIMATED BENZENE CONCENTRATION DISTRIBUTION IN mg/L

ecs

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PROJECT:

CIRCLE K #2706682

171 EAST GLENN AVENUE
AUBURN, ALABAMA

TITLE: **BENZENE ISOCONCENTRATION MAP for JULY 1, 2015**

CLIENT: **CIRCLE K STORES**

GRAPHIC SCALE: 30 15 0 15 30

COMPUTER CADFILE : CK-2706682-HYG715

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
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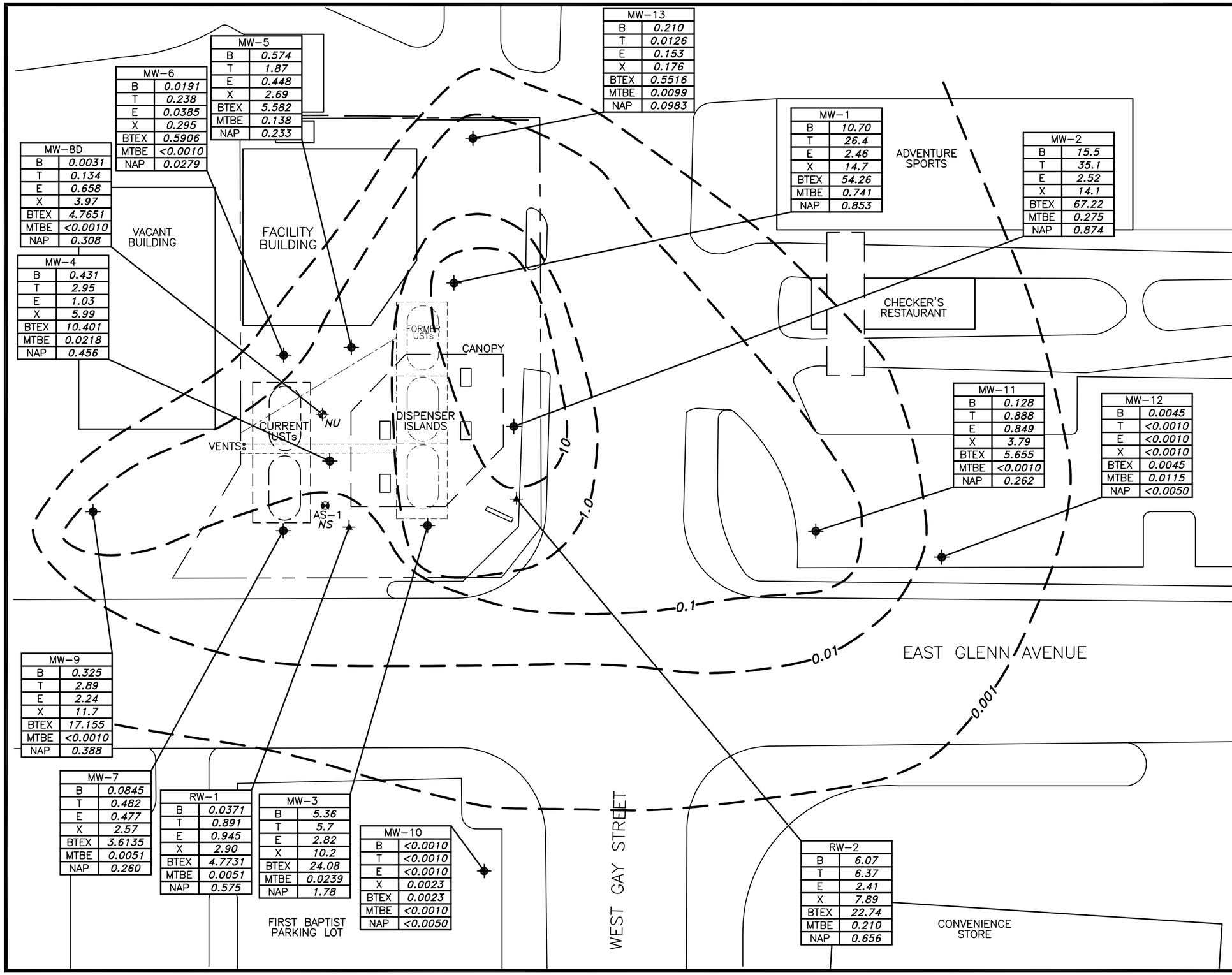

LEGEND

- MONITORING WELL LOCATION
- DEEP MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- AIR SPARGE WELL LOCATION
- PROPERTY LINE
- FORMER PRODUCT PIPING
- CURRENT PRODUCT PIPING

MW-12		SAMPLE ID
B	0.0045	BENZENE CONCENTRATION IN mg/L
T	<0.0010	TOLUENE CONCENTRATION IN mg/L
E	<0.0010	ETHYLBENZENE CONCENTRATION IN mg/L
X	<0.0010	XYLENES CONCENTRATION IN mg/L
BTEX	0.0045	TOTAL BTEX CONCENTRATION IN mg/L
MTBE	0.0115	MTBE CONCENTRATION IN mg/L
NAP	<0.0050	NAPHTHALENE CONCENTRATION IN mg/L

BTEX BENZENE TOLUENE ETHYLBENZENE XYLENE

MTBE METHYL TERTIARY BUTYL ETHER

mg/L MILLIGRAMS PER LITER

NU NOT USED IN CONTOURING

NS NOT SAMPLED

0.1 ESTIMATED BENZENE CONCENTRATION DISTRIBUTION IN mg/L

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PROJECT:
CIRCLE K #2706682
171 EAST GLENN AVENUE
AUBURN, ALABAMA

TITLE: BENZENE ISOCONCENTRATION MAP for OCTOBER 7, 2015

CLIENT: CIRCLE K STORES

GRAPHIC SCALE: 30 15 0 15 30

COMPUTER CADFILE : CK-2706682-HYG1015

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
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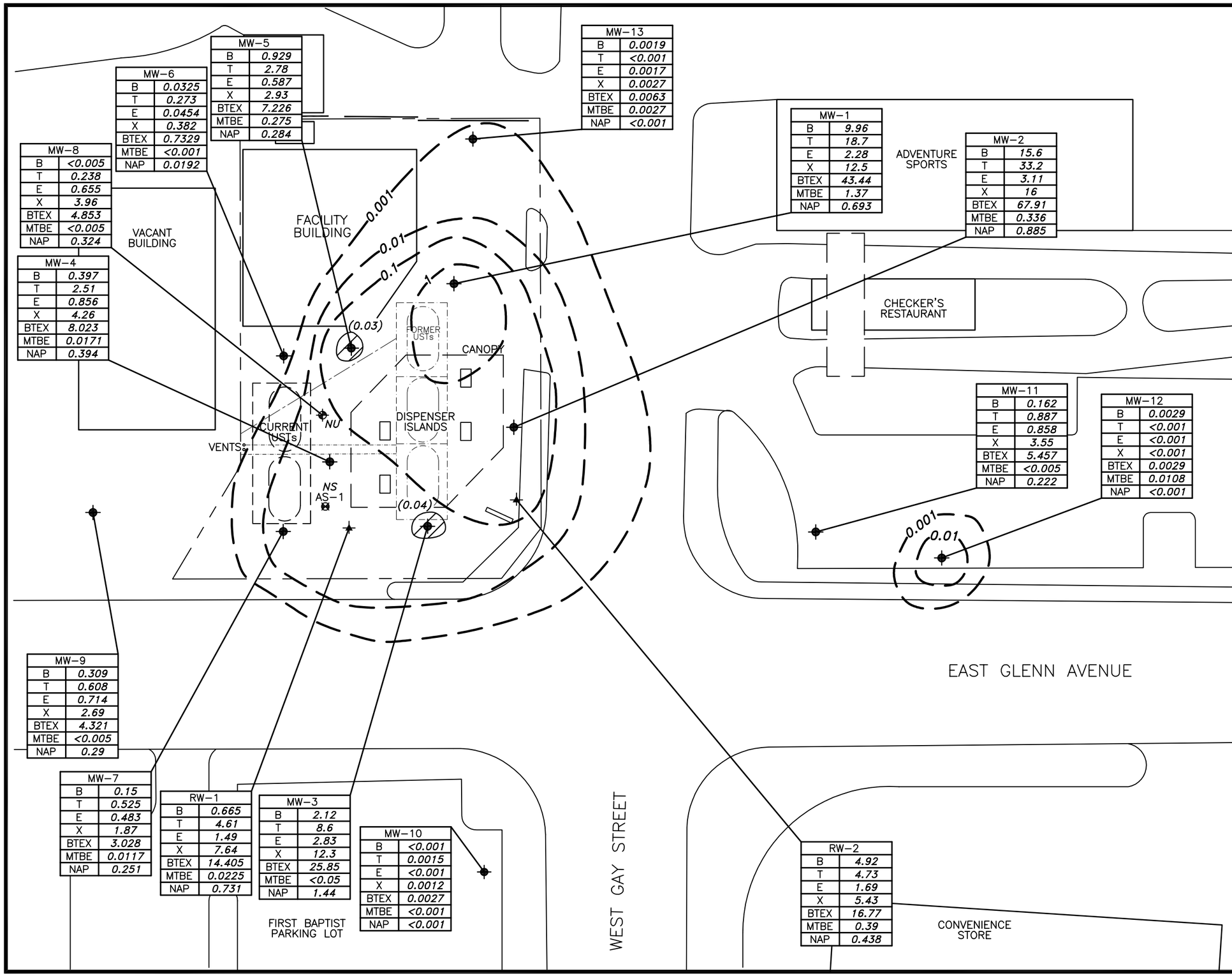

LEGEND

- MONITORING WELL LOCATION
- DEEP MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- AIR SPARGE WELL LOCATION
- PROPERTY LINE
- FORMER PRODUCT PIPING
- CURRENT PRODUCT PIPING

MW-12		SAMPLE ID
B	0.0029	BENZENE CONCENTRATION IN mg/L
T	<0.001	TOLUENE CONCENTRATION IN mg/L
E	<0.001	ETHYLBENZENE CONCENTRATION IN mg/L
X	<0.001	XYLENES CONCENTRATION IN mg/L
BTEX	0.0029	TOTAL BTEX CONCENTRATION IN mg/L
MTBE	0.0108	MTBE CONCENTRATION IN mg/L
NAP	<0.001	NAPHTHALENE CONCENTRATION IN mg/L

BTEX BENZENE TOLUENE ETHYLBENZENE XYLENE

MTBE METHYL TERTIARY BUTYL ETHER

mg/L MILLIGRAMS PER LITER

NU NOT USED IN CONTOURING

NS NOT SAMPLED

(0.04) NAPL THICKNESS IN FEET

NAPL NON-AQUEOUS PHASE LIQUID

ESTIMATED HORIZONTAL EXTENT OF NAPL

0.1 ESTIMATED BENZENE CONCENTRATION DISTRIBUTION IN mg/L

ecs

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PROJECT:
CIRCLE K #2706682
171 EAST GLENN AVENUE
AUBURN, ALABAMA

TITLE: MTBE ISOCONCENTRATION MAP for JULY 1, 2015

CLIENT: CIRCLE K STORES

GRAPHIC SCALE: 30 15 0 15 30

COMPUTER CADFILE : CK-2706682-HYG715

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
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DATE:	JOB NO.:	FIGURE NO.:	PAGE NO.:
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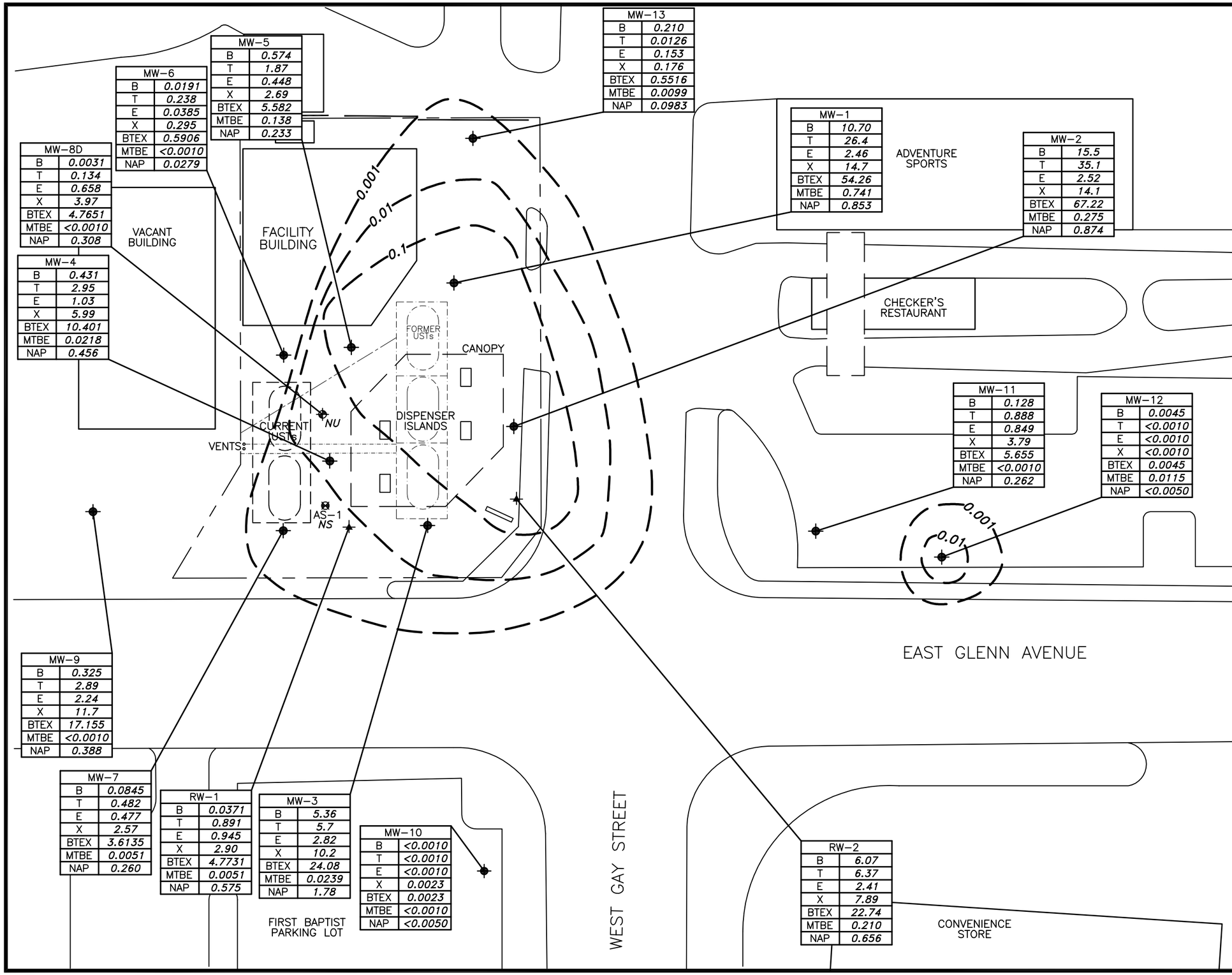

LEGEND

- MONITORING WELL LOCATION
- DEEP MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- AIR SPARGE WELL LOCATION
- PROPERTY LINE
- FORMER PRODUCT PIPING
- CURRENT PRODUCT PIPING

MW-12		SAMPLE ID
B	0.0045	BENZENE CONCENTRATION IN mg/L
T	<0.0010	TOLUENE CONCENTRATION IN mg/L
E	<0.0010	ETHYLBENZENE CONCENTRATION IN mg/L
X	<0.0010	XYLENES CONCENTRATION IN mg/L
BTEX	0.0045	TOTAL BTEX CONCENTRATION IN mg/L
MTBE	0.0115	MTBE CONCENTRATION IN mg/L
NAP	<0.0050	NAPHTHALENE CONCENTRATION IN mg/L

BTEX BENZENE TOLUENE ETHYLBENZENE XYLENE

MTBE METHYL TERTIARY BUTYL ETHER

mg/L MILLIGRAMS PER LITER

NU NOT USED IN CONTOURING

NS NOT SAMPLED

0.1 ESTIMATED MTBE CONCENTRATION DISTRIBUTION IN mg/L

ecs
9874 MAIN STREET, SUITE 100, WOODSTOCK, GA 30188
PHONE: 770-926-8883 FAX: 770-926-5383
ecsconsult.com

PROJECT:
CIRCLE K #2706682
171 EAST GLENN AVENUE
AUBURN, ALABAMA

TITLE: MTBE ISOCONCENTRATION MAP for OCTOBER 7, 2015

CLIENT: CIRCLE K STORES

GRAPHIC SCALE: 30 15 0 15 30

COMPUTER CADFILE : CK-2706682-HYG1015

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
EL	KP	KP	DM
DATE:	JOB NO.:	FIGURE NO.:	PAGE NO.:
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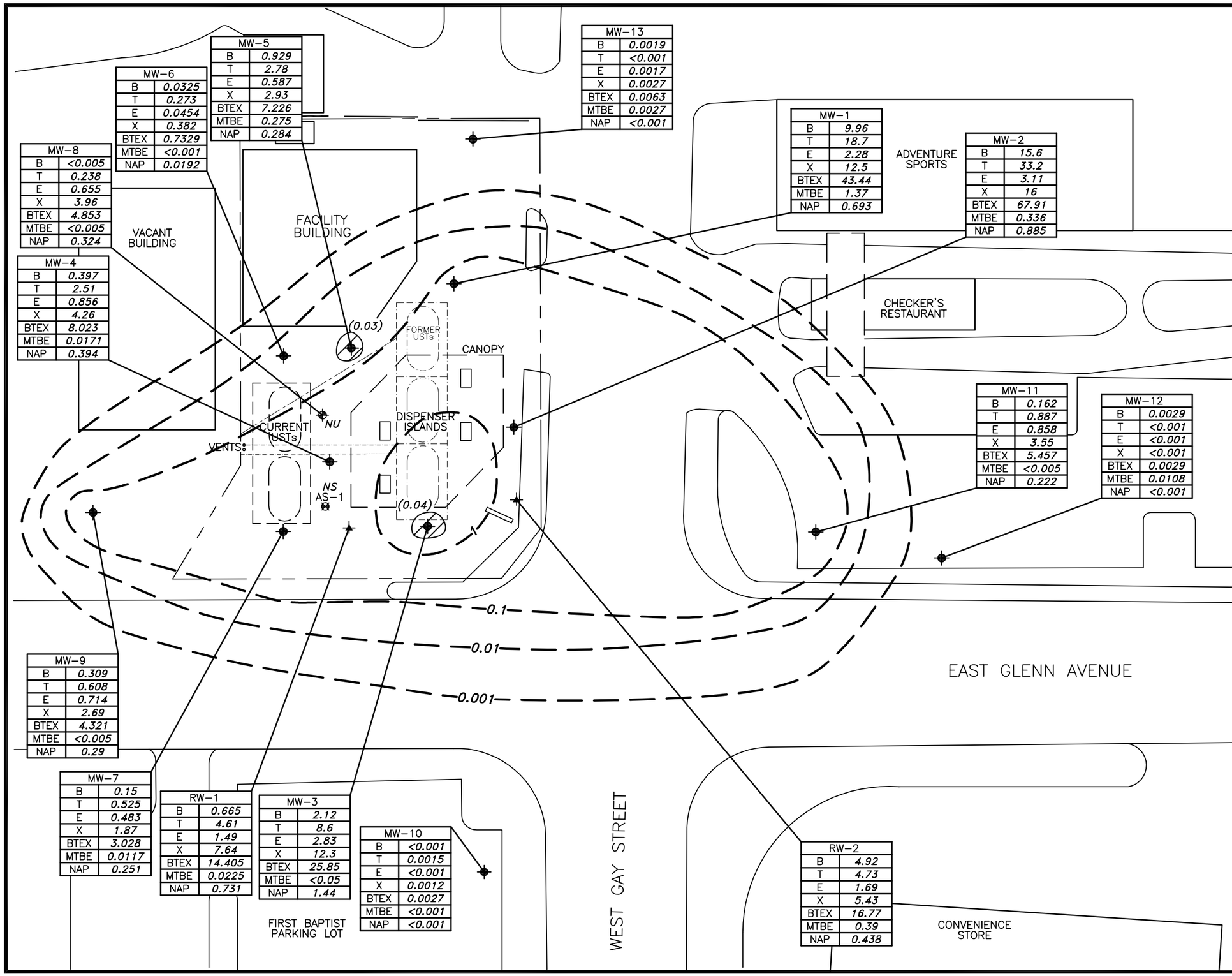

LEGEND

- MONITORING WELL LOCATION
- DEEP MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- AIR SPARGE WELL LOCATION
- PROPERTY LINE
- FORMER PRODUCT PIPING
- CURRENT PRODUCT PIPING

MW-12		SAMPLE ID
B	0.0029	BENZENE CONCENTRATION IN mg/L
T	<0.001	TOLUENE CONCENTRATION IN mg/L
E	<0.001	ETHYLBENZENE CONCENTRATION IN mg/L
X	<0.001	XYLENES CONCENTRATION IN mg/L
BTEX	0.0029	TOTAL BTEX CONCENTRATION IN mg/L
MTBE	0.0108	MTBE CONCENTRATION IN mg/L
NAP	<0.001	NAPHTHALENE CONCENTRATION IN mg/L

BTEX BENZENE TOLUENE ETHYLBENZENE XYLENE

MTBE METHYL TERTIARY BUTYL ETHER

mg/L MILLIGRAMS PER LITER

NU NOT USED IN CONTOURING

NS NOT SAMPLED

(0.04) NAPL THICKNESS IN FEET

NAPL NON-AQUEOUS PHASE LIQUID

ESTIMATED HORIZONTAL EXTENT OF NAPL

0.1 ESTIMATED BENZENE CONCENTRATION DISTRIBUTION IN mg/L

ecs

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PHONE: 770-926-8883 FAX: 770-926-5383
ecsconsult.com

PROJECT:
CIRCLE K #2706682
171 EAST GLENN AVENUE
AUBURN, ALABAMA

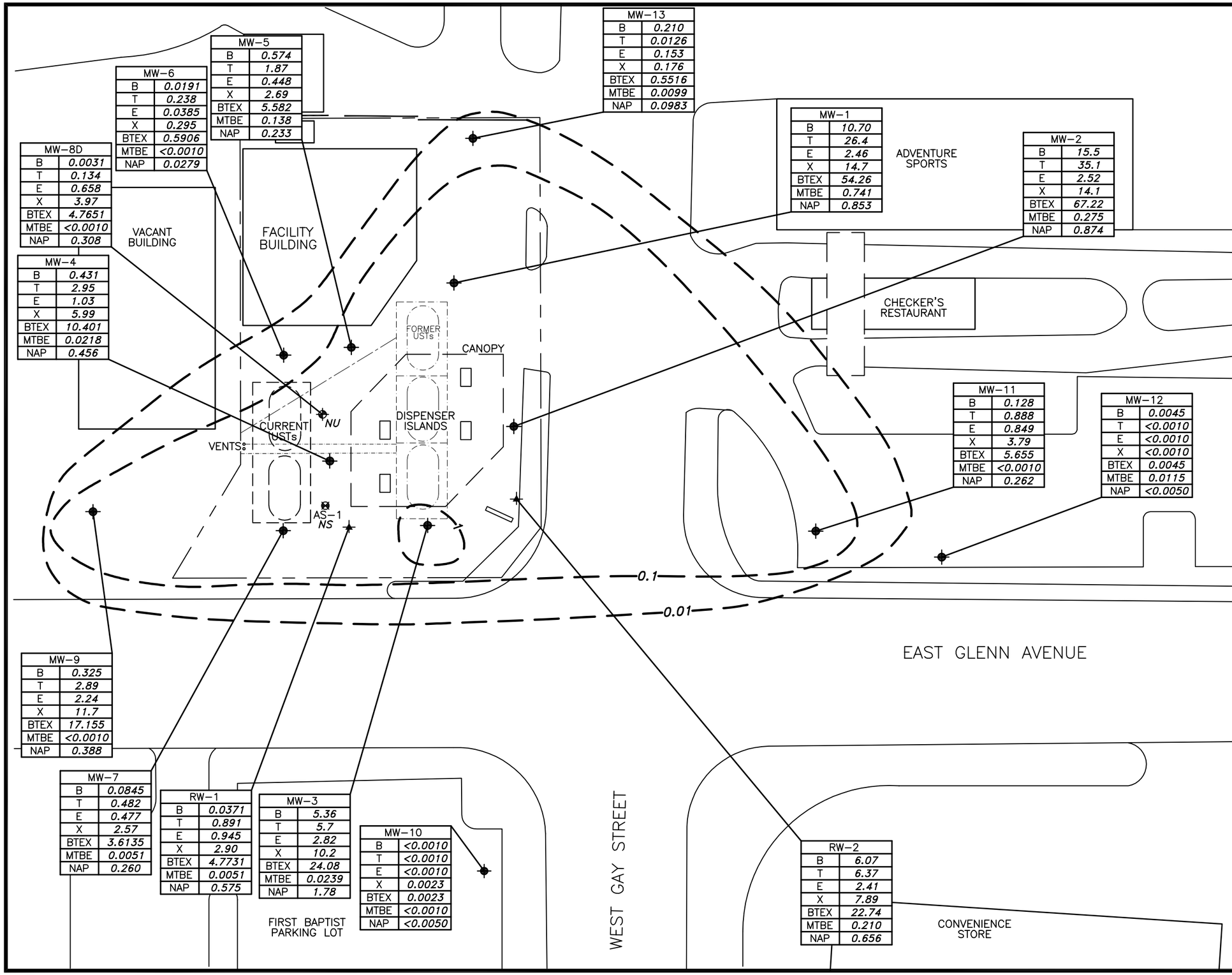
TITLE: NAPHTHALENE ISOCONCENTRATION MAP for JULY 1, 2015

CLIENT: CIRCLE K STORES

GRAPHIC SCALE: 30 15 0 15 30

COMPUTER CADFILE : CK-2706682-HYG715

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
EL	KP	KP	DM
DATE:	JOB NO.:	FIGURE NO.:	PAGE NO.:
8-20-15	CK-2706682	6A	



LEGEND

- MONITORING WELL LOCATION
- DEEP MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- AIR SPARGE WELL LOCATION
- PROPERTY LINE
- FORMER PRODUCT PIPING
- CURRENT PRODUCT PIPING

MW-12		SAMPLE ID
B	0.0045	BENZENE CONCENTRATION IN mg/L
T	<0.0010	TOLUENE CONCENTRATION IN mg/L
E	<0.0010	ETHYLBENZENE CONCENTRATION IN mg/L
X	<0.0010	XYLENES CONCENTRATION IN mg/L
BTEX	0.0045	TOTAL BTEX CONCENTRATION IN mg/L
MTBE	0.0115	MTBE CONCENTRATION IN mg/L
NAP	<0.0050	NAPHTHALENE CONCENTRATION IN mg/L

BTEX BENZENE TOLUENE ETHYLBENZENE XYLENE

MTBE METHYL TERTIARY BUTYL ETHER

mg/L MILLIGRAMS PER LITER

NU NOT USED IN CONTOURING

NS NOT SAMPLED

0.1 ESTIMATED NAPHTHALENE CONCENTRATION DISTRIBUTION IN mg/L

ecs
9874 MAIN STREET, SUITE 100, WOODSTOCK, GA 30188
PHONE: 770-926-8883 FAX: 770-926-5383
ecsconsult.com

PROJECT:
CIRCLE K #2706682
171 EAST GLENN AVENUE
AUBURN, ALABAMA

TITLE: NAPHTHALENE ISOCONCENTRATION MAP for OCTOBER 7, 2015

CLIENT: CIRCLE K STORES

GRAPHIC SCALE: 30 15 0 15 30

COMPUTER CADFILE : CK-2706682-HYG1015

DRAWN BY:	DESIGNED BY:	CHECKED BY:	APPROVED BY:
EL	KP	KP	DM
DATE:	JOB NO.:	FIGURE NO.:	PAGE NO.:
11-12-15	CK-2706682	6B	

TABLES

TABLE 1: Historical Liquid Level Data

Circle K Store No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
UST Incident No. UST 11-01-02

Well ID	Date Liquid Level Measured	Screen Interval (feet)	Top of Casing Elevation (feet)	Depth to Free Product (feet)	Depth to Water (feet)	Free Product Thickness (feet)	Groundwater Elevation* (feet)
MW-1	04/08/11	8.55 - 23.55	699.59	-	13.59	0.00	686.00
	12/12/11			-	14.46	0.00	685.13
	02/02/12			-	13.45	0.00	686.14
	03/01/12			-	13.27	0.00	686.32
	08/15/12			-	13.16	0.00	686.43
	12/04/12			-	14.32	0.00	685.27
	06/24/13			-	12.93	0.00	686.66
	12/05/13			-	13.64	0.00	685.95
	04/10/14			-	11.56	0.00	688.03
	06/10/14			-	11.86	0.00	687.73
	10/06/14			-	12.24	0.00	687.35
	01/14/15			-	11.91	0.00	687.68
	07/01/15			**-**	10.94	0.00	688.65
	10/07/15			**-**	**11.02**	**0.00**	**688.57**
MW-2	04/08/11	8.30 - 23.30	698.17	-	12.40	0.00	685.77
	12/12/11			12.78	14.94	2.16	684.85
	12/21/11			13.08	13.89	0.81	684.89
	01/04/12			12.49	13.43	0.94	685.45
	01/10/12			12.73	13.79	1.06	685.18
	02/02/12			12.26	12.35	0.09	685.89
	03/01/12			12.07	12.17	0.10	686.08
	08/15/12			12.21	12.38	0.17	685.92
	10/30/12			12.73	13.26	0.53	685.31
	12/04/12			13.17	13.59	0.42	684.90
	06/24/13			11.79	12.19	0.40	686.28
	08/13/13			11.21	11.58	0.37	686.87
	11/19/13			12.95	13.81	1.09	685.18
	12/05/13			12.46	12.86	0.40	685.61
	03/27/14			10.85	10.87	0.02	687.32
	04/10/14			-	10.34	0.00	687.83
	05/28/14			10.39	10.40	0.01	687.78
	06/10/14			-	10.51	0.00	687.66
	10/06/14			-	10.92	0.00	687.25
	01/14/15			-	10.37	0.00	687.80
	07/01/15			**-**	9.06	0.00	689.11
	10/07/15			**-**	**9.36**	**0.00**	**688.81**

TABLE 1: Historical Liquid Level Data

Circle K Store No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
UST Incident No. UST 11-01-02

Well ID	Date Liquid Level Measured	Screen Interval (feet)	Top of Casing Elevation (feet)	Depth to Free Product (feet)	Depth to Water (feet)	Free Product Thickness (feet)	Groundwater Elevation* (feet)
MW-3	04/08/11	8.45 - 23.45	698.00	-	11.78	0.00	686.22
	12/12/11			12.91	13.04	0.13	685.06
	12/21/12			12.93	13.06	0.13	685.04
	01/04/12			-	13.39	0.00	684.61
	01/10/12			-	12.45	0.00	685.55
	02/02/12			11.85	11.99	0.14	686.12
	03/01/12			11.50	11.62	0.12	686.47
	08/15/12			11.41	12.14	0.73	686.41
	10/30/12			12.12	13.62	1.50	685.51
	12/04/12			12.88	13.67	0.79	684.92
	06/24/13			10.77	13.89	3.12	686.45
	08/13/13			10.18	13.70	3.52	686.94
	11/19/13			12.11	13.53	1.24	685.40
	12/05/13			12.10	12.44	0.34	685.82
	03/27/14			10.32	12.23	1.91	687.20
	04/10/14			10.80	11.45	0.65	687.04
	05/28/14			10.77	11.82	1.05	686.97
	06/10/14			10.57	10.98	0.41	687.33
	10/06/14			11.30	11.58	0.28	686.63
	01/14/15			11.61	12.02	0.41	686.29
	07/01/15			8.53	8.57	0.04	689.46
	10/07/15			-	**12.11**	**0.00**	**685.89**
MW-4	04/08/11	8.50 - 23.50	698.65	12.67	12.78	0.11	685.95
	12/12/11			12.34	17.90	5.56	684.92
	12/21/12			12.40	17.59	5.19	684.95
	01/04/12			12.16	14.32	2.16	685.95
	01/10/12			12.49	13.36	0.87	685.94
	02/02/12			12.49	14.24	1.75	685.72
	03/01/12			12.32	14.43	2.11	685.80
	04/10/12			11.76	13.95	2.19	686.34
	07/19/12			12.18	13.78	1.60	686.07
	08/15/12			12.36	12.60	0.24	686.23
	10/30/12			12.90	14.03	1.13	685.47
	12/04/12			13.31	14.61	1.30	685.02
	06/24/13			11.85	13.77	1.92	686.32
	08/12/13			11.74	12.58	0.84	686.70
	11/19/13			12.48	12.92	0.44	686.06
	12/05/13			12.55	12.71	0.16	686.06
	03/26/14			-	10.70	0.00	687.95
	04/10/14			-	8.75	0.00	689.90
	05/28/14			9.16	9.18	0.02	689.49
	06/10/14			10.94	11.09	0.15	687.67
	10/06/14			-	10.48	0.00	688.17
	01/14/15			-	9.82	0.00	688.83
	07/01/15			-	9.19	0.00	689.46
	10/07/15			**-**	**8.44**	**0.00**	**690.21**

TABLE 1: Historical Liquid Level Data

Circle K Store No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
UST Incident No. UST 11-01-02

Well ID	Date Liquid Level Measured	Screen Interval (feet)	Top of Casing Elevation (feet)	Depth to Free Product (feet)	Depth to Water (feet)	Free Product Thickness (feet)	Groundwater Elevation* (feet)
MW-5	04/08/11	8.04 - 23.04	699.63	-	15.98	0.00	683.65
	12/12/11			-	14.29	0.00	685.34
	01/10/12			-	13.67	0.00	685.96
	02/02/12			-	12.86	0.00	686.77
	03/01/12			-	12.82	0.00	686.81
	04/10/12			-	13.12	0.00	686.51
	07/19/12			13.04	13.07	0.03	686.58
	08/15/12			-	13.05	0.00	686.58
	10/30/12			14.00	14.07	0.07	685.61
	12/04/12			-	14.48	0.00	685.15
	06/24/13			12.95	13.04	0.09	686.66
	08/12/13			12.17	12.21	0.04	687.45
	11/19/13			13.38	13.41	0.03	686.24
	12/05/13			13.36	13.40	0.04	686.26
	03/26/14			-	11.28	0.00	688.35
	04/10/14			-	10.41	0.00	689.22
	05/28/14			10.93	11.14	0.21	688.65
	06/10/14			-	11.35	0.00	688.28
	10/06/14			-	10.88	0.00	688.75
	01/14/15			11.08	11.24	0.16	688.51
	07/01/15			9.60	9.63	0.03	690.02
	10/07/15			-	**9.37**	**0.00**	**690.26**
MW-6	04/08/11	11.95 - 31.95	700.20	-	14.09	0.00	686.11
	12/12/11			-	14.46	0.00	685.74
	01/10/12			-	16.77	0.00	683.43
	02/02/12			-	13.93	0.00	686.27
	03/01/12			-	13.38	0.00	686.82
	04/10/12			-	15.27	0.00	684.93
	07/19/12			-	14.13	0.00	686.07
	08/15/12			-	14.15	0.00	686.05
	10/30/12			-	14.74	0.00	685.46
	12/04/12			-	14.76	0.00	685.44
	06/24/13			-	15.37	0.00	684.83
	08/12/13			-	13.43	0.00	686.77
	11/19/13			-	14.02	0.00	686.18
	12/05/13			-	14.21	0.00	685.99
	03/26/14			-	12.48	0.00	687.72
	04/10/14			-	11.93	0.00	688.27
	05/28/14			-	12.07	0.00	688.14
	06/10/14			-	12.27	0.00	687.93
	10/06/14			-	12.36	0.00	687.84
	01/14/15			-	12.20	0.00	688.00
	07/01/15			-	12.26	0.00	687.94
	10/07/15			**-**	**10.76**	**0.00**	**689.44**

TABLE 1: Historical Liquid Level Data

Circle K Store No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
UST Incident No. UST 11-01-02

Well ID	Date Liquid Level Measured	Screen Interval (feet)	Top of Casing Elevation (feet)	Depth to Free Product (feet)	Depth to Water (feet)	Free Product Thickness (feet)	Groundwater Elevation* (feet)
MW-7	04/08/11	8.90 - 23.90	698.74	-	12.36	0.00	686.38
	12/12/11			-	13.22	0.00	685.52
	01/10/12			-	12.52	0.00	686.22
	02/02/12			-	12.02	0.00	686.72
	03/01/12			-	11.80	0.00	686.94
	04/10/12			-	11.98	0.00	686.76
	07/19/12			-	12.07	0.00	686.67
	08/15/12			-	12.08	0.00	686.66
	10/30/12			-	12.78	0.00	685.96
	12/04/12			-	13.26	0.00	685.48
	06/24/13			12.89	12.94	0.05	685.84
	08/12/13			-	11.29	0.00	687.45
	11/19/13			-	12.45	0.00	686.29
	12/05/13			-	12.38	0.00	686.36
	03/26/14			-	10.55	0.00	688.19
	04/10/14			-	9.78	0.00	688.96
	05/28/14			-	10.20	0.00	688.54
	06/10/14			-	10.60	0.00	688.14
	10/06/14			-	11.03	0.00	687.71
	01/14/15			-	10.58	0.00	688.16
	07/01/15			-	11.41	0.00	687.33
	10/07/15				**10.55**	**0.00**	**688.19**
MW-8D	02/02/12	32.50 - 37.50	698.85	-	12.37	0.00	686.48
	03/01/12			-	12.21	0.00	686.64
	04/10/12			-	12.64	0.00	686.21
	08/15/12			-	12.78	0.00	686.07
	10/30/12			-	13.46	0.00	685.39
	12/04/12			-	13.58	0.00	685.27
	06/24/13			-	15.91	0.00	682.94
	12/05/13			-	12.88	0.00	685.97
	04/10/14			-	10.67	0.00	688.18
	06/10/14			-	15.52	0.00	683.33
	10/06/14			-	15.59	0.00	683.26
	01/14/15			-	11.42	0.00	687.43
	07/01/15			-	10.59	0.00	688.26
	10/07/15			**-**	**10.43**	**0.00**	**688.42**

TABLE 1: Historical Liquid Level Data

Circle K Store No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
UST Incident No. UST 11-01-02

Well ID	Date Liquid Level Measured	Screen Interval (feet)	Top of Casing Elevation (feet)	Depth to Free Product (feet)	Depth to Water (feet)	Free Product Thickness (feet)	Groundwater Elevation* (feet)
MW-9	02/02/12	5.30 - 30.30	702.13	-	15.93	0.00	686.20
	03/01/12			-	15.78	0.00	686.35
	08/15/12			-	16.06	0.00	686.07
	12/04/12			-	17.17	0.00	684.96
	06/24/13			-	15.81	0.00	686.32
	12/05/13			-	16.48	0.00	685.65
	04/10/14			-	13.95	0.00	688.18
	06/10/14			-	14.62	0.00	687.51
	10/06/14			-	15.11	0.00	687.02
	01/14/15			-	14.93	0.00	687.20
	07/01/15			**-**	13.97	0.00	688.16
	10/07/15			**-**	**14.08**	**0.00**	**688.05**
MW-10	02/02/12	5.00 - 20.00	693.93	-	9.64	0.00	684.29
	03/01/12			-	9.49	0.00	684.44
	08/15/12			-	9.57	0.00	684.36
	12/04/12			-	10.33	0.00	683.60
	06/24/13			-	9.25	0.00	684.68
	12/05/13			-	9.82	0.00	684.11
	04/10/14			-	8.19	0.00	685.74
	06/10/14			-	8.68	0.00	685.25
	10/06/14			-	9.57	0.00	684.36
	01/14/15			-	9.48	0.00	684.45
	07/01/15			**-**	8.62	0.00	685.31
	10/07/15			**-**	**9.02**	**0.00**	**684.91**
MW-11	03/01/12	3.51 - 23.51	696.19	-	11.66	0.00	684.53
	08/15/12			-	11.95	0.00	684.24
	12/04/12			Not Accessible			
	06/24/13			-	11.34	0.00	684.85
	12/05/13			-	12.31	0.00	683.88
	04/10/14			-	10.41	0.00	685.78
	06/10/14			-	10.45	0.00	685.74
	10/06/14			-	12.43	0.00	683.76
	01/14/15			-	11.93	0.00	684.26
	07/01/15			**-**	10.66	0.00	685.53
	10/07/15			**-**	**11.30**	**0.00**	**684.89**

TABLE 1: Historical Liquid Level Data

Circle K Store No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
UST Incident No. UST 11-01-02

Well ID	Date Liquid Level Measured	Screen Interval (feet)	Top of Casing Elevation (feet)	Depth to Free Product (feet)	Depth to Water (feet)	Free Product Thickness (feet)	Groundwater Elevation* (feet)
MW-12	05/10/13	7.30 - 22.30	696.23	-	6.91	0.00	689.32
	06/24/13			-	15.81	0.00	680.42
	12/05/13			-	12.45	0.00	683.78
	04/10/14			-	10.45	0.00	685.78
	06/10/14			-	10.47	0.00	685.76
	10/06/14			-	12.02	0.00	684.21
	01/14/15			-	12.09	0.00	684.14
	07/01/15			-	10.75	0.00	685.48
	10/07/15			**-**	**11.44**	**0.00**	**684.79**
MW-13	02/02/12	8.90 - 23.90	700.46	-	14.28	0.00	686.18
	03/01/12			-	13.94	0.00	686.52
	08/15/12			-	13.63	0.00	686.83
	12/04/12			-	14.51	0.00	685.95
	06/24/13			-	13.34	0.00	687.12
	12/05/13			-	14.20	0.00	686.26
	04/10/14			-	12.42	0.00	688.04
	06/10/14			-	12.62	0.00	687.84
	10/06/14			-	13.05	0.00	687.41
	01/14/15			-	13.73	0.00	686.73
	07/01/15			-	12.80	0.00	687.66
	10/07/15			**-**	**13.06**	0.00	**687.40**
DW-1	12/12/11	? - 24.00	-	-	Dry	-	-
RW-1	05/10/13	7.42 - 22.42	697.58	-	11.06	0.00	686.52
	06/24/13			-	11.41	0.00	686.17
	08/13/13			-	10.80	0.00	686.78
	11/19/13			-	12.23	0.00	685.35
	12/05/13			-	12.09	0.00	685.49
	03/26/14			-	9.80	0.00	687.78
	04/10/14			-	8.96	0.00	688.62
	05/28/14			-	9.32	0.00	688.26
	06/10/14			-	9.91	0.00	687.67
	10/06/14			-	9.18	0.00	688.40
	01/14/15			-	7.71	0.00	689.87
	07/01/15			-	6.29	0.00	691.29
	10/07/15			**-**	**3.86**	**0.00**	**693.72**

TABLE 1: Historical Liquid Level Data

Circle K Store No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
UST Incident No. UST 11-01-02

Well ID	Date Liquid Level Measured	Screen Interval (feet)	Top of Casing Elevation (feet)	Depth to Free Product (feet)	Depth to Water (feet)	Free Product Thickness (feet)	Groundwater Elevation* (feet)
RW-2	05/10/13	7.27 - 22.27	696.73	-	10.99	0.00	685.74
	06/24/13			-	10.59	0.00	686.14
	08/13/13			-	10.19	0.00	686.54
	11/19/13			-	11.45	0.00	685.28
	12/05/13			-	11.20	0.00	685.53
	03/27/14			9.84	9.85	0.01	686.89
	04/10/14			-	9.16	0.00	687.57
	05/28/14			-	9.35	0.00	687.38
	06/10/14			-	9.49	0.00	687.24
	10/06/14			-	9.49	0.00	687.24
	01/14/15			-	9.56	0.00	687.17
	07/01/15			-	9.65	0.00	687.08
	10/07/15			-	**9.32**	**0.00**	**687.41**

Notes:
Bold = Most recent gauging event
* = Groundwater elevation + (product thickness X 0.75)

TABLE 2: Summary of Groundwater Analytical Data

Circle K Store No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
UST Incident No. UST 11-01-02

Well ID	Date Collected	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	MTBE	Naphthalene
SB-2	12/13/10	**3.600**	5.700	1.200	5.300	15.800	**2.500**	NA
SB-4	12/13/10	**1.600**	1.300	0.500	1.600	5.000	**1.300**	NA
SB-6	12/13/10	**6.600**	14.000	1.300	6.600	28.500	**3.600**	NA
SB-7	12/13/10	**14.000**	17.000	1.200	6.600	38.800	**12.000**	NA
MW-1	04/08/11	0.0062	0.0071	0.0018	0.0090	0.0241	0.100	NA
	12/12/11	**0.290**	0.013	0.087	0.0193	0.4093	0.330	NA
	02/02/12	**0.450**	0.039	0.100	0.096	0.685	0.330	NA
	03/01/12	**0.350**	0.030	0.064	0.033	0.477	0.360	NA
	08/15/12	**1.300**	1.300	0.360	0.760	3.720	**1.100**	NA
	12/04/12	**2.000**	4.200	0.780	3.300	10.280	**0.79**	NA
	06/24/13	**4.900**	9.300	1.600	7.500	23.300	**1.100**	NA
	12/05/13	**6.5**	9.4	1.8	7.6	25.3	**1.8**	0.47
	04/10/14	**4.8**	7.6	1.4	5.9	19.7	**1.6**	<1.0
	06/10/14	**5.5**	10	1.6	8.9	26.0	**1.9**	1.6
	10/06/14	**8.3**	15	1.6	7.8	32.7	**2.8**	<1.2
	01/15/15	**10**	23	2.1	11	46.1	**2.3**	<1.2
	07/01/15	**9.96**	18.7	2.28	12.5	43.44	**1.37**	0.693
	10/07/15	**10.70**	26.4	2.46	14.7	54.26	**0.741**	0.853
Tier II SSTLs		**0.134**	**26.8**	**18.7**	**198**	**-**	**0.535**	**-**
MW-2	04/08/11	**3.100**	**2.800**	1.300	3.630	10.830	**7.000**	NA
	12/12/11	FP = 2.16'						
	02/02/12	FP = 0.09'						
	03/01/12	FP = 0.10'						
	08/15/12	FP = 0.17'						
	12/04/12	FP = 0.42'						
	06/24/13	FP = 0.40'						
	12/05/13	FP = 0.40'						
	04/10/14	**11**	**38**	<5.0	25	74	**<5.0**	<25
	06/10/14	**23**	**64**	7.5	42	136.5	**<5.0**	<25
	10/06/14	**17**	**38**	2.9	15	72.9	**0.78**	<1.2
	01/15/15	**20**	**33**	3.4	20	76.4	**0.74**	<1.2
	07/01/15	**15.6**	**33.2**	3.11	16	67.91	0.336	0.885
	10/07/15	**15.5**	**35.1**	2.52	14.1	67.22	0.275	0.874
Tier II SSTLs		**0.134**	**26.8**	**18.7**	**198**	**-**	**0.535**	**-**
MW-3	04/08/11	**4.700**	6.000	1.900	8.000	20.600	0.630	NA
	12/12/11	FP = 0.13'						
	02/02/12	FP = 0.14'						
	03/01/12	FP = 0.12'						
	08/15/12	FP = 0.73'						
	12/04/12	FP = 0.79'						
	06/24/13	FP = 3.12'						
	12/05/13	FP = 0.34'						
	04/10/14	FP = 0.65'						
	06/10/14	FP = 0.41'						
	10/614	FP = 0.28'						
	01/15/15	FP = 0.41'						
	07/01/15	**2.12**	8.6	2.83	12.3	25.85	<0.05	1.44
	10/07/15	**5.36**	5.7	2.82	10.2	24.08	0.0239	1.78
Tier II SSTLs		**0.134**	**26.8**	**18.7**	**198**	**-**	**0.535**	**-**

TABLE 2: Summary of Groundwater Analytical Data

Circle K Store No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
UST Incident No. UST 11-01-02

Well ID	Date Collected	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	MTBE	Naphthalene
MW-4	04/08/11	FP = 0.11'						
	12/12/11	FP = 5.56'						
	02/02/12	FP = 1.75'						
	03/01/12	FP = 2.11'						
	08/15/12	FP = 0.24'						
	12/04/12	FP = 1.30'						
	06/24/13	FP = 1.92'						
	12/05/13	FP = 0.16'						
	04/10/14	**1.3**	<5.0	2.2	13	16.5	**<1.0**	<5.0
	06/10/14	FP = 0.15'						
	10/06/14	**0.70**	3.8	1.1	6.0	11.6	<0.50	<2.5
	01/15/15	**0.76**	4.5	1.0	6.1	12.36	<0.10	0.62
	07/01/15	**0.397**	2.51	0.856	4.26	8.023	0.0171	0.394
	10/07/15	**0.431**	2.95	1.03	5.99	10.401	0.0218	0.456
Tier II SSTLs		**0.134**	**26.8**	**18.7**	**198**	**-**	**0.535**	**-**
MW-5	04/08/11	**5.4**	9.1	2.0	10.9	27.4	**2.3**	NA
	12/12/11	**15**	**29**	3.5	21.9	69.4	**5.5**	NA
	02/02/12	**15**	**37**	3.0	18.3	73.3	**5.5**	NA
	03/01/12	**16**	**38**	2.5	14.9	71.4	**6.6**	NA
	08/15/12	**16**	**40**	3.0	19.1	78.1	**3.9**	NA
	12/04/12	**14**	**33**	2.6	15	64.6	**5.2**	NA
	06/24/13	FP = 0.09'						
	12/05/13	FP = 0.04'						
	04/10/14	**5.8**	18	2.3	13	39.1	**1.5**	0.58
	06/10/14	**3.0**	9.6	1.5	9.0	23.1	**1.0**	<1.0
	10/06/14	**3.3**	8.8	1.3	7.6	21.0	**0.96**	0.56
	01/15/15	FP = 0.16'						
	07/01/15	**0.929**	2.78	0.587	2.93	7.226	0.275	0.284
	10/07/15	**0.574**	1.87	0.448	2.69	5.582	0.138	0.233
Tier II SSTLs		**0.134**	**26.8**	**18.7**	**198**	**-**	**0.535**	**-**
MW-6	04/08/11	**0.210**	0.380	0.045	0.350	0.985	0.018	NA
	12/12/11	**0.390**	0.230	0.038	0.330	0.988	0.034	NA
	02/02/12	**0.950**	2.000	0.190	1.560	4.700	0.042	NA
	03/01/12	**0.460**	0.420	0.059	0.470	1.409	0.034	NA
	08/15/12	**0.490**	0.250	0.034	0.340	1.114	0.035	NA
	12/04/12	**0.880**	1.600	0.280	2.200	4.960	0.063	NA
	06/24/13	**0.480**	0.890	0.160	1.100	2.630	0.026	NA
	12/05/13	**0.38**	0.36	0.11	0.85	1.70	0.038	0.049
	04/10/14	0.10	0.20	0.054	0.32	0.674	0.010	0.060
	06/10/14	**0.18**	0.76	0.12	0.74	1.80	<0.0050	0.039
	10/06/14	0.033	0.13	0.037	0.20	0.40	<0.010	<0.050
	01/15/15	0.0099	0.067	0.016	0.093	0.1859	<0.0010	0.0075
	07/01/15	0.0325	0.273	0.0454	0.382	0.7329	<0.001	0.0192
	10/07/15	0.0191	0.238	0.0385	0.295	0.5906	<0.0010	0.0279
Tier II SSTLs		**0.134**	**26.8**	**18.7**	**198**	**-**	**0.535**	**-**

TABLE 2: Summary of Groundwater Analytical Data

Circle K Store No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
UST Incident No. UST 11-01-02

Well ID	Date Collected	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	MTBE	Naphthalene
MW-7	04/08/11	**6.500**	9.200	2.700	14.300	32.700	**1.600**	NA
	12/12/11	**9.200**	12.000	3.600	18.000	42.800	**2.200**	NA
	02/02/12	**7.100**	10.000	2.000	12.600	31.700	**<2.500**	NA
	03/01/12	**7.700**	9.000	2.200	14.000	32.900	**1.000**	NA
	08/15/12	**7.100**	10.000	2.000	14.200	33.300	**0.720**	NA
	12/04/12	**4.400**	8.300	1.400	9.500	23.600	**0.81**	NA
	06/24/13	FP = 0.05'						
	12/05/13	**3.2**	4.6	1.4	8.5	17.7	0.49	<1.0
	04/10/14	**1.9**	3.1	1.1	6.6	12.7	0.37	<1.0
	06/10/14	**1.4**	2.6	0.80	4.8	9.60	0.34	<1.0
	10/06/14	**0.74**	1.2	0.43	2.4	4.77	0.19	0.27
	01/15/15	**0.35**	0.86	0.49	3.0	4.70	0.086	0.29
	07/01/15	**0.15**	0.525	0.483	1.87	3.028	0.0117	0.251
	10/07/15	0.0845	0.482	0.477	2.57	3.6135	0.0051	0.260
Tier II SSTLs		**0.134**	**26.8**	**18.7**	**198**	**-**	**0.535**	**-**
MW-8D	02/02/12	**0.830**	0.780	0.051	0.242	1.903	0.290	NA
	03/01/12	**15.000**	**27.000**	1.800	10.300	54.100	**7.100**	NA
	08/15/12	**22.000**	**46.000**	2.800	16.300	87.100	**8.900**	NA
	12/04/12	**13.000**	**26.000**	2.200	13.000	54.200	**9.2**	NA
	06/24/13	**4.300**	19.000	1.700	13.000	38.000	**1.500**	NA
	12/05/13	**2.9**	14	2.6	16	35.5	**0.77**	3.6
	04/10/14	**0.27**	4.1	1.1	6.8	12.27	0.079	0.49
	06/10/14	**0.16**	3.1	1.2	6.9	11.36	<0.10	<0.50
	10/06/14	0.051	1.7	1.1	5.9	8.75	<0.025	0.12
	01/15/15	<0.025	0.76	1.1	6.9	8.76	<0.025	0.46
	07/01/15	<0.005	0.238	0.655	3.96	4.853	<0.005	0.324
	10/07/15	0.0031	0.134	0.658	3.97	4.7651	<0.0010	0.308
Tier II SSTLs		**0.134**	**26.8**	**18.7**	**198**	**-**	**0.535**	**-**
MW-9	02/02/12	0.041	0.290	0.120	0.470	0.921	<0.0050	NA
	03/01/12	**0.340**	3.100	0.710	4.100	8.250	<0.0050	NA
	08/15/12	**0.210**	3.600	1.100	6.700	11.610	<0.050	NA
	12/04/12	**0.160**	3.600	1.200	6.700	11.660	<0.0050	NA
	06/24/13	**0.230**	1.600	0.720	2.800	5.350	<0.020	NA
	12/05/13	**0.36**	0.56	0.40	1.9	3.22	<0.020	0.23
	04/10/14	**0.10**	0.10	0.15	0.60	0.95	<0.020	<0.10
	06/10/14	**0.10**	0.38	0.50	2.1	3.08	<0.020	0.16
	10/06/14	**0.13**	0.11	0.16	0.44	0.84	<0.010	0.11
	01/15/15	**0.15**	0.20	0.34	1.0	1.69	<0.010	0.15
	07/01/15	**0.309**	0.608	0.714	2.69	4.321	<0.005	0.29
	10/07/15	**0.325**	2.89	2.24	11.7	17.155	<0.0010	0.388
Tier II SSTLs		**0.0420**	**8.4**	**5.88**	**84.0**	**-**	**0.168**	**-**

TABLE 2: Summary of Groundwater Analytical Data

Circle K Store No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
UST Incident No. UST 11-01-02

Well ID	Date Collected	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	MTBE	Naphthalene
MW-10	02/02/12	<0.0010	<0.0010	<0.0010	<0.0020	<RL	<0.0050	NA
	03/01/12	<0.0010	<0.0010	<0.0010	<0.0020	<RL	<0.0050	NA
	08/15/12	<0.0010	<0.0010	<0.0010	<0.0020	<RL	<0.0050	NA
	12/04/12	<0.0010	0.0014	<0.0010	0.0022	0.0036	<0.0050	NA
	06/24/13	<0.0010	<0.0050	<0.0010	<0.0030	<RL	<0.0010	NA
	12/05/13	0.0013	<0.0050	0.0011	0.0077	0.0101	<0.0010	<0.0050
	04/10/14	<0.0010	<0.0050	<0.0010	<0.0030	<RL	<0.0010	<0.0050
	06/10/14	<0.0010	<0.0050	<0.0010	<0.0030	<RL	<0.0010	<0.0050
	10/06/14	<0.0010	<0.0050	<0.0010	<0.0030	<RL	<0.0010	<0.0050
	01/15/15	<0.0010	<0.0050	<0.0010	<0.0030	<RL	<0.0010	<0.0050
	07/01/15	<0.001	0.0015	<0.001	0.0012	0.0027	<0.001	<0.001
	10/07/15	<0.0010	<0.0010	<0.0010	0.0023	0.0023	<0.0010	<0.0050
Tier II SSTLs		**0.0552**	**11**	**7.73**	**11**	**-**	**0.221**	**0.221**
MW-11	03/01/12	**0.150**	0.640	0.530	2.450	3.770	0.0057	NA
	08/15/12	**0.430**	3.1	1.8	8.200	13.530	<0.050	NA
	12/04/12	Not Sampled - Well Inaccessable						
	06/24/13	**0.35**	1.6	1.3	5.0	8.25	<0.050	NA
	12/05/13	**0.14**	0.58	0.80	3.0	4.52	<0.025	0.29
	04/10/14	**0.045**	<0.12	0.39	1.1	1.535	<0.025	<0.12
	06/10/14	**0.30**	1.2	1.3	4.2	7.00	<0.025	0.37
	10/06/14	**0.34**	1.4	1.2	4.3	7.24	<0.010	0.43
	01/15/15	**0.092**	0.78	0.99	4.1	5.962	<0.010	0.28
	07/01/15	**0.162**	0.887	0.858	3.55	5.457	<0.005	0.222
	10/07/15	**0.128**	0.888	0.849	3.79	5.655	<0.0010	0.262
Tier II SSTLs		**0.0512**	**10.2**	**7.17**	**10.2**	**-**	**0.205**	**0.205**
MW-12	06/25/13	**0.041**	<0.0050	<0.0010	<0.0030	0.041	<0.0010	NA
	12/05/13	**0.056**	<0.0050	0.013	0.0053	0.0743	0.0052	0.016
	04/10/14	0.019	<0.0050	<0.0010	<0.0030	0.019	0.0012	<0.0050
	06/10/14	0.0011	<0.0050	<0.0010	<0.0030	0.0011	0.0012	<0.0050
	10/06/14	0.0022	<0.0050	<0.0010	<0.0030	0.0022	0.0079	<0.0050
	01/15/15	0.024	0.0081	0.0018	0.013	0.0469	0.0038	0.0096
	07/01/15	0.0029	<0.001	<0.001	<0.001	0.0029	0.0108	<0.001
	10/07/15	0.0045	<0.0010	<0.0010	<0.0010	0.0045	0.0115	<0.0050
Tier II SSTLs		**0.0398**	**7.95**	**5.6**	**78.5**	**-**	**0.159**	**-**
MW-13	02/02/12	<0.0010	<0.0010	<0.0010	<0.0020	<RL	<0.0050	NA
	03/01/12	<0.0010	<0.0010	<0.0010	<0.0020	<RL	<0.0050	NA
	08/15/12	<0.0010	<0.0010	<0.0010	<0.0020	<RL	<0.0050	NA
	12/04/12	<0.0010	<0.0010	<0.0010	<0.0020	<RL	<0.0050	NA
	06/24/13	<0.0010	<0.0050	<0.0010	<0.0030	<RL	<0.0010	NA
	12/05/13	<0.0010	<0.0050	<0.0010	<0.0030	<RL	<0.0010	<0.0050
	04/10/14	<0.0010	<0.0050	<0.0010	<0.0030	<RL	<0.0010	<0.0050
	06/10/14	<0.0010	<0.0050	<0.0010	<0.0030	<RL	<0.0010	<0.0050
	10/06/14	<0.0010	<0.0050	<0.0010	<0.0030	<RL	<0.0010	<0.0050
	01/15/15	<0.0010	<0.0050	<0.0010	<0.0030	<RL	<0.0010	<0.0050
	07/01/15	0.0019	<0.001	0.0017	0.0027	0.0063	0.0027	<0.001
	10/07/15	0.210	0.0126	0.153	0.176	0.5516	0.0099	0.0983
Tier II SSTLs		**0.0398**	**7.95**	**5.6**	**78.5**	**-**	**0.159**	**-**

TABLE 2: Summary of Groundwater Analytical Data

Circle K Store No. 6682
171 East Glenn Avenue
Auburn, Lee County, Alabama
UST Incident No. UST 11-01-02

Well ID	Date Collected	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	MTBE	Naphthalene
RW-1	06/24/13	**13.000**	17.000	3.200	19.000	52.200	**3.500**	NA
	12/05/13	**11**	16	2.4	16	45.4	**2.8**	0.98
	04/10/14	**5.9**	13	1.9	12	32.8	**0.74**	0.75
	06/10/14	**6.7**	15	2.4	14	38.1	**0.64**	0.80
	10/06/14	**4.8**	17	2.5	15	39.3	0.13	1.0
	01/15/15	**1.1**	9.6	2.1	12	24.8	<0.10	0.79
	07/01/15	**0.665**	4.61	1.49	7.64	14.405	0.0225	0.731
	10/07/15	0.0371	0.891	0.945	2.90	4.7731	0.0051	0.575
Tier II SSTLs		**0.134**	**26.8**	**18.7**	**198**	**-**	**0.535**	**-**
RW-2	06/24/13	**3.500**	5.000	0.880	3.500	12.880	**0.720**	NA
	12/05/13	**3.1**	1.8	0.48	1.6	6.98	**1.0**	<0.25
	04/10/14	**2.5**	2.2	0.60	2.1	7.40	**0.73**	<0.25
	06/10/14	**3.0**	2.6	0.85	3.0	9.45	**0.65**	<0.25
	10/06/14	**4.6**	3.6	1.2	3.3	12.7	**0.73**	0.42
	01/15/15	**3.5**	3.9	1.4	4.2	13.0	0.36	0.36
	07/01/15	**4.92**	4.73	1.69	5.43	16.77	0.39	0.438
	10/07/15	**6.07**	6.37	2.41	7.89	22.74	0.210	0.656
Tier II SSTLs		**0.134**	**26.8**	**18.7**	**198**	**-**	**0.535**	**-**

Notes:
all results reported in milligrams per liter (mg/l)
<RL = Less than laboratory reporting limits
FP = Free Product
Bold = Exceed Tier II SSTLs
SSTL = Site Specific Target Levels

APPENDIX A

MEME Report

227 Sandy Springs Place
Suite D-122
Atlanta, Georgia 30328-5918
Phone 404 256 0667
Fax 404 256 0668

September 10, 2015

Paul Naman
Environmental Compliance Services, Inc.
7856 Westside Park Drive, Suite G
Mobile, AL 36695

Subject: 24-Hour Multi-Phase Extraction Event
Circle K 6682
171 East Glenn Avenue
Auburn, AL
Project No. AL81559

Dear Mr. Naman:

Brown Remediation, Inc. is pleased to provide you with this report of our Multi-Phase Extraction (MPE) service conducted at the subject facility on August 31, 2015.

Site monitoring wells MW-4, MW-5, MW-7, RW-2, MW-3, MW-2, MW-6, and RW-1 were gauged before the MPE event with an oil-water interface probe to determine the static depth to groundwater and the presence of light non-aqueous phase liquid (LNAPL). Detectable levels of LNAPL were observed in monitoring wells MW-5 and MW-3. LNAPL was not detected in the other wells measured during the initial gauging event.

MW-4, MW-5, MW-7, RW-2, MW-3, and MW-2 were used as extraction wells during the MPE event. A drop tube was connected to the vacuum port of the MPE unit before lowering it below the static groundwater level in each extraction well. Vacuum was applied to the drop tube, thereby creating a vacuum influence, which was measured in adjacent monitoring wells MW-6 and RW-1.

Following the MPE event, all wells were again gauged to determine the new static depth to groundwater and the presence of LNAPL. The differences in water levels before and after the event were recorded. No LNAPL was detected in any of the wells measured.

Following is a summary of the site data recorded during the event.

MPE Event Gauging Data Summary								
Well	Before Event			Influence Vacuum	After Event			Change in
Number	DTP (ft)	DTW (ft)	Prod.(ft)	Time: ime of Extracti	DTP (ft)	DTW (ft)	Prod.(ft)	Elevation (ft)
MW-4		9.12		-4.5" Hg		12.22		-3.10
MW-5	9.75	9.83	0.08	-4.5" Hg		12.36		-2.53
MW-7		10.39		-4.0" Hg		13.19		-2.80
RW-2		8.99		-5.5" Hg		10.83		-1.84
MW-3	12.46	12.54	0.08	-4.5" Hg		14.86		-2.32
MW-2		9.22		-5.0" Hg		11.27		-2.05
MW-6		10.83		-0.12" WC		10.99		-0.16
RW-1		4.14		-0.01" WC		4.22		-0.08

Calculated values for carbon, methane, and hydrocarbon recorded during the MPE event are presented below. In addition, the amount of recovered groundwater, propane consumption, and total MPE event time are noted.

Event Totals	
Total Carbon (lbs)	4.83
Total Methane (lbs)	0.71
Total Hydrocarbon (lbs)	16.13
Equiv. Hydrocarbons (gallons)	2.61
Total Liquid (gallons)	950
Total Propane (gallons)	85.0
Total Event Time (hours)	24.0

Cumulative Totals	
Total Carbon (lbs)	30.51
Total Methane (lbs)	4.45
Total Hydrocarbon (lbs)	101.84
Equiv. Hydrocarbons (gallons)	16.50
Total Liquid (gallons)	1950
Total Propane (gallons)	170.0
Events	2

Extracted groundwater was transported to Aqua-Terra located in Oxford, Georgia, by Brown Remediation, Inc. A copy of the manifest is attached.

We appreciate the opportunity to provide you with these services. Please do not hesitate to call if you have any questions.

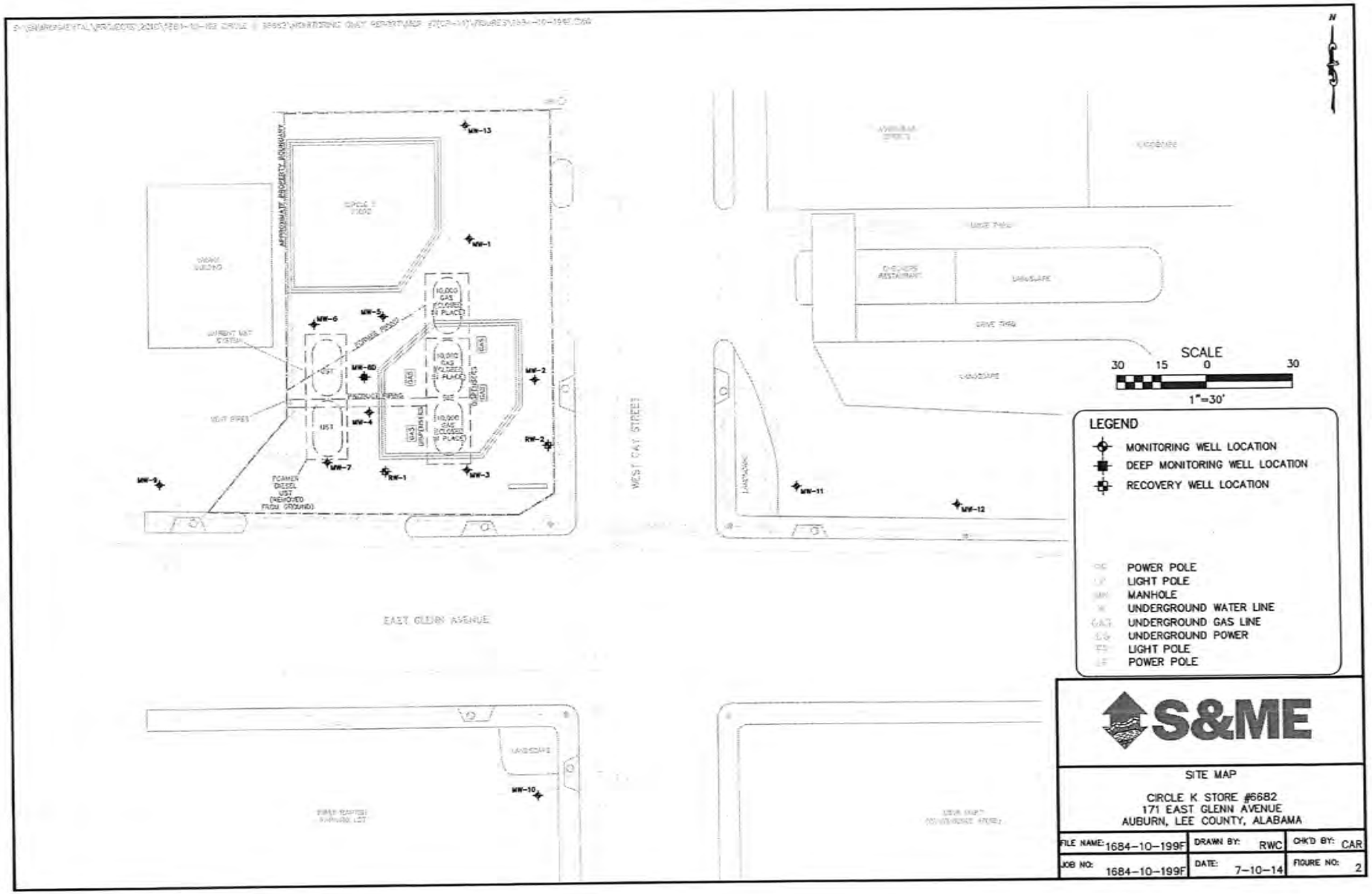
Sincerely,

Brown Remediation, Inc.

Thomas Brown

Thomas Brown
Director of Operations

Attachments: Site Map
MPE Event Data Summary
Field Data Sheet
Flow and Hydrocarbon Removal Rates
MPE Technology Description and Calculations
Disposal Manifest



S&ME

SITE MAP

CIRCLE K STORE #6682
171 EAST GLENN AVENUE
AUBURN, LEE COUNTY, ALABAMA

FILE NAME: 1684-10-199F	DRAWN BY: RWC	CHK'D BY: CAR
JOB NO: 1684-10-199F	DATE: 7-10-14	FIGURE NO: 2

MPE Event Data Summary

Circle K 6682
171 East Glenn Avenue, Auburn, AL
Operator Name: Juan Velasquez
Date: August 31, 2015
Project # AL81559

Time	Time Interval	Applied Well Head Vacuum					Addl. Bleed Air	Total Velocity	Total Effluent Flow	Well Field Flow	Pump Effluent Temp.	Total Influent FID	Filtered (CH_4) FID	Hydrocarbon Compounds		Before off-gas treatment				Stack Gas Temp.	Effluent Conc. Data	Total Flow Rate	After off-gas treatment		
		MW-4	MW-5	MW-7												Total Methane Removed	Total Carbon Removed	Total Hydrocarbon Removed					Carbon Emission Rate	Equiv. Hydrocarbon Rate	Destruction Efficiency Rating %
	(minutes)	(in/Hg)	(in/Hg)	(in/Hg)	(in/Hg)	(in/Hg)	(SCFM)	ft/sec.	(SCFM)	(SCFM)	(F^0)	(PPMv)	(PPMv)	(PPMv)	(mg/m3)	(lbs./ reading)	(lbs./ reading)	(lbs./ reading)	(gal./ reading)	(F^0)	(PPMv)	(SCFM)	(lbs./ reading)	(lbs./ reading)	
11:00	0 min.	11.0	11.0	11.0			50.4	27.2	143.7	78.3	125.0	2,100	218	1,882	3,137	0.000	0.00	0.00	0.000	829.0		143.71			
11:30	30 min.	11.0	11.0	11.0			49.7	25.8	136.5	71.9	188.0	1,450	165	1,285	2,142	0.028	0.16	0.55	0.089	815.0		136.55			
12:00	30 min.	11.0	11.0	11.0			49.2	25.6	135.2	71.0	201.0	969	108	861	1,435	0.018	0.11	0.36	0.059	809.0	4.30	135.20	0.0005	0.0018	99.50%
AVG	60 min.	11.0	11.0	11.0			49.2	25.5	135.0	70.8	203.0	1,025	109	916	1,527	0.036	0.23	0.77	0.125	808.0		134.99			
13:00	0 min.	11.0	11.0	11.0			49.1	25.5	134.8	70.7	205.0	1,080	100	980	1,633	0.000	0.00	0.00	0.000	806.0		134.79			
13:30	30 min.	11.0	11.0	11.0			49.0	25.4	134.5	70.5	208.0	990	99	891	1,485	0.016	0.11	0.37	0.061	805.0		134.49			
14:00	30 min.	11.0	11.0	11.0			49.0	25.5	134.8	70.8	205.0	952	95	857	1,428	0.016	0.11	0.36	0.058	804.0		134.79			
14:30	30 min.	11.0	11.0	11.0			49.0	25.5	135.1	71.1	202.0	880	90	790	1,317	0.015	0.10	0.33	0.054	802.0		135.10			
AVG	300 min.	11.0	11.0	11.0			49.1	25.6	135.5	71.4	198.0	705	70	635	1,058	0.116	0.80	2.68	0.435	803.0		135.51			
19:30	0 min.	11.0	11.0	11.0			49.1	25.7	135.8	71.8	195.0	530	55	475	792	0.000	0.00	0.00	0.000	803.0		135.82			
20:00	30 min.	11.0	11.0	11.0			49.1	25.7	135.9	71.8	194.0	522	56	466	777	0.009	0.06	0.20	0.032	802.0		135.92			
		RW-2	**MW-3**	**MW-2**																					
20:30	30 min.	11.0	11.0	11.0			49.4	25.8	136.5	72.2	188.0	1,810	185	1,625	2,708	0.031	0.21	0.69	0.112	821.0		136.55			
21:00	30 min.	11.0	11.0	11.0			49.3	25.8	136.7	72.3	187.0	1,450	143	1,307	2,178	0.024	0.17	0.56	0.090	816.0		136.65			
AVG	720 min.	11.0	11.0	11.0			49.5	25.8	136.4	72.0	189.0	942	94	848	1,413	0.377	2.59	8.66	1.403	808.0		136.44			
9:00	0 min.	11.0	11.0	11.0			49.5	25.8	136.3	71.8	190.0	425	44	381	635	0.000	0.00	0.00	0.000	800.0		136.34			
9:30	30 min.	11.0	11.0	11.0			49.5	25.7	136.2	71.7	191.0	398	40	358	597	0.007	0.05	0.15	0.025	802.0		136.23			
10:00	30 min.	11.0	11.0	11.0			49.5	25.7	136.1	71.6	192.0	400	41	359	598	0.007	0.05	0.15	0.025	801.0		136.13			
10:30	30 min.	11.0	11.0	11.0			49.5	25.7	136.2	71.8	191.0	356	37	319	532	0.006	0.04	0.14	0.022	800.0		136.23			
11:00	30 min.	11.0	11.0	11.0			49.5	25.8	136.3	71.9	190.0	380	39	341	568	0.007	0.04	0.15	0.023	801.0		136.34			
Average Reading:		**11.0**	**11.0**	**11.0**			**49.3**	**25.7**	**136.2**	**71.9**	**191.7**	**913.9**	**94.1**	**Total Removed:**		**0.713**	**4.83**	**16.13**	**2.613**	**Total Lbs Discharged:**			0.00054	0.00181	99.50%

Comments

Paul Naman was on site for ECS.

Field Data Sheet

Circle K 6682

171 East Glenn Avenue, Auburn, AL

Operator Name: Juan Velasquez

Date: August 31, 2015

Project # AL81559

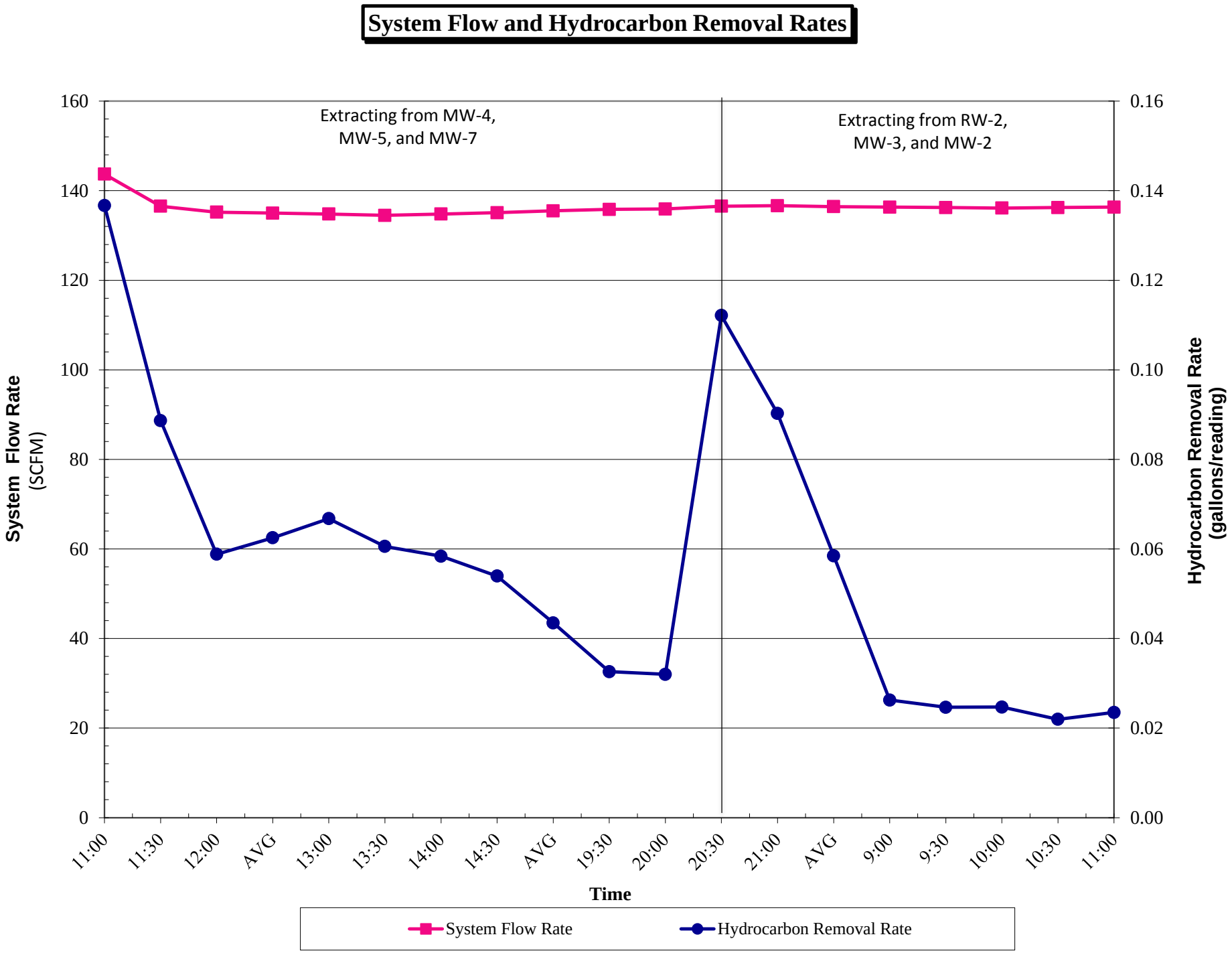
Response Ratio : 600

(Gas=600, Diesel=203, JetA=198)

Specific Gravity : 0.74

(Gas=0.74, Diesel=0.83, JetA=0.80)

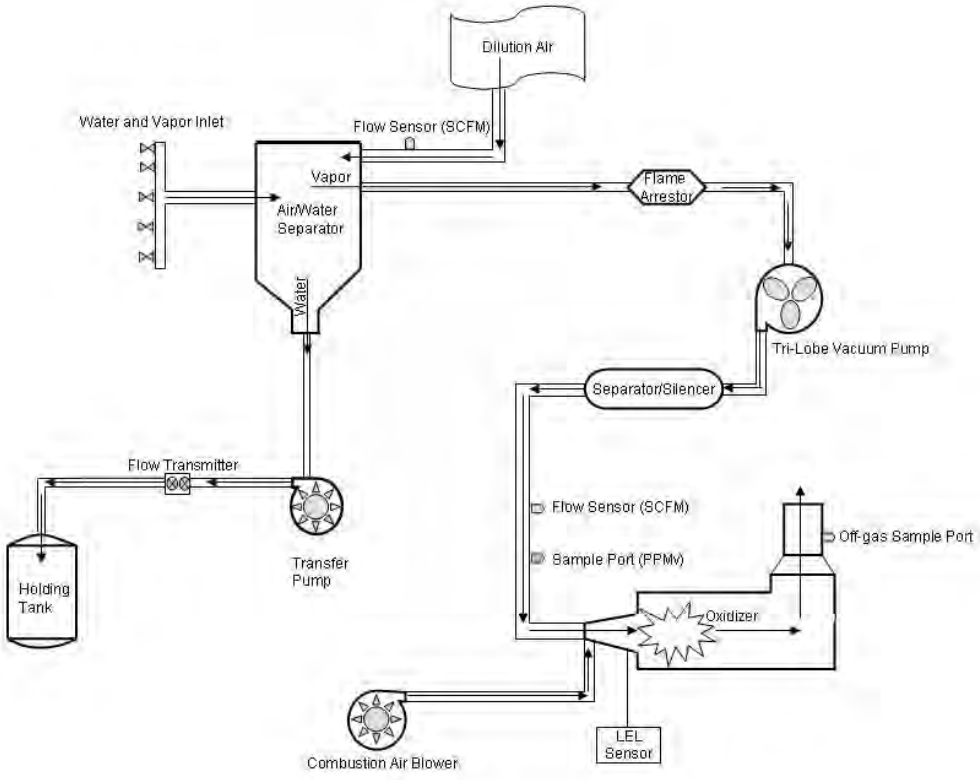
LINE #	Time	Time Interval	Dilution Stream		Pump Discharge Stream				Extraction Well #		MW-4	Extraction Well #		MW-5	Extraction Well #		MW-7	Extraction Well #			Extraction Well #			LINE#
			Bleed Air Diff Press. ("WC)	Bleed Air Temp	Effluent Pressure (psi)	Manifold Vacuum ("Hg")	Effluent Separator Temp	Effluent Diff Press ("WC)	Wellhead Vacuum ("Hg)	Ambient Air (SCFM)	Stinger Depth (ft.)	Wellhead Vacuum ("Hg)	Ambient Air (SCFM)	Stinger Depth (ft.)	Wellhead Vacuum ("Hg)	Ambient Air (SCFM)	Stinger Depth (ft.)	Wellhead Vacuum ("Hg)	Ambient Air (SCFM)	Stinger Depth (ft.)	Wellhead Vacuum ("Hg)	Ambient Air (SCFM)	Stinger Depth (ft.)	
1	11:00	0.01	0.15	79	0.1	14	125	0.31	11	5	10	11	5	9	11	5	11							1
2	11:30	30	0.15	95	0.1	14	188	0.31	11	5	12	11	5	12	11	5	13							2
3	12:00	30	0.15	105	0.1	14	201	0.31	11	5	12	11	5	12	11	5	13							3
4	AVG	60	0.15	106	0.1	14	203	0.31	11	5	12	11	5	12	11	5	13							4
5	13:00	0.01	0.15	108	0.1	14	205	0.31	11	5	12	11	5	12	11	5	13							5
6	13:30	30	0.15	110	0.1	14	208	0.31	11	5	12	11	5	12	11	5	13							6
7	14:00	30	0.15	111	0.1	14	205	0.31	11	5	12	11	5	12	11	5	13							7
8	14:30	30	0.15	110	0.1	14	202	0.31	11	5	12	11	5	12	11	5	13							8
9	AVG	300	0.15	109	0.1	14	198	0.31	11	5	12	11	5	12	11	5	13							9
10	19:30	0.01	0.15	109	0.1	14	195	0.31	11	5	12	11	5	12	11	5	13							10
11	20:00	30	0.15	108	0.1	14	194	0.31	11	5	12	11	5	12	11	5	13							11
12									Extraction Well #		RW-2	Extraction Well #		MW-3	Extraction Well #		MW-2							12
13	20:30	30	0.15	102	0.1	14	188	0.31	11	5	8	11	5	12	11	5	9							13
14	21:00	30	0.15	103	0.1	14	187	0.31	11	5	10	11	5	14	11	5	11							14
15	AVG	720	0.15	100	0.1	14	189	0.31	11	5	10	11	5	14	11	5	11							15
16	9:00	0.01	0.15	98	0.1	14	190	0.31	11	5	10	11	5	14	11	5	11							16
17	9:30	30	0.15	99	0.1	14	191	0.31	11	5	10	11	5	14	11	5	11							17
18	10:00	30	0.15	99	0.1	14	192	0.31	11	5	10	11	5	14	11	5	11							18
19	10:30	30	0.15	100	0.1	14	191	0.31	11	5	10	11	5	14	11	5	11							19
20	11:00	30	0.15	100	0.1	14	190	0.31	11	5	10	11	5	14	11	5	11							20
Average Reading:			0.14	97.55	0.10	13.30	182.10	0.29	11.00	5.00	10.95	11.00	5.00	12.58	11.00	5.00	11.95							


System Flow and Hydrocarbon Removal Rates
Extracting from MW-4, MW-5, and MW-7
Extracting from RW-2, MW-3, and MW-2
System Flow Rate (SCFM)
Hydrocarbon Removal Rate (gallons/reading)
160
140
120
100
80
60
40
20
0
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
11:00
11:30
12:00
AVG
13:00
13:30
14:00
14:30
AVG
19:30
20:00
20:30
21:00
AVG
9:00
9:30
10:00
10:30
11:00
Time
System Flow Rate
Hydrocarbon Removal Rate

Multi-Phase Extraction Technology

Multi-phase extraction (MPE) systems remove vapors and liquids simultaneously from the subsurface. Ambient air (5 to 20 cubic feet per minute) is drawn down the casing of monitoring wells, across the groundwater interface, and back up a drop tube, providing the necessary lift to extract subsurface groundwater. An airflow gauge attached to a well head is used to measure the amount of ambient air, which is subtracted from the total flow. Additionally, vacuum gauges are used to measure the extraction vacuum, as well as the vacuum applied to the subsurface stratigraphy.

The extracted vapors and liquids are transferred to a mobile treatment system, where the liquids are separated and discharged into a storage tank for proper disposal. Soil vapors are transferred to a forced air thermal oxidation (ThOx) unit and incinerated at approximately 1,500 degrees Fahrenheit. The treated air is then discharged into the atmosphere. Following is a process flow diagram for the Brown Remediation, Inc. MPE system.



Summary of Calculations

During the MPE event, a total flow rate measurement of the process stream is taken on the discharge side of the vacuum extraction pump and before off-gas treatment. This measurement is performed using an averaging pitot tube (Dwyer DS-300) attached to a digital differential pressure sensor. This measurement is used to calculate the removal rates and the off-gas emission rates and is reported in actual cubic feet per minute. A separate flow rate is calculated for the extraction well field, as well as for any additional ambient air introduced into the influent stream. To determine the volume of hydrocarbon removed during the event, samples of the extracted vapors are collected from a sample port located before the vapor stream enters the ThOx unit. A second sample port located on the exhaust stack of the ThOx unit provides access for determining the destruction efficiency of the combustion process.

Concentration measurements are taken using a TVA-1000A flame ionization detector (FID) calibrated to methane. This FID instrument has a dynamic range of 0 to 50,000 parts per million (PPM) as methane, and 0 to 100,000 PPM as hydrocarbon. The concentration measurements of the process stream are made after the addition of ambient air at the phase separator and prior to the addition of combustion air at the oxidizer; however, the concentration of the process stream at the sample port exceed the dynamic range of the FID instrument. To accurately record the high concentrations commonly observed during an MPE event, a calibrated 10:1 dilution assembly is used to accurately dilute the sample. This dilution assembly, along with the FID instrument, is calibrated before the start of each event.

To account for naturally occurring methane present during a typical MPE event, two concentration measurements are taken. One unfiltered sample measures the total volatile organic compounds (VOCs) in the subsurface. The other sample is collected using an in-line activated carbon filter, which adsorbs the hydrocarbon compounds, leaving only methane. This methane-only result is then subtracted from the total VOC measurement for use in the mass hydrocarbon removal calculation. However, as with any FID instrument, the non-methane organic compound results are recorded as parts per million by volume (PPMv) as if the concentrations were equivalent to methane gas. A conversion from methane to hydrocarbon, and from volume to weight, is necessary to calculate the accurate hydrocarbon removal. By using the TVA-1000's factory-certified response ratio for various hydrocarbons, the measurements are converted to equivalent hydrocarbon in milligrams per liter (mg/L). For example, a TVA-1000 FID has an average response ratio of 600 PPMv per mg/L for unleaded gasoline and 200 PPMv per mg/L for diesel. Following is a summary of calculations.

Flow

$$Q = 128.8 \times K \times D \times SQRT((P \times dP) / (T + 460) \times Ss)$$

Where:

Q =	Flow expressed in Standard Cubic Feet per Minute (SCFM)
K =	Flow coefficient (provided by Dwyer Instruments, Inc.)
D =	Inside diameter of process line in inches
SQRT =	Square Root
P =	Static line pressure
dP =	Differential pressure expressed in inches of water column (WC)
T =	Temperature in degrees Fahrenheit (plus 460 equals degrees Rankine)

Ss = Specific gravity at 60 degrees Fahrenheit

Conversion of Field Data (PPMv to mg/m^3)

C = (PPMv / R) x (1000 L / 1 m^3)

Where:

R = TVA response ratio supplied in The Foxboro Monitor, Volume 3, Issue 1A (600 PPMv / (mg/L) for gasoline and 200 PPMv / (mg/L) for diesel)

Hydrocarbon Loading Rate

M = Q x C x c

Where:

M = Contaminant loading rate (lbs/hr)

Q = Air flow rate (SCFM)

C = Contaminant concentration (mg/m^3)

c = (1m^3 / 35.31 ft) x (1 lb / 454 x 10^3) x (60 min / 1 hr) = 3.743 x 10^{-6}

Conversion of Pounds of Hydrocarbon to Equivalent Gallons

Equivalent Gallons = Ss x c

Where:

Ss = Specific gravity (0.74 = gasoline, 0.84 = diesel fuel)

c = 8.34 lbs/gallon

227 Sandy Springs Place
Suite D-122
Atlanta, Georgia 30328-5918
Phone 404 256 0667
Fax 404 256 0668

Non-Hazardous Waste Manifest

Manifest No.: 4680 Project No.: AL 81559 Quantity in U.S. Gallons: 950

Section 1: Generator

Company Name: Circle K 6682
Address: 171 East Glenn Avenue
City: Auburn State: AL ZIP:
Phone No.: Fax No.:

Location:
Address:
City: State: ZIP:
Phone No.: Fax No.:

Description of Waste: Petroleum contacted water

This is to certify that the above-named material is properly described and is in proper condition for transportation according to the applicable regulations of the Department of Transportation. I further certify that the above-named material is not a hazardous waste as defined by 40 CFR, Parts 261 and 279, or any applicable federal, state, or local laws.

PAUL NAMAN FOR CIRCLE K — Authorized Agent
Paul Naman — Signature
8-31-15 — Date

Section 2: Transporter

Primary

Company Name: Brown Remediation, Inc
Address: 227 Sandy Springs Place
Suite D-122
City: Atlanta State: GA ZIP: 30328
Phone No.: (404) 256-0667 Fax No.: (404) 256-0668
Driver Name: Ivan Velasquez
Truck No.: 2 Vehicle Tag: IP078F

Driver Signature
8/31/2015 — Date

Secondary

Company Name:
Address:
City: State: ZIP:
Phone No.: Fax No.:
Driver Name:
Truck No.: Vehicle Tag:

Driver Signature
Date

Section 3: Destination

Company Name: Aqua-Terra
Address: 710 Moore Street
City: Oxford State: GA ZIP:
Phone No.: Fax No.:

I hereby certify that the above material has been accepted, and to the best of my knowledge, the foregoing is true and accurate.

Misty Lefebvre — Authorized Agent
Signature
9/2/15 — Date

White – Destination Yellow – Brown Remediation

APPENDIX B

Air Division Approval Letter

LANCE R. LEFLEUR
DIRECTOR

ROBERT J. BENTLEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov
1400 Coliseum Blvd. 36110-2400 ■ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ■ FAX (334) 271-7950

July 6, 2015

MR PAUL NAMAN
ENVIRONMENTAL COMPLIANCE SERVICES INC
7856 WESTSIDE PARK DRIVE
SUITE G
MOBILE AL 36695

RE: Circle K No. 2706682
171 East Glenn Avenue
Auburn, Lee County
UST11-01-02
Facility ID#: 22502-081-011783
Air ID #: 206-15-M021 (8/31)

Dear Mr. Naman:

The Air Division reviewed the proposal to conduct a Mobile Enhanced Multi-Phase Extraction (MEME) event at the above-referenced site. Based on the fact that the subcontractor, Brown Remediation, will utilize an off-gas combustion treatment system during the event, permitting will not be required at this time. **At the conclusion of the event, the results should be submitted to the Air Division for evaluation.**

Please use the attached "Air Division Requirements For Active Soil And Groundwater Remediation Projects" as a guideline. Also, if any of the factors in the operation of the remediation system change, you should notify the Air Division <u>prior</u> to those changes so that a re-evaluation can be made.

Should you have any questions, please contact me in Montgomery at (334) 271-7907.

Sincerely,

Katie Smith
Petroleum Section
Energy Branch
Air Division

KMS/kms

cc: Dorothy Malaier –UST Corrective Action Section

Enclosure

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
4171 Commanders Drive
Mobile, AL 36615-1421
(251) 432-6533
(251) 432-6598 (FAX)

APPENDIX C

NAMR Form(s)

NATURAL ATTENUATION MONITORING REPORT

Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 1 - Site Summary

Purpose of Monitoring:

- [X] Plume Characterization
- [ ] Confirmation Monitoring
- [ ] Remediation by Natural Attenuation (Approved Corrective Action Plan)

Site Status:

- [ ] Assessment Complete
- [X] ARBCA Evaluation Conducted
- [X] Active UST's
- [X] Site Classification
- [Yes] Free Product ever present

Number of Groundwater Monitoring Wells:

- [ ] Piezometers
- [14] Type II
- [1] Type III
- [ ] Other

Number of Water Supply Wells:

- [0] Public (within 1 mile radius of site)
- [0] Private (within 1000 foot radius of site)
- [ ] Other (Explain) _____

Status of Waste Water Disposal:

[161.5] Quantity (gallons) [55-gal Drum] Disposal Method

[ ] Stored On-site [X] Disposal Documentation

Comments:

Three drums of purge water was generated during the 10/7/15 sampling event
to be transported to Demermuth Environmental for treatment at their Knoxville, Tennessee Facility.

NATURAL ATTENUATION MONITORING REPORT

Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 2 - Site Maps

Attach site map(s) illustrating all well locations, location of former and/or current UST system(s), utilities, adjacent properties, receptors, current and most likely future land use of site and adjacent properties, Point of Compliance, buildings and other pertinent features. All maps should contain a north arrow and should be to scale.

Section 3 - Well Inventory Tables

Monitoring Wells

Well ID	Date Installed	Diameter (inches)	Screened Interval (feet bgs)		Depth to Water (feet bgs)*
MW-1	04/07/11	2"	8.55	23.55	11.02
MW-2	04/07/11	2"	8.30	23.30	9.36
MW-3	04/07/11	2"	8.45	23.45	12.11
MW-4	04/07/11	2"	8.50	23.50	8.44
MW-5	04/07/11	2"	8.04	23.04	9.37
MW-6	04/06/11	2"	11.95	31.95	10.76
MW-7	04/06/11	2"	8.90	23.90	10.55
MW-8D	01/31/12	2"	32.50	37.50	10.43
MW-9	01/31/12	2"	10.30	30.30	14.08
MW-10	02/01/12	2"	5.00	20.00	9.02
MW-11	03/01/12	2"	3.51	23.51	11.30
MW-12	05/10/13	2"	7.30	22.30	11.44
MW-13	02/01/12	2"	8.90	23.90	13.06
RW-1	05/10/13	4"	7.42	22.42	3.86
RW-2	05/10/13	4"	7.27	22.27	9.32

* Depth to groundwater following well installation.

Water Supply Wells

Well ID	Date Installed	Diameter (inches)	Screened Interval (feet bgs)		Depth to Water (feet bgs)	Well Use

NATURAL ATTENUATION MONITORING REPORT

Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 4 - History of Sampling

Date	Sampling Parameters									Sampled By		
Sampled	BTEX	MTBE	PAH	Metals	D.O.	Nitrate	Fe^{+2}	Sulfate	Naph	Name	Company	Title
12/13/10	X	X	X							Duane Fulton	S&ME, Inc.	Project Geologist
04/08/11	X	X	X							Duane Fulton	S&ME, Inc.	Project Geologist
12/12/11	X	X	X							Duane Fulton	S&ME, Inc.	Project Geologist
02/02/12	X	X	X							Duane Fulton	S&ME, Inc.	Project Geologist
03/01/12	X	X								Duane Fulton	S&ME, Inc.	Project Geologist
08/15/12	X	X								Duane Fulton	S&ME, Inc.	Project Geologist
12/04/12	X	X								Keith Spooner	S&ME, Inc.	Staff Geologist
06/24/13	X	X								Keith Spooner	S&ME, Inc.	Staff Geologist
12/05/13	X	X							X	Slade Stevenson	S&ME, Inc.	Techncian
04/10/14	X	X							X	Keith Spooner	S&ME, Inc.	Staff Geologist
06/10/14	X	X							X	Micheal Guy	S&ME, Inc.	Techncian
10/06/14	X	X							X	Slade Stevenson	S&ME, Inc.	Techncian
01/15/15	X	X							X	Slade Stevenson	S&ME, Inc.	Techncian
07/01/15	X	X							X	Ath Yim	ECS, Inc.	Techncian
10/07/15	X	X							X	Ath Yim	ECS, Inc.	Techncian

NATURAL ATTENUATION MONITORING REPORT

Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 5 - Sampling Methodology

Date	Analytical Methods										Sampled By		
Sampled	BTEX	MTBE	PAH	Metals	D.O.	Nitrate	Fe^{+2}	Sulfate	Napth		Name	Company	Title
12/13/10	8260	8260	8270C								Duane Fulton	S&ME, Inc.	Project Geologist
04/08/11	8260	8260	8270C								Duane Fulton	S&ME, Inc.	Project Geologist
12/12/11	8260	8260	8270C								Duane Fulton	S&ME, Inc.	Project Geologist
02/02/12	8260	8260	8270C								Duane Fulton	S&ME, Inc.	Project Geologist
03/01/12	8260	8260									Duane Fulton	S&ME, Inc.	Project Geologist
08/15/12	8260	8260									Duane Fulton	S&ME, Inc.	Project Geologist
12/04/12	8260	8260									Keith Spooner	S&ME, Inc.	Staff Geologist
06/24/13	8260	8260									Keith Spooner	S&ME, Inc.	Staff Geologist
12/05/13	8260	8260							8260		Slade Stevenson	S&ME, Inc.	Technician
04/10/14	8260	8260							8260		Slade Stevenson	S&ME, Inc.	Technician
06/10/14	8260	8260							8260		Micheal Guy	S&ME, Inc.	Technician
10/06/14	8260	8260			YSI 556				8260		Slade Stevenson	S&ME, Inc.	Technician
01/15/15	8260	8260			YSI 556				8260		Slade Stevenson	S&ME, Inc.	Technician
07/01/15	8260	8260			YSI 556				8260		Ath Yim	ECS, Inc.	Technician
10/07/15	8260	8260			YSI 556				8260		Ath Yim	ECS, Inc.	Technician

DO measured in the field with a calibrated Dissolved Oxygen Meter

NATURAL ATTENUATION MONITORING REPORT

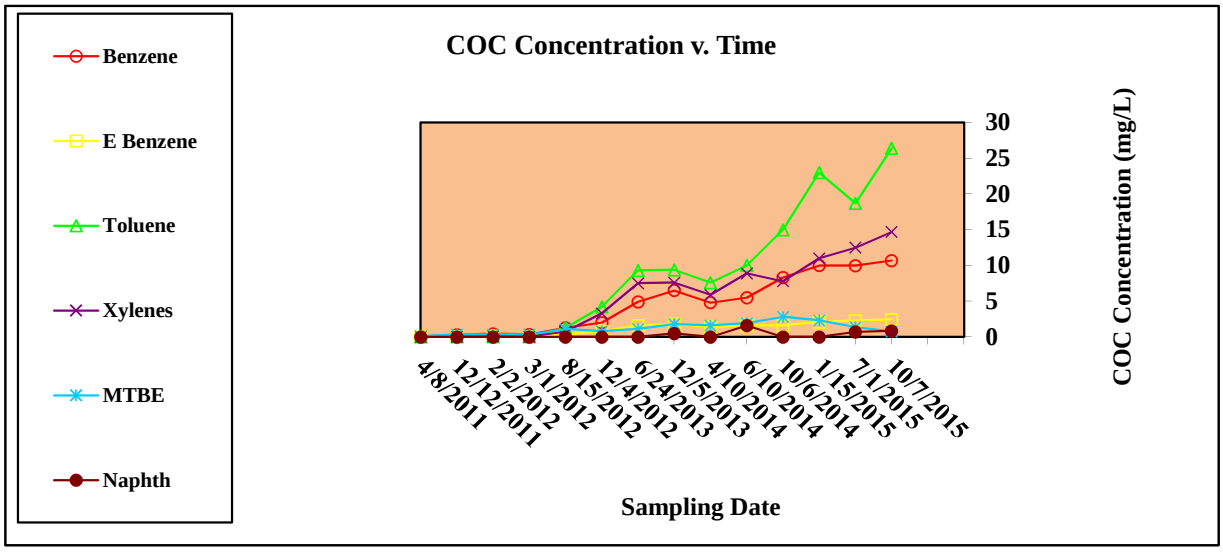
Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 6 - Historical Monitoring Well Chemicals of Concern Data (mg/L)

Well ID MW-1

	Historical Chemicals of Concern Data									
Date	**Benzene**	**E Benzene**	**Toluene**	**Xylenes**	**MTBE**	**Naphth**	**T. PAHs**	**Lead**		
04/08/11	0.0062	0.0018	0.0071	0.0090	0.100	-				
12/12/11	0.290	0.087	0.013	0.0193	0.330	-				
02/02/12	0.450	0.100	0.039	0.096	0.330	-				
03/01/12	0.350	0.064	0.030	0.033	0.360	-				
08/15/12	1.300	0.360	1.300	0.760	1.100	-				
12/04/12	2.000	0.780	4.200	3.300	0.79	-				
06/24/13	4.900	1.600	9.300	7.500	1.100	-				
12/05/13	6.5	1.8	9.4	7.6	1.8	0.47				
04/10/14	4.8	1.4	7.6	5.9	1.6	<1.0				
06/10/14	5.5	1.6	10	8.9	1.9	1.6				
10/06/14	8.3	1.6	15	7.8	2.8	<1.2				
01/15/15	10	2.1	23	11	2.3	<1.2				
7/1/2015	9.96	2.28	18.7	12.5	1.37	0.693				
10/7/2015	10.7	2.46	26.4	14.7	0.741	0.853				

Well ID MW-1



NATURAL ATTENUATION MONITORING REPORT

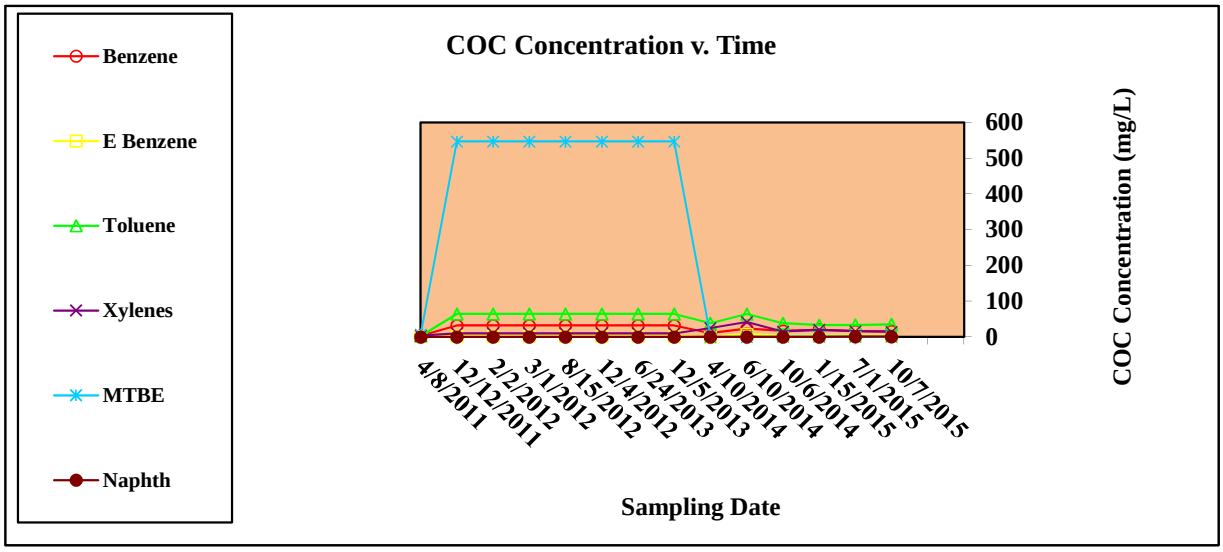
Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 6 - Historical Monitoring Well Chemicals of Concern Data (mg/L)

Well ID MW-2

	Historical Chemicals of Concern Data									
Date	**Benzene**	**E Benzene**	**Toluene**	**Xylenes**	**MTBE**	**Naphth**	**T. PAHs**	**Lead**		
04/08/11	3.100	1.300	2.800	3.630	7.000	-				
12/12/11	31.7	2.72	64.5	10.1	547	-	FP = 2.16'			
02/02/12	31.7	2.72	64.5	10.1	547	-	FP = 0.09'			
03/01/12	31.7	2.72	64.5	10.1	547	-	FP = 0.10'			
08/15/12	31.7	2.72	64.5	10.1	547	-	FP = 0.17'			
12/04/12	31.7	2.72	64.5	10.1	547	-	FP = 0.42'			
06/24/13	31.7	2.72	64.5	10.1	547	-	FP = 0.40'			
12/05/13	31.7	2.72	64.5	10.1	547	-	FP = 0.40'			
04/10/14	11	<5.0	38	25	<5.0	<25				
06/10/14	23	7.5	64	42	<5.0	<25				
10/06/14	17	2.9	38	15	0.78	<1.2				
01/15/15	20	3.4	33	20	0.74	<1.2				
7/1/2015	15.6	3.11	33.2	16	0.336	0.885				
10/7/2015	15.5	2.52	35.1	14.1	0.275	0.874				

Well ID MW-2



NATURAL ATTENUATION MONITORING REPORT

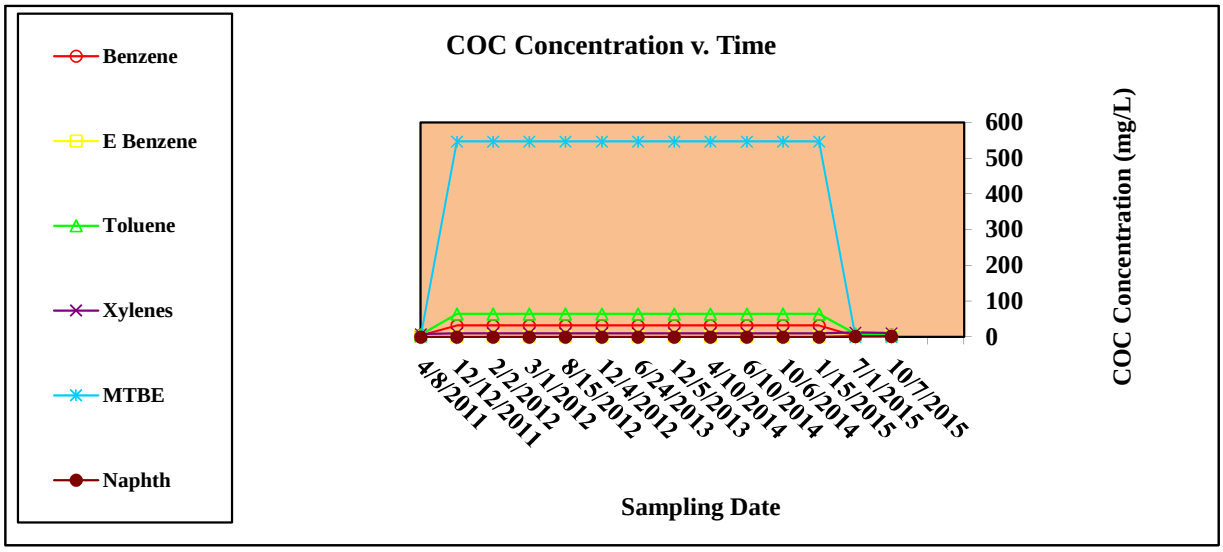
Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 6 - Historical Monitoring Well Chemicals of Concern Data (mg/L)

Well ID MW-3

	Historical Chemicals of Concern Data									
Date	**Benzene**	**E Benzene**	**Toluene**	**Xylenes**	**MTBE**	**Naphth**	**T. PAHs**	**Lead**		
04/08/11	4.700	1.900	6.000	8.000	0.630	-				
12/12/11	31.7	2.72	64.5	10.1	547	-	FP = 0.13'			
02/02/12	31.7	2.72	64.5	10.1	547	-	FP = 0.14'			
03/01/12	31.7	2.72	64.5	10.1	547	-	FP = 0.12'			
08/15/12	31.7	2.72	64.5	10.1	547	-	FP = 0.73'			
12/04/12	31.7	2.72	64.5	10.1	547	-	FP = 0.79'			
06/24/13	31.7	2.72	64.5	10.1	547	-	FP = 3.12'			
12/05/13	31.7	2.72	64.5	10.1	547	-	FP = 0.34'			
04/10/14	31.7	2.72	64.5	10.1	547	-	FP = 0.65'			
06/10/14	31.7	2.72	64.5	10.1	547	-	FP = 0.41'			
10/06/14	31.7	2.72	64.5	10.1	547	-	FP = 0.28'			
01/15/15	31.7	2.72	64.5	10.1	547	-	FP = 0.41'			
7/1/2015	2.120	2.83	8.6	12.3	<0.05	1.44	FP = 0.04'			
10/7/2015	5.36	2.82	5.7	10.2	0.0239	1.78				

Well ID MW-3



NATURAL ATTENUATION MONITORING REPORT

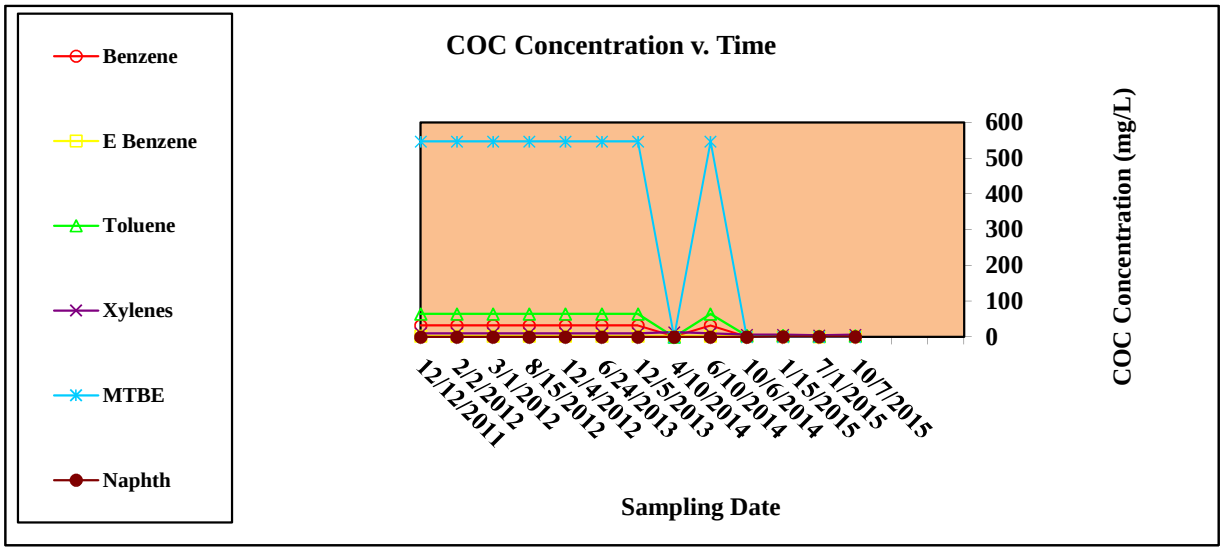
Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 6 - Historical Monitoring Well Chemicals of Concern Data (mg/L)

Well ID MW-4

	Historical Chemicals of Concern Data									
Date	**Benzene**	**E Benzene**	**Toluene**	**Xylenes**	**MTBE**	**Naphth**	**T. PAHs**	**Lead**		
12/12/11	31.7	2.72	64.5	10.1	547	-	FP = 5.56'			
02/02/12	31.7	2.72	64.5	10.1	547	-	FP = 1.75'			
03/01/12	31.7	2.72	64.5	10.1	547	-	FP = 2.11'			
08/15/12	31.7	2.72	64.5	10.1	547	-	FP = 0.24'			
12/04/12	31.7	2.72	64.5	10.1	547	-	FP = 1.30'			
06/24/13	31.7	2.72	64.5	10.1	547	-	FP = 1.92'			
12/05/13	31.7	2.72	64.5	10.1	547	-	FP = 0.16'			
04/10/14	1.3	2.2	<5.0	13	<1.0	<5.0				
06/10/14	31.7	2.72	64.5	10.1	547	-	FP = 0.15'			
10/06/14	0.70	1.1	3.8	6.0	<0.50	<2.5				
01/15/15	0.76	1.0	4.5	6.1	<0.10	0.62				
07/01/15	0.397	0.856	2.51	4.26	0.0171	0.394				
10/7/2015	0.431	1.03	2.95	5.99	0.0218	0.456				

Well ID MW-4



NATURAL ATTENUATION MONITORING REPORT

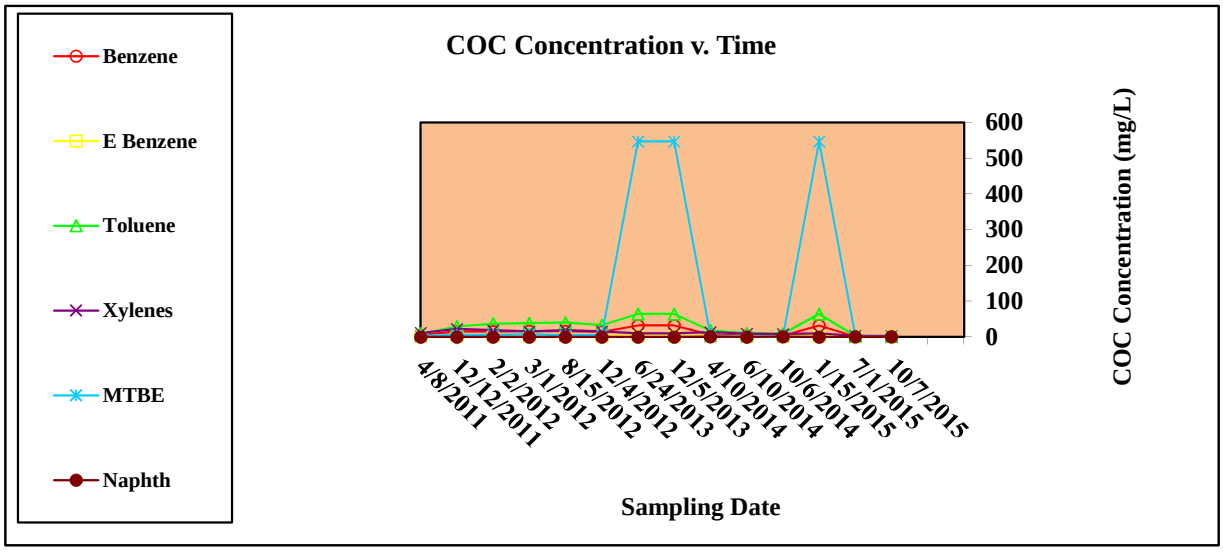
Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 6 - Historical Monitoring Well Chemicals of Concern Data (mg/L)

Well ID MW-5

	Historical Chemicals of Concern Data									
Date	**Benzene**	**E Benzene**	**Toluene**	**Xylenes**	**MTBE**	**Naphth**	**T. PAHs**	**Lead**		
04/08/11	5.400	2.000	9.100	10.900	2.300	-				
12/12/11	15.000	3.500	29.000	21.900	5.500	-				
02/02/12	15.000	3.000	37.000	18.300	5.500	-				
03/01/12	16.000	2.500	38.000	14.900	6.600	-				
08/15/12	16.000	3.000	40.000	19.100	3.900	-				
12/04/12	14.000	2.600	33.000	15.000	5.2	-				
06/24/13	31.7	2.72	64.5	10.1	547	-	FP = 0.09'			
12/05/13	31.7	2.72	64.5	10.1	547	-	FP = 0.04'			
04/10/14	5.8	2.3	18	13	1.5	0.58				
06/10/14	3.0	1.5	9.6	9.0	1.0	<1.0				
10/06/14	3.3	1.3	8.8	7.6	0.96	0.56				
01/15/15	31.7	2.72	64.5	10.1	547	-	FP = 0.16'			
7/1/2015	0.929	0.587	2.78	2.93	0.275	0.284	FP = 0.03'			
10/7/2015	0.574	0.448	1.87	2.69	0.138	0.233				

Well ID MW-5



NATURAL ATTENUATION MONITORING REPORT

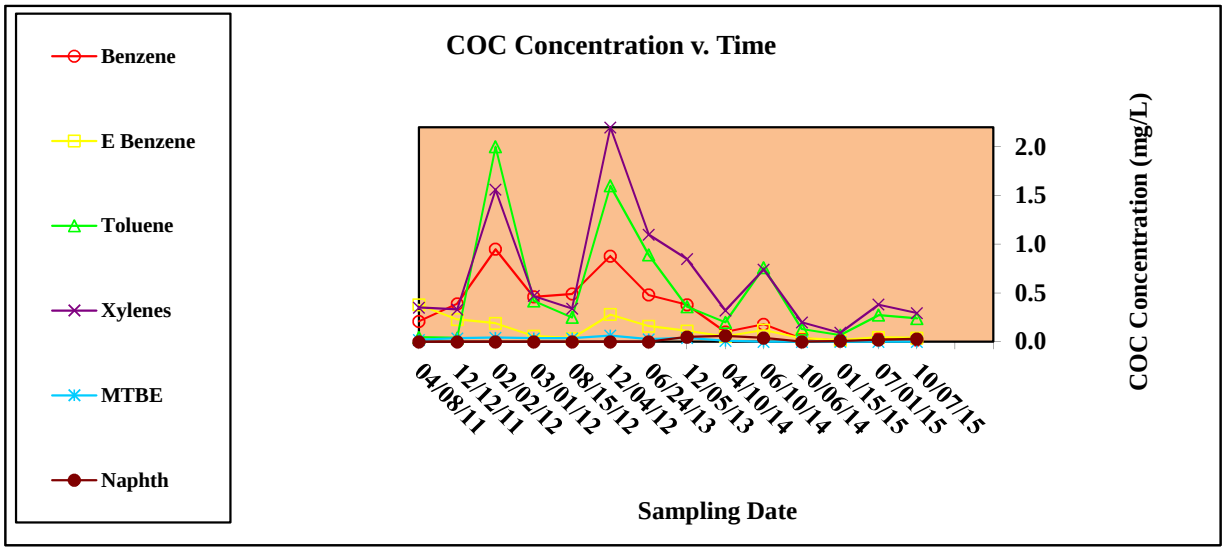
Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 6 - Historical Monitoring Well Chemicals of Concern Data (mg/L)

Well ID MW-6

	Historical Chemicals of Concern Data									
Date	**Benzene**	**E Benzene**	**Toluene**	**Xylenes**	**MTBE**	**Naphth**	**T. PAHs**	**Lead**		
04/08/11	0.210	0.380	0.045	0.350	0.018	-				
12/12/11	0.390	0.230	0.038	0.330	0.034	-				
02/02/12	0.950	0.190	2.000	1.560	0.042	-				
03/01/12	0.460	0.059	0.420	0.470	0.034	-				
08/15/12	0.490	0.034	0.250	0.340	0.035	-				
12/04/12	0.880	0.280	1.600	2.200	0.063	-				
06/24/13	0.480	0.160	0.890	1.100	0.026	-				
12/05/13	0.38	0.11	0.36	0.85	0.038	0.049				
04/10/14	0.10	0.054	0.20	0.32	0.010	0.060				
06/10/14	0.18	0.12	0.76	0.74	<0.0050	0.039				
10/06/14	0.033	0.037	0.13	0.20	<0.010	<0.050				
1/15/2015	0.0098	0.016	0.067	0.093	<0.0010	0.0075				
7/1/2015	0.0325	0.0454	0.273	0.382	<0.001	0.0192				
10/7/2015	0.0191	0.0385	0.238	0.295	<0.001	0.0279				

Well ID MW-6



NATURAL ATTENUATION MONITORING REPORT

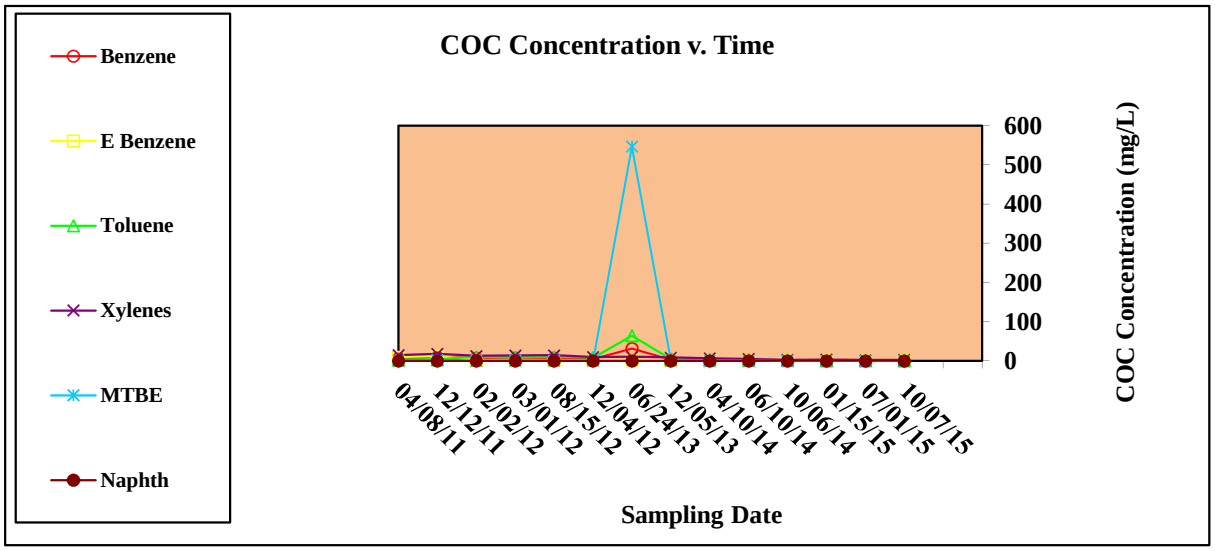
Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 6 - Historical Monitoring Well Chemicals of Concern Data (mg/L)

Well ID MW-7

	Historical Chemicals of Concern Data									
Date	**Benzene**	**E Benzene**	**Toluene**	**Xylenes**	**MTBE**	**Naphth**	**T. PAHs**	**Lead**		
04/08/11	6.500	9.200	2.700	14.300	1.600	-				
12/12/11	9.200	12.000	3.600	18.000	2.200	-				
02/02/12	7.100	2.000	10.000	12.600	<2.500	-				
03/01/12	7.700	2.200	9.000	14.000	1.000	-				
08/15/12	7.100	2.000	10.000	14.200	0.720	-				
12/04/12	4.400	1.400	8.300	9.500	0.81	-				
06/24/13	31.7	2.72	64.5	10.1	547	-	FP = 0.05'			
12/05/13	3.2	1.4	4.6	8.5	0.49	<1.0				
04/10/14	1.9	1.1	3.1	6.6	0.37	<1.0				
06/10/14	1.4	0.80	2.6	4.8	0.34	<1.0				
10/06/14	0.74	0.43	1.2	2.4	0.19	0.27				
01/15/15	0.35	0.49	0.86	3.0	0.086	0.29				
7/1/2015	0.15	0.483	0.525	1.87	0.0117	0.251				
10/7/2015	0.085	0.477	0.482	2.57	0.0051	0.260				

Well ID MW-7



NATURAL ATTENUATION MONITORING REPORT

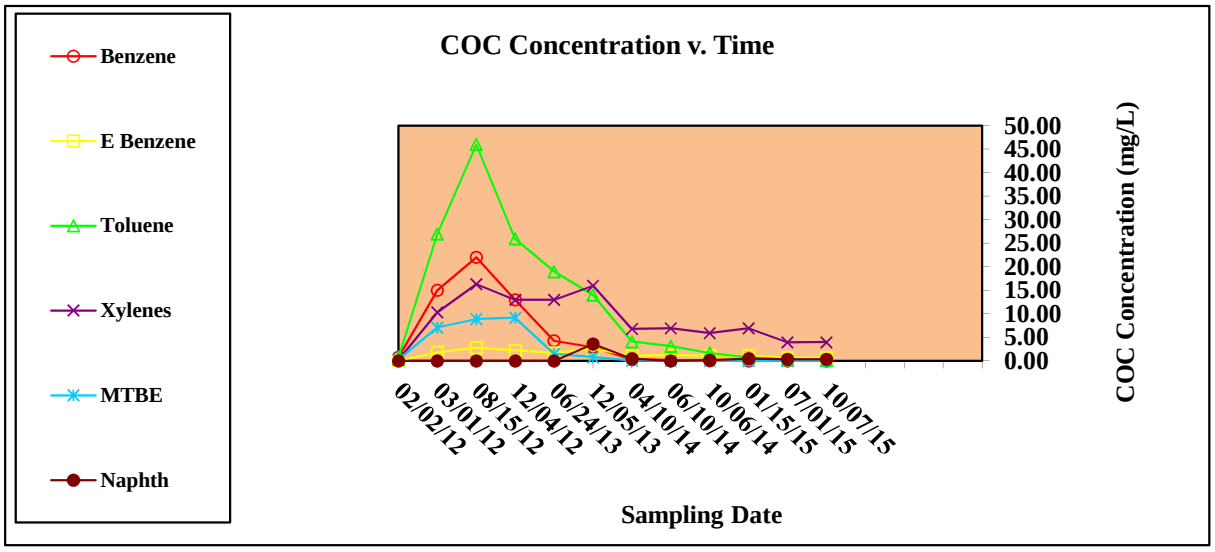
Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 6 - Historical Monitoring Well Chemicals of Concern Data (mg/L)

Well ID MW-8D

	Historical Chemicals of Concern Data									
Date	**Benzene**	**E Benzene**	**Toluene**	**Xylenes**	**MTBE**	**Naphth**	**T. PAHs**	**Lead**		
02/02/12	0.830	0.051	0.780	0.242	0.290	-				
03/01/12	15.000	1.800	27.000	10.300	7.100	-				
08/15/12	22.000	2.800	46.000	16.300	8.900	-				
12/04/12	13.000	2.200	26.000	13.000	9.2	-				
06/24/13	4.300	1.700	19.000	13.000	1.500	-				
12/05/13	2.9	2.6	14	16	0.77	3.6				
04/10/14	0.27	1.1	4.1	6.8	0.079	0.49				
06/10/14	0.16	1.2	3.1	6.9	<0.10	<0.50				
10/06/14	0.051	1.1	1.7	5.9	<0.025	0.12				
1/15/2015	<0.025	1.1	0.76	6.9	<0.025	0.46				
7/1/2015	<0.005	0.655	0.238	3.96	<0.005	0.324				
10/7/2015	0.0031	0.658	0.134	3.97	<0.001	0.308				

Well ID MW-8D



NATURAL ATTENUATION MONITORING REPORT

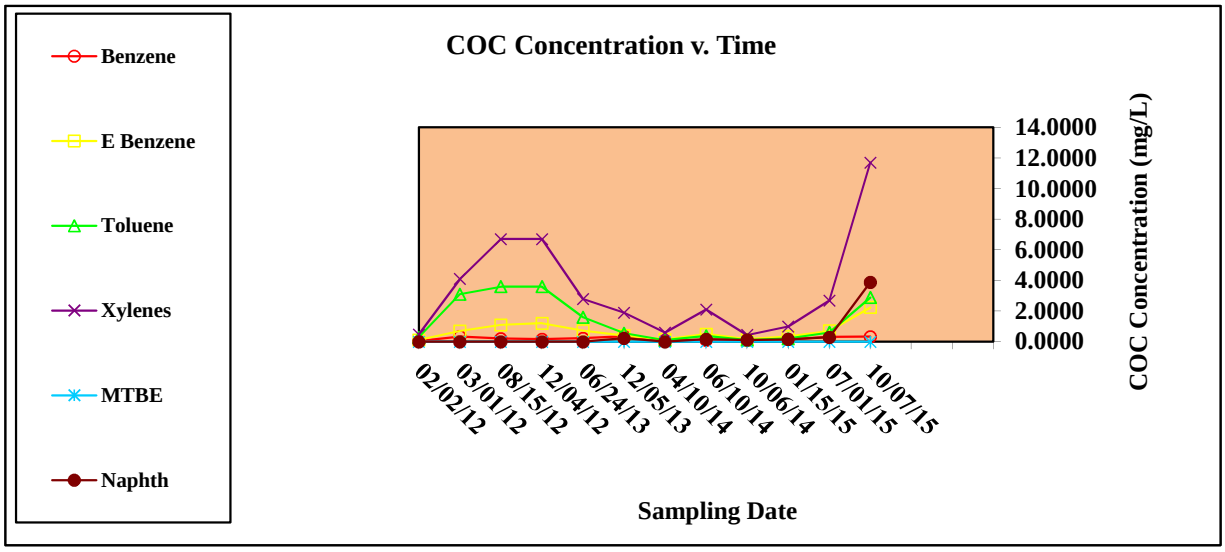
Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 6 - Historical Monitoring Well Chemicals of Concern Data (mg/L)

Well ID MW-9

	Historical Chemicals of Concern Data									
Date	**Benzene**	**E Benzene**	**Toluene**	**Xylenes**	**MTBE**	**Naphth**	**T. PAHs**	**Lead**		
02/02/12	0.041	0.12	0.29	0.47	<0.0050	-	-	-		
03/01/12	0.34	0.71	3.1	4.1	<0.0050	-	-	-		
08/15/12	0.21	1.1	3.6	6.7	<0.050	-				
12/04/12	0.16	1.2	3.6	6.7	<0.0050	-				
06/24/13	0.23	0.72	1.6	2.8	<0.020	-				
12/05/13	0.36	0.40	0.56	1.9	<0.020	0.23				
04/10/14	0.10	0.15	0.10	0.60	<0.020	<0.10				
06/10/14	0.10	0.50	0.38	2.1	<0.020	0.16				
10/06/14	0.13	0.16	0.11	0.44	<0.010	0.11				
01/15/15	0.15	0.34	0.20	1.0	<0.010	0.15				
07/01/15	0.309	0.714	0.608	2.69	<0.005	0.29				
10/07/15	0.325	2.24	2.89	11.7	<0.001	3.88				

Well ID MW-9



NATURAL ATTENUATION MONITORING REPORT

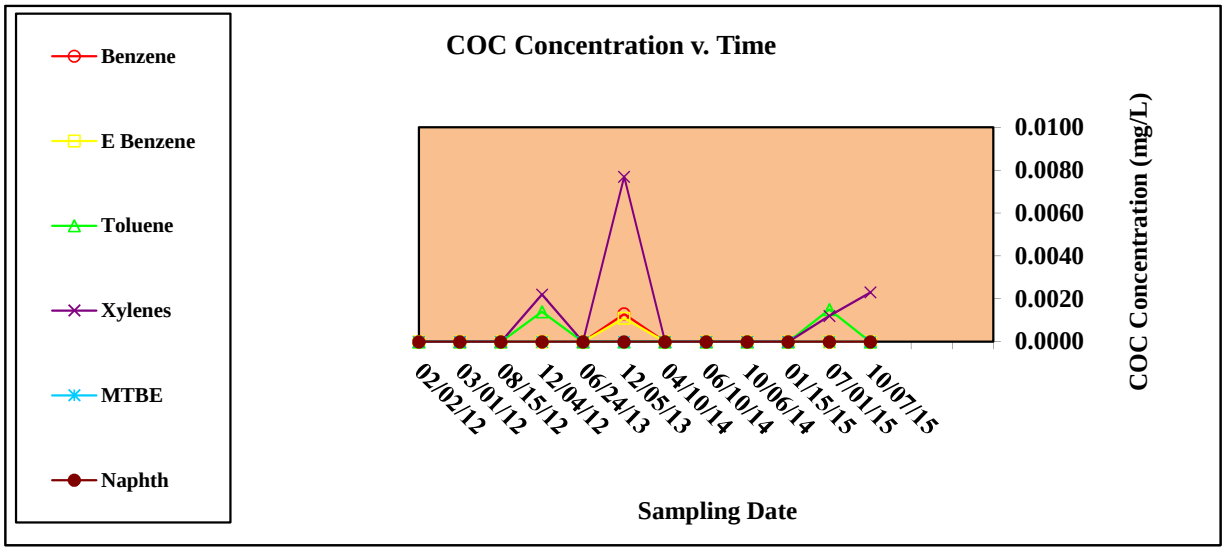
Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 6 - Historical Monitoring Well Chemicals of Concern Data (mg/L)

Well ID MW-10

	Historical Chemicals of Concern Data									
Date	**Benzene**	**E Benzene**	**Toluene**	**Xylenes**	**MTBE**	**Naphth**	**T. PAHs**	**Lead**		
02/02/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0050	-	-	-		
03/01/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0050	-	-	-		
08/15/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0050	-				
12/04/12	<0.0010	<0.0010	0.0014	0.0022	<0.0050	-				
06/24/13	<0.0010	<0.0010	<0.0050	<0.0030	<0.0010	-				
12/05/13	0.0013	0.0011	<0.0050	0.0077	<0.0010	<0.0050				
04/10/14	<0.0010	<0.0010	<0.0050	<0.0030	<0.0010	<0.0050				
06/10/14	<0.0010	<0.0010	<0.0050	<0.0030	<0.0010	<0.0050				
10/06/14	<0.0010	<0.0010	<0.0050	<0.0030	<0.0010	<0.0050				
01/15/15	<0.0010	<0.0010	<0.0050	<0.0030	<0.0010	<0.0050				
07/01/15	<0.001	<0.001	0.0015	0.0012	<0.001	<0.001				
10/07/15	<0.001	<0.001	<0.001	0.0023	<0.001	<0.005				

Well ID MW-10



NATURAL ATTENUATION MONITORING REPORT

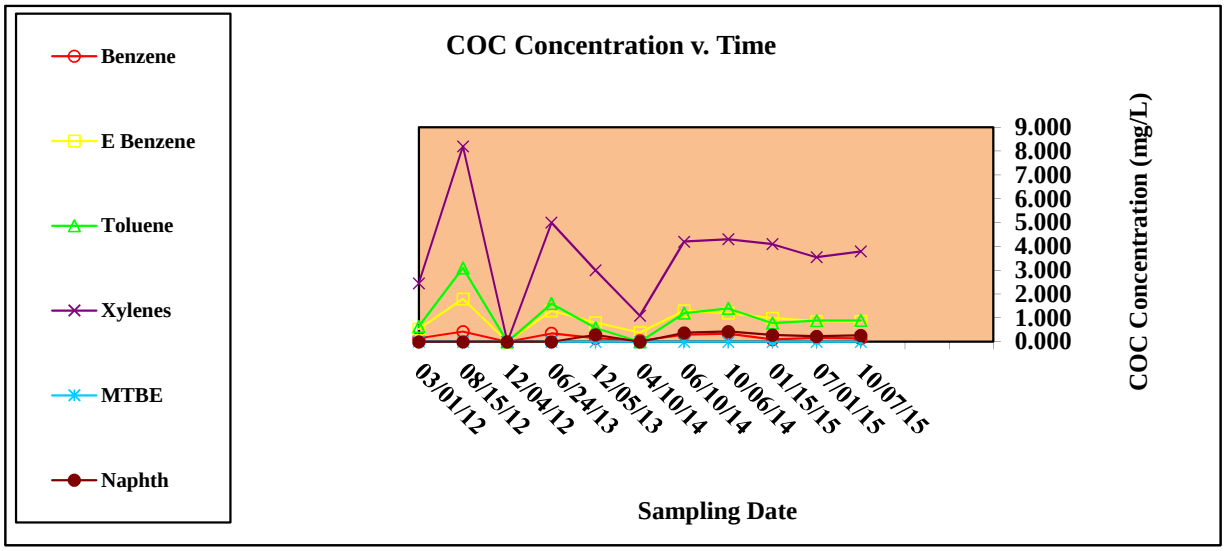
Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 6 - Historical Monitoring Well Chemicals of Concern Data (mg/L)

Well ID MW-11

	Historical Chemicals of Concern Data									
Date	**Benzene**	**E Benzene**	**Toluene**	**Xylenes**	**MTBE**	**Naphth**	**T. PAHs**	**Lead**		
03/01/12	0.150	0.530	0.640	2.450	0.006	-	-	-		
08/15/12	0.430	1.800	3.100	8.200	<0.050	-	-	-		
12/04/12	-	-	-	-	-	-				
06/24/13	0.350	1.300	1.600	5.000	<0.050	-				
12/05/13	0.14	0.80	0.58	3.0	<0.025	0.29				
04/10/14	0.045	0.39	<0.12	1.1	<0.025	<0.12				
06/10/14	0.30	1.3	1.2	4.2	<0.025	0.37				
10/06/14	0.34	1.2	1.4	4.3	<0.010	0.43				
01/15/15	0.092	0.99	0.78	4.1	<0.010	0.28				
7/1/2015	0.162	0.858	0.887	3.55	<0.005	0.222				
10/7/2015	0.128	0.849	0.888	3.79	<0.001	0.262				

Well ID MW-11



NATURAL ATTENUATION MONITORING REPORT

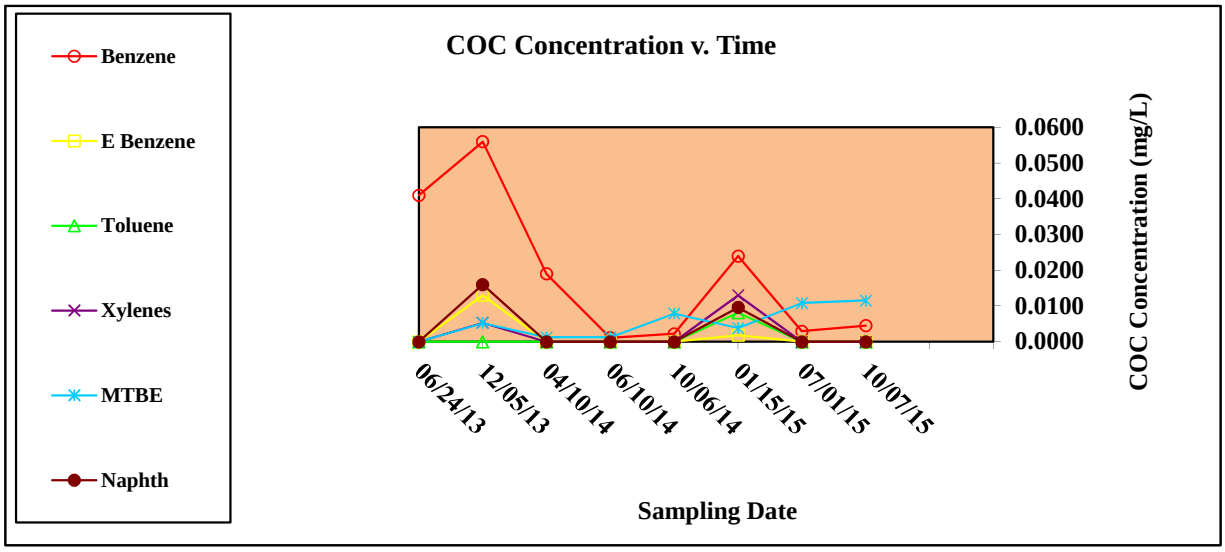
Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 6 - Historical Monitoring Well Chemicals of Concern Data (mg/L)

Well ID MW-12

	Historical Chemicals of Concern Data									
Date	**Benzene**	**E Benzene**	**Toluene**	**Xylenes**	**MTBE**	**Naphth**	**T. PAHs**	**Lead**		
06/24/13	0.041	<0.010	<0.0050	<0.0030	<0.0010	-	-	-		
12/05/13	0.056	0.013	<0.0050	0.0053	0.0052	0.016	-	-		
04/10/14	0.019	<0.0010	<0.0050	<0.0030	0.0012	<0.0050				
06/10/14	0.0011	<0.0010	<0.0050	<0.0030	0.0012	<0.0050				
10/06/14	0.0022	<0.0010	<0.0050	<0.0030	0.0079	<0.0050				
1/15/2015	0.024	0.0018	0.0081	0.013	0.0038	0.0096				
7/1/2015	0.0029	<0.001	<0.001	<0.001	0.0108	<0.001				
10/7/2015	0.0045	<0.001	<0.001	<0.001	0.0115	<0.005				

Well ID MW-12



NATURAL ATTENUATION MONITORING REPORT

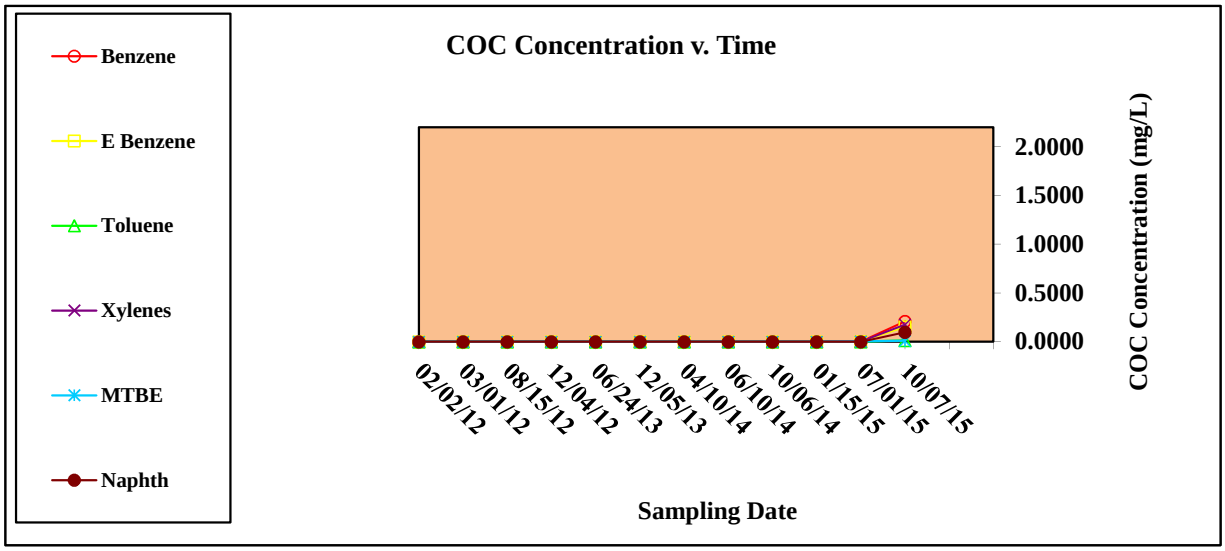
Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 6 - Historical Monitoring Well Chemicals of Concern Data (mg/L)

Well ID MW-13

	Historical Chemicals of Concern Data									
Date	**Benzene**	**E Benzene**	**Toluene**	**Xylenes**	**MTBE**	**Naphth**	**T. PAHs**	**Lead**		
02/02/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0050	-				
03/01/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0050	-				
08/15/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0050	-				
12/04/12	<0.0010	<0.0010	<0.0010	<0.0020	<0.0050	-				
06/24/13	<0.0010	<0.0010	<0.0050	<0.0030	<0.0010	-				
12/05/13	<0.0010	<0.0010	<0.0050	<0.0030	<0.0010	<0.0050				
04/10/14	<0.0010	<0.0010	<0.0050	<0.0030	<0.0010	<0.0050				
06/10/14	<0.0010	<0.0010	<0.0050	<0.0030	<0.0010	<0.0050				
10/06/14	<0.0010	<0.0010	<0.0050	<0.0030	<0.0010	<0.0050				
1/15/2015	<0.0010	<0.0010	<0.0050	<0.0030	<0.0010	<0.0050				
7/1/2015	0.0019	0.0017	<0.001	0.0027	0.0027	<0.001				
10/7/2015	0.21	0.153	0.0126	0.176	0.0099	0.0983				

Well ID MW-13



NATURAL ATTENUATION MONITORING REPORT

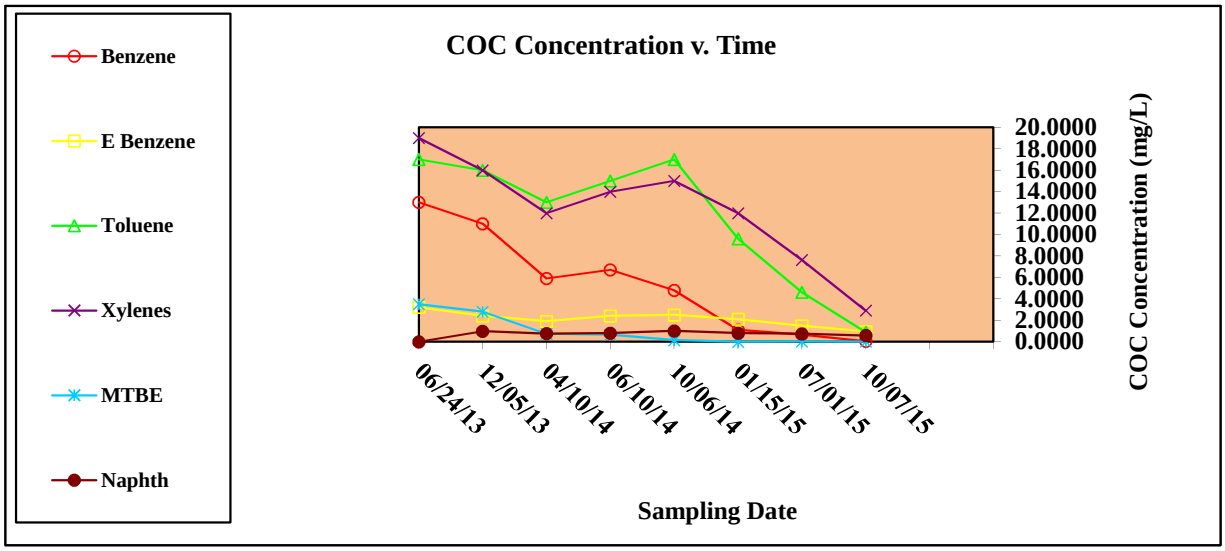
Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 6 - Historical Monitoring Well Chemicals of Concern Data (mg/L)

Well ID RW-1

	Historical Chemicals of Concern Data									
Date	**Benzene**	**E Benzene**	**Toluene**	**Xylenes**	**MTBE**	**Naphth**	**T. PAHs**	**Lead**		
06/24/13	13.000	3.200	17.000	19.000	3.500	-	-	-		
12/05/13	11	2.4	16	16	2.8	0.98	-	-		
04/10/14	5.9	1.9	13	12	0.74	0.75				
06/10/14	6.7	2.4	15	14	0.64	0.80				
10/06/14	4.8	2.5	17	15	0.13	1.0				
01/15/15	1.1	2.1	9.6	12	<0.10	0.79				
07/01/15	0.665	1.49	4.61	7.64	0.0225	0.731				
10/07/15	0.0371	0.945	0.891	2.9	0.0051	0.575				

Well ID RW-1



NATURAL ATTENUATION MONITORING REPORT

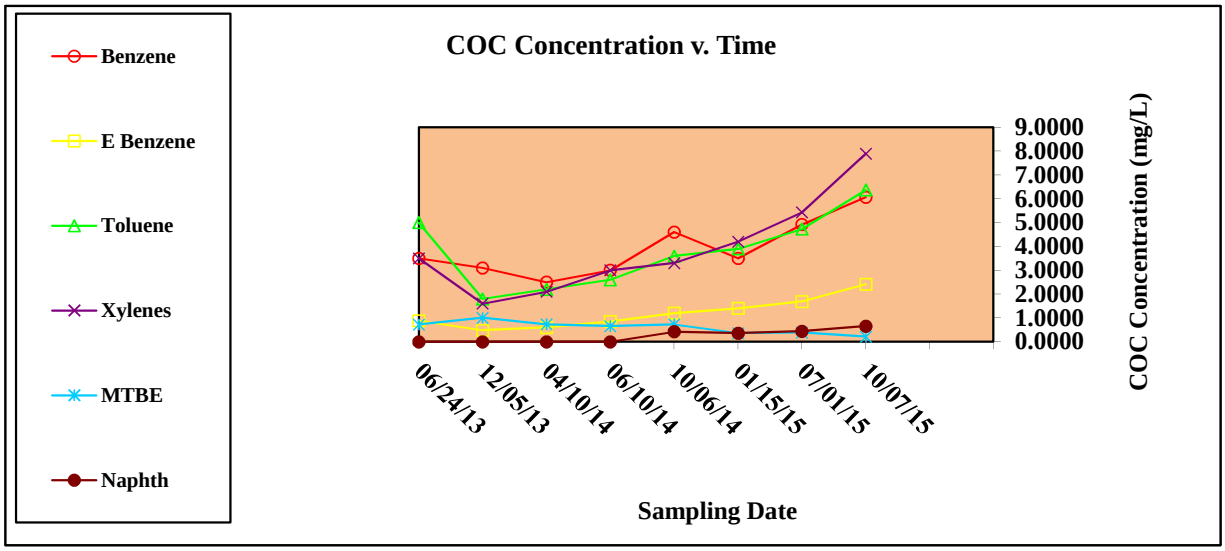
Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 6 - Historical Monitoring Well Chemicals of Concern Data (mg/L)

Well ID RW-2

	Historical Chemicals of Concern Data									
Date	**Benzene**	**E Benzene**	**Toluene**	**Xylenes**	**MTBE**	**Naphth**	**T. PAHs**	**Lead**		
06/24/13	3.500	0.880	5.000	3.500	0.720	-	-	-		
12/05/13	3.1	0.48	1.8	1.6	1.0	<0.25	-	-		
04/10/14	2.5	0.60	2.2	2.1	0.73	<0.25				
06/10/14	3.0	0.85	2.6	3.0	0.65	<0.25				
10/06/14	4.6	1.2	3.6	3.3	0.73	0.42				
01/15/15	3.5	1.4	3.9	4.2	0.36	0.36				
07/01/15	4.92	1.69	4.73	5.43	0.39	0.438				
10/07/15	6.07	2.41	6.37	7.89	0.210	0.656				

Well ID RW-2



NATURAL ATTENUATION MONITORING REPORT

Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 7 - Historical Well Intrinsic Data

MW-ID	DATE	Temp. (°C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
MW-1	12/12/11	25.17	0.676	6.4	6.38	NM
	02/02/12	23.71	597	2.93	-	604
	03/1/12*	-	-	-	-	-
	08/15/12	26.33	1.065	2.68	5.11	4.52
	12/04/12	25.57	0.710	0.80	6.41	-156.1
	06/24/13	23.12	0.682	0.58	6.26	-120.2
	12/05/13	25.03	0.75	1.29	6.20	-89.7
	04/10/14	21.03	0.648	2.94	5.77	-50.1
	06/10/14	23.20	0.515	1.63	7.10	133.6
	10/06/14	26.30	0.729	0.15	6.62	-66.4
	01/14/15	21.65	0.771	0.70	6.84	-108.2
	07/01/15	24.16	0.729	0.72	6.57	-102.8
	10/07/15	**25.75**	**0.718**	**0.08**	**7.52**	**-114.5**
MW-2	12/12/11	Not Measured - Free Product				
	02/02/12	Not Measured - Free Product				
	03/01/12	Not Measured - Free Product				
	08/15/12	Not Measured - Free Product				
	12/04/12	Not Measured - Free Product				
	06/24/13	Not Measured - Free Product				
	12/05/13	Not Measured - Free Product				
	04/10/14	20.20	0.223	2.45	5.41	28.8
	06/10/14	22.39	0.222	1.06	6.59	174.1
	10/06/14	26.79	0.334	0.19	6.12	-15.8
	01/14/15	21.26	0.488	1.13	6.32	-41.9
	07/01/15	25.03	0.467	0.83	6.20	-59.6
	10/07/15	**21.69**	**0.429**	**0.10**	**6.48**	**-97.8**
MW-3	12/12/11	Not Measured - Free Product				
	02/02/12	Not Measured - Free Product				
	03/01/12	Not Measured - Free Product				
	08/15/12	Not Measured - Free Product				
	12/04/12	Not Measured - Free Product				
	06/24/13	Not Measured - Free Product				
	12/05/13	Not Measured - Free Product				
	04/10/14	Not Measured - Free Product				
	06/10/14	Not Measured - Free Product				
	10/06/14	Not Measured - Free Product				
	01/14/15	Not Measured - Free Product				
	07/01/15	23.90	0.255	NM	6.13	-38.2
	10/07/15	**24.90**	**0.308**	**0.18**	**6.42**	**-92.2**
MW-4	12/12/11	Not Measured - Free Product				
	02/02/12	Not Measured - Free Product				
	03/01/12	Not Measured - Free Product				
	08/15/12	Not Measured - Free Product				
	12/04/12	Not Measured - Free Product				
	06/24/13	Not Measured - Free Product				
	12/05/13	Not Measured - Free Product				
	04/10/14	18.09	0.143	1.60	5.26	94.1
	06/10/14	Not Measured - Free Product				
	10/06/14	25.77	0.261	1.45	5.91	24.8
	01/14/15	18.62	0.239	0.93	6.18	-35.0
	07/01/15	21.34	0.104	0.76	5.91	57.8
	10/07/15	**25.64**	**0.115**	**0.15**	**6.23**	**17.7**

NATURAL ATTENUATION MONITORING REPORT

Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 7 - Historical Well Intrinsic Data

MW-ID	DATE	Temp. (°C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
MW-5	12/12/11	23.26	0.09	7.25	4.46	NM
	02/02/12	22.86	117	1.38	4.59	116
	03/01/12	21.88	0.107	1.37	4.97	297.1
	08/15/12	23.71	0.095	3.60	5.05	212
	12/04/12	24.34	0.079	1.21	4.58	273.2
	06/24/13	Not Measured - Free Product				
	12/05/13	Not Measured - Free Product				
	04/10/14	19.55	0.059	1.20	5.48	153.2
	06/10/14	21.25	0.042	0.87	5.52	260.2
	10/06/14	24.31	0.049	0.34	4.37	285.3
	01/14/15	Not Measured - Free Product				
	07/01/15	21.89	0.048	NM	4.60	198.2
	10/07/15	**24.69**	**0.050**	**0.13**	**4.86**	**184.4**
MW-6	12/12/11	21.85	0.041	7.98	4.77	NM
	02/02/12	21.80	62	1.27	4.30	135
	03/01/12	20.93	0.048	1.16	4.86	284.2
	08/15/12	22.36	0.107	2.45	4.42	207.5
	12/04/12	22.97	0.057	1.81	5.01	171
	06/24/13	20.71	0.078	1.16	5.34	68.9
	12/05/13	22.68	0.050	0.96	3.87	190.7
	04/10/14	19.13	0.069	1.04	7.54	101.2
	06/10/14	19.94	0.074	1.68	5.44	264.7
	10/06/14	23.80	0.085	0.34	4.64	136.8
	01/14/15	19.11	0.133	1.79	5.11	184.1
	07/01/15	21.39	0.059	1.46	4.90	198.9
	10/07/15	**23.49**	**0.074**	**0.38**	**5.07**	**171.6**
MW-7	12/12/11	25.11	0.028	7.05	4.22	NM
	02/02/12	23.13	34	0.75	5.26	49.6
	03/01/12	21.97	0.030	3.14	4.83	283.5
	08/15/12	25.68	0.095	5.49	4.97	302
	12/04/12	26.38	0.042	0.95	4.79	162
	06/24/13	Not Measured - Free Product				
	12/05/13	25.01	0.051	6.49	5.04	98.3
	04/10/14	19.72	0.054	1.94	9.50	69.1
	06/10/14	22.23	0.045	0.44	6.12	239.6
	10/06/14	27.18	0.059	0.26	4.61	58.4
	01/14/15	20.66	0.105	0.61	5.04	105.3
	07/01/15	21.73	0.071	1.05	4.70	44.6
	10/07/15	**27.41**	**0.071**	**0.33**	**5.19**	**-26**
MW-8D	02/02/12	22.39	-	6.90	-	46.5
	03/01/12	20.86	1.574	7.80	11.70	4.2
	08/15/12	24.02	0.452	2.29	5.09	147.6
	12/04/12	23.54	0.418	1.24	6.57	119.9
	06/24/13	21.01	0.202	2.74	6.44	15.2
	12/05/13	22.78	0.159	1.86	4.22	189.8
	04/10/14	18.30	0.179	1.32	5.26	110.8
	06/10/14	20.29	0.084	2.93	5.90	247.1
	10/06/14	23.94	0.094	3.23	5.29	143.5
	01/14/15	18.71	0.113	0.78	5.49	151.4
	07/01/15	21.31	0.073	0.68	5.30	83.5
	10/07/15	**21.49**	**0.070**	**0.49**	**5.54**	**72.9**

NATURAL ATTENUATION MONITORING REPORT

Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 7 - Historical Well Intrinsic Data

MW-ID	DATE	Temp. (°C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
MW-9	02/02/12	22.25	108	5.40	-	904
	03/01/12*	-	-	-	-	-
	08/15/12	22.78	0.099	4.01	4.60	251.2
	12/04/12	23.67	0.045	0.57	4.69	129.9
	06/24/13	21.43	0.049	0.80	6.44	127.5
	12/05/13	22.89	0.082	2.90	4.52	117.7
	04/10/14	19.39	0.058	1.05	5.42	104.7
	06/10/14	20.27	0.044	1.67	5.56	255.1
	06/10/14	20.27	0.044	1.67	5.56	255.1
	10/06/14	22.94	0.109	0.40	5.54	4.8
	01/14/15	21.15	0.113	0.69	5.33	144.6
	07/01/15	21.71	0.097	0.70	5.22	15.1
	10/07/15	**22.59**	**0.104**	**0.11**	**5.43**	**-5.9**
MW-10	02/02/12	23.33	62	5.97	-	875
	03/01/12	21.05	0.068	4.41	4.97	333.8
	08/15/12	26.69	0.226	7.45	4.29	240.2
	12/04/12	25.31	0.065	4.05	4.62	212.7
	06/24/13	24.13	0.070	2.90	4.58	269.1
	12/05/13	24.74	0.067	4.63	4.55	193.8
	04/10/14	20.41	0.077	1.56	5.54	177.8
	06/10/14	23.02	0.061	2.23	4.93	304.9
	10/06/14	27.25	0.076	3.28	4.46	308.5
	01/14/15	20.53	0.094	3.80	4.78	263.6
	07/01/15	25.68	0.086	2.64	4.32	169.3
	10/07/15	**27.18**	**0.089**	**0.07**	**NC**	**183.1**
MW-11	03/01/12	21.66	0.232	3.06	6.75	2.9
	08/15/12	25.16	0.281	3.34	4.59	146.2
	12/04/12	-	-	-	-	-
	06/24/13	23.07	0.204	0.63	5.76	-53.6
	12/05/13	23.95	0.252	1.06	5.79	-43.8
	04/10/14	19.75	0.199	0.47	5.89	-34.9
	06/10/14	21.09	0.147	1.51	5.90	14.3
	10/06/14	25.01	0.230	0.27	5.89	-46.8
	01/14/15	21.30	0.234	0.93	6.19	-28.7
	07/01/15	23.39	0.167	0.90	5.76	-47.8
	10/07/15	**25.99**	**0.189**	**0.31**	**7.67**	**5.3**
MW-12	06/24/13	22.93	0.379	0.26	6.17	-61.8
	12/05/13	24.45	0.315	0.45	6.11	-78.1
	04/10/14	19.89	0.268	1.16	5.97	-20.6
	06/10/14	21.02	0.215	2.01	5.75	76.2
	10/06/14	24.90	0.276	0.14	6.05	13.6
	01/14/15	21.21	0.248	0.75	6.07	-44.1
	07/01/15	23.06	0.283	0.88	6.17	-56.3
	10/07/15	**26.10**	**0.254**	**0.18**	**7.74**	**-2.3**

NATURAL ATTENUATION MONITORING REPORT

Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 7 - Historical Well Intrinsic Data

MW-ID	DATE	Temp. (◦C)	Conductivity (mS/cm)	DO (mg/L)	pH	ORP (mV)
MW-13	02/02/12	23.54	89	7.69	-	794
	03/01/12	22.30	0.064	5.02	6.81	322
	08/15/12	24.45	0.213	1.42	5.37	203.2
	12/04/12	24.70	0.058	3.64	4.77	205.6
	06/24/13	22.33	0.061	3.71	5.21	150.8
	12/05/13	24.04	0.074	4.42	5.39	41.7
	04/10/14	21.47	0.066	2.61	6.42	120.4
	06/10/14	21.67	0.047	2.11	5.82	259.2
	10/06/14	21.85	0.057	4.52	4.83	211.6
	01/14/15	22.24	0.099	4.11	5.08	186.5
	07/01/15	22.91	0.063	1.34	4.79	242.2
	10/07/15	**25.33**	**0.066**	**0.57**	**7.20**	**85.3**
RW-1	06/24/13	22.59	0.222	1.22	6.09	19.0
	12/05/13	25.45	0.208	2.43	6.29	-47.5
	04/10/14	20.36	0.129	0.93	5.22	39.6
	06/10/14	22.13	0.116	0.87	6.22	152.5
	10/06/14	28.48	0.133	0.32	5.11	64.1
	01/14/15	21.41	0.186	0.62	5.94	-0.3
	07/01/15	23.49	0.144	1.02	6.18	-101.4
	10/07/15	**28.23**	**0.154**	**0.11**	**NC**	**-203.8**
RW-2	06/24/13	22.80	0.248	0.63	6.13	-57.2
	12/05/13	24.32	0.248	1.59	5.64	-31.4
	04/10/14	20.23	0.176	0.53	4.93	14.8
	06/10/14	21.77	0.104	0.93	6.05	126.1
	10/06/14	25.10	0.294	0.18	6.08	-46.0
	01/14/15	21.52	0.295	0.68	6.33	-91.3
	07/01/15	23.45	0.320	0.68	6.20	-61.6
	10/07/15	**25.44**	**0.346**	**0.44**	**6.40**	**-121.2**

Notes:

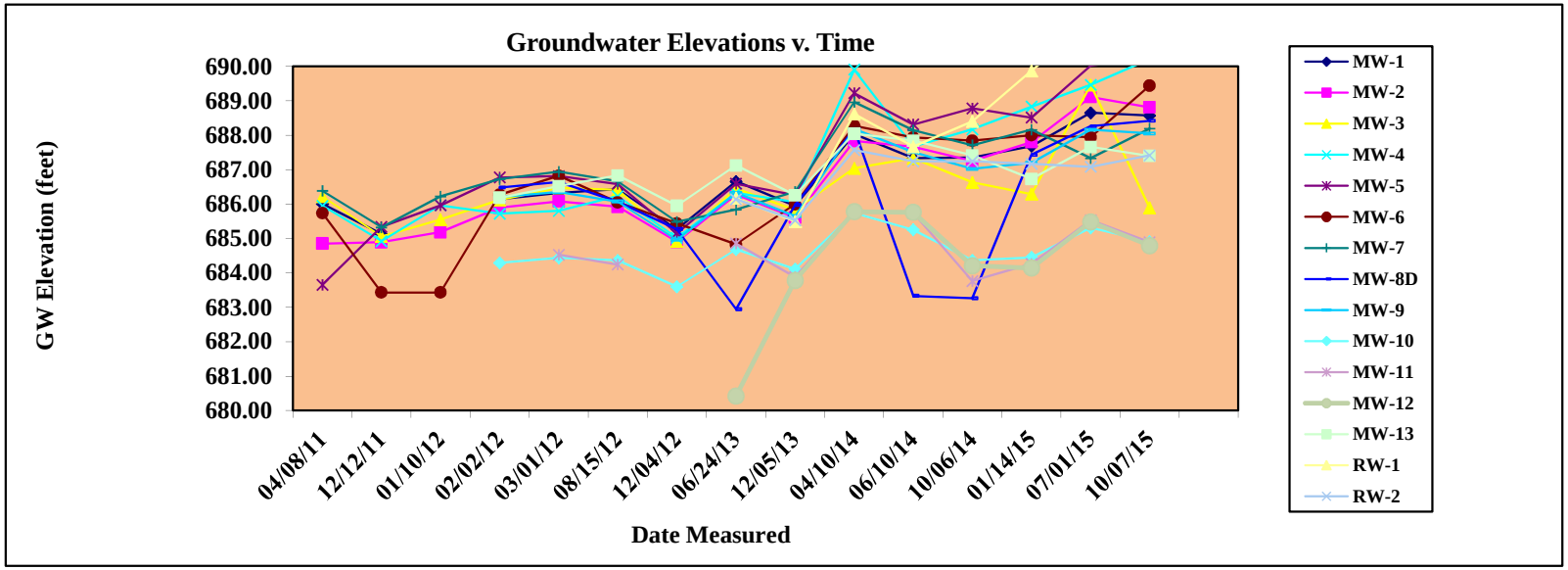
◦C degree Centigrade
mS/cm milliSiemen per centimeter
mg/L milligram per liter
mV millivolt
***Bold** Most Recent Event*
NC Not Collected - Instrument Malfunction

NATURAL ATTENUATION MONITORING REPORT

Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 8 - Groundwater Elevation Data

DATE	Well ID/Corrected Groundwater Elevation (feet)														
Date	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8D	MW-9	MW-10	MW-11	MW-12	MW-13	RW-1	RW-2
04/08/11	686.00	684.85	686.22	685.95	683.65	685.74	686.38								
12/12/11	685.13	684.89	685.06	684.92	685.34	683.43	685.32								
01/10/12		685.18	685.55	685.96	685.96	683.43	686.22								
02/02/12	686.14	685.89	686.12	685.72	686.77	686.27	686.72	686.48	686.20	684.29			686.18		
03/01/12	686.32	686.08	686.47	685.80	686.81	686.82	686.94	686.64	686.35	684.44	684.53		686.52		
08/15/12	686.43	685.92	686.41	686.23	686.58	686.05	686.66	686.07	686.07	684.36	684.24		686.83		
12/04/12	685.27	684.90	684.92	685.02	685.15	685.44	685.48	685.27	684.96	683.60			685.95		
06/24/13	686.66	686.28	686.45	686.32	686.59	684.83	685.84	682.94	686.32	684.68	684.85	680.42	687.12	686.17	686.14
12/05/13	685.95	685.61	685.82	686.06	686.26	685.99	686.36	685.97	685.65	684.11	683.88	683.78	686.26	685.49	685.53
04/10/14	688.03	687.83	687.04	689.90	689.22	688.27	688.96	688.18	688.18	685.74	685.78	685.78	688.04	688.62	687.57
06/10/14	687.33	687.66	687.33	687.67	688.31	687.93	688.14	683.33	687.51	685.25	685.74	685.76	687.84	687.67	687.24
10/06/14	687.35	687.25	686.63	688.17	688.78	687.84	687.71	683.26	687.02	684.36	683.76	684.21	687.41	688.4	687.24
01/14/15	687.68	687.80	686.29	688.83	688.51	688.00	688.16	687.43	687.20	684.45	684.26	684.14	686.73	689.87	687.17
07/01/15	688.65	689.11	689.46	689.46	690.02	687.94	687.33	688.26	688.16	685.31	685.53	685.48	687.66	691.29	687.08
10/07/15	688.57	688.81	685.89	690.21	690.26	689.44	688.19	688.42	688.05	684.91	684.89	684.79	687.40	693.72	687.41



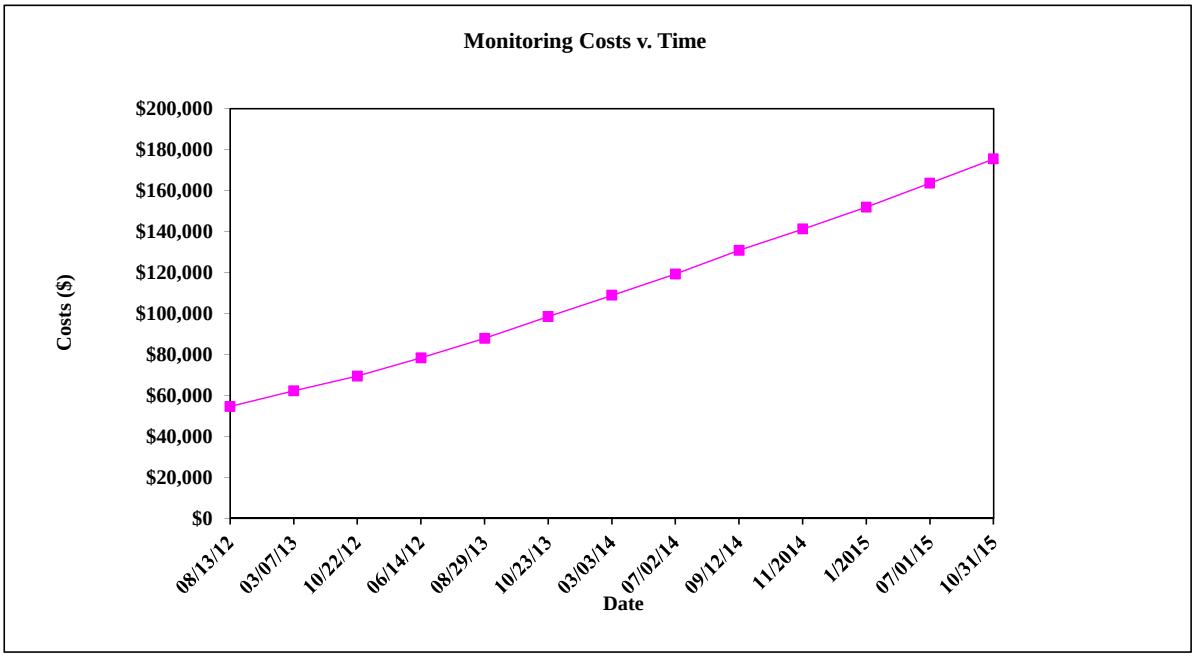
NATURAL ATTENUATION MONITORING REPORT

Facility Name:	Circle K Store 6682	Year:	2015
Facility I. D. No.:	22502-081-011783	Quarter:	Fourth
Incident No.:	UST 11-01-02	Reporting Period:	8/1/14 - 10/31/15
Consulting Firm:	ECS, Inc.	Project Manager:	Paul Naman

Section 9 - Monitoring Costs v. Time

Date	08/13/12	03/07/13	10/22/12	06/14/12	08/29/13	10/23/13	03/03/14	07/02/14	09/12/14	11/2014	1/2015
Cost Proposal	CP1-CP4	CP5	CP6	CP7	CP8	CP9	CP10	CP11	CP14	CP15	CP16
O & M	$54,637	$7,693	$7,173	$8,911	$9,460	$10,636	$10,411	$10,357	$11,607	$10,399	$10,651
Cumulative	$54,637	$62,330	$69,503	$78,414	$87,874	$98,510	$108,921	$119,278	$130,885	$141,284	$151,935

Date	07/01/15	10/31/15									
Cost Proposal	CP17	CP-18									
O & M	$11,788	$11,788									
Cumulative	$163,723	$175,511									



APPENDIX D

Laboratory Analytical Report and Chain of Custody Form(s)

Lafayette
ACCUTEST LABORATORIES

10/20/15

Technical Report for

Environmental Compliance Services, Inc.

Circle K #2706682 171 East Glenn Avenue, Auburn, AL

30-223216.00

Accutest Job Number: LA12553

Sampling Date: 10/07/15

Report to:

Pangean-CMD Associates, Inc.
9874 Main Street Suite 100
Woodstock, GA 30188
pnaman@pangean-cmd.com

ATTN: Paul Naman

Total number of pages in report: **52**

NELAP ACCREDITED TNI LABORATORY

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Ron Benjamin
Lab Director

Client Service contact: Ralph Frye 337-237-4775

Certifications: LDEQ(2048), LDHH(LA150012), AR(14-045-04), FL(E87657), KY(#31), NC(487), SC(73004001), TX(T104704186-15-7), WV(257)

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Test results relate only to samples analyzed.

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Sample Summary

Environmental Compliance Services, Inc.

Job No: LA12553

Circle K #2706682 171 East Glenn Avenue, Auburn, AL
Project No: 30-223216.00

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
LA12553-1	10/07/15	14:00	AY	10/09/15	AQ	Water	MW-1
LA12553-2	10/07/15	13:25	AY	10/09/15	AQ	Water	MW-2
LA12553-3	10/07/15	12:05	AY	10/09/15	AQ	Water	MW-3
LA12553-4	10/07/15	10:55	AY	10/09/15	AQ	Water	MW-4
LA12553-5	10/07/15	09:45	AY	10/09/15	AQ	Water	MW-5
LA12553-6	10/07/15	09:10	AY	10/09/15	AQ	Water	MW-6
LA12553-7	10/07/15	11:30	AY	10/09/15	AQ	Water	MW-7
LA12553-8	10/07/15	10:20	AY	10/09/15	AQ	Water	MW-8D
LA12553-9	10/07/15	08:35	AY	10/09/15	AQ	Water	MW-9
LA12553-10	10/07/15	17:30	AY	10/09/15	AQ	Water	MW-10
LA12553-11	10/07/15	15:15	AY	10/09/15	AQ	Water	MW-11
LA12553-12	10/07/15	15:50	AY	10/09/15	AQ	Water	MW-12
LA12553-13	10/07/15	14:40	AY	10/09/15	AQ	Water	MW-13

Sample Summary
(continued)

Environmental Compliance Services, Inc.

Job No: LA12553

Circle K #2706682 171 East Glenn Avenue, Auburn, AL
Project No: 30-223216.00

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
LA12553-14	10/07/15	16:45	AY	10/09/15	AQ	Water	RW-1
LA12553-15	10/07/15	12:50	AY	10/09/15	AQ	Water	RW-2

Summary of Hits

Job Number: LA12553
Account: Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL
Collected: 10/07/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
LA12553-1	**MW-1**					
Benzene		10.7	0.10		mg/l	SW846 8260B
Toluene		26.4	0.10		mg/l	SW846 8260B
Ethylbenzene		2.46	0.10		mg/l	SW846 8260B
Xylene (total)		14.7	0.20		mg/l	SW846 8260B
Methyl Tert Butyl Ether		0.741	0.10		mg/l	SW846 8260B
Naphthalene		0.853	0.50		mg/l	SW846 8260B
LA12553-2	**MW-2**					
Benzene		15.5	0.10		mg/l	SW846 8260B
Toluene		35.1	0.10		mg/l	SW846 8260B
Ethylbenzene		2.52	0.10		mg/l	SW846 8260B
Xylene (total)		14.1	0.20		mg/l	SW846 8260B
Methyl Tert Butyl Ether		0.275	0.10		mg/l	SW846 8260B
Naphthalene		0.874	0.50		mg/l	SW846 8260B
LA12553-3	**MW-3**					
Benzene		5.36	0.020		mg/l	SW846 8260B
Toluene		5.70	0.020		mg/l	SW846 8260B
Ethylbenzene		2.82	0.020		mg/l	SW846 8260B
Xylene (total)		10.2	0.040		mg/l	SW846 8260B
Methyl Tert Butyl Ether		0.0239	0.020		mg/l	SW846 8260B
Naphthalene		1.78	0.10		mg/l	SW846 8260B
LA12553-4	**MW-4**					
Benzene		0.431	0.010		mg/l	SW846 8260B
Toluene		2.95	0.010		mg/l	SW846 8260B
Ethylbenzene		1.03	0.010		mg/l	SW846 8260B
Xylene (total)		5.99	0.020		mg/l	SW846 8260B
Methyl Tert Butyl Ether		0.0218	0.010		mg/l	SW846 8260B
Naphthalene		0.456	0.050		mg/l	SW846 8260B
LA12553-5	**MW-5**					
Benzene		0.574	0.010		mg/l	SW846 8260B
Toluene		1.87	0.010		mg/l	SW846 8260B
Ethylbenzene		0.448	0.010		mg/l	SW846 8260B
Xylene (total)		2.69	0.020		mg/l	SW846 8260B
Methyl Tert Butyl Ether		0.138	0.0010		mg/l	SW846 8260B
Naphthalene		0.233	0.0050		mg/l	SW846 8260B

Summary of Hits

Job Number: LA12553
Account: Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL
Collected: 10/07/15

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
LA12553-6	**MW-6**					
Benzene		0.0191	0.0010		mg/l	SW846 8260B
Toluene		0.238	0.0010		mg/l	SW846 8260B
Ethylbenzene		0.0385	0.0010		mg/l	SW846 8260B
Xylene (total)		0.295	0.0020		mg/l	SW846 8260B
Naphthalene		0.0279	0.0050		mg/l	SW846 8260B
LA12553-7	**MW-7**					
Benzene		0.0845	0.0010		mg/l	SW846 8260B
Toluene		0.482	0.010		mg/l	SW846 8260B
Ethylbenzene		0.477	0.010		mg/l	SW846 8260B
Xylene (total)		2.57	0.020		mg/l	SW846 8260B
Methyl Tert Butyl Ether		0.0051	0.0010		mg/l	SW846 8260B
Naphthalene		0.260	0.0050		mg/l	SW846 8260B
LA12553-8	**MW-8D**					
Benzene		0.0031	0.0010		mg/l	SW846 8260B
Toluene		0.134	0.0010		mg/l	SW846 8260B
Ethylbenzene		0.658	0.010		mg/l	SW846 8260B
Xylene (total)		3.97	0.020		mg/l	SW846 8260B
Naphthalene		0.308	0.0050		mg/l	SW846 8260B
LA12553-9	**MW-9**					
Benzene		0.325	0.0010		mg/l	SW846 8260B
Toluene		2.89	0.020		mg/l	SW846 8260B
Ethylbenzene		2.24	0.020		mg/l	SW846 8260B
Xylene (total)		11.7	0.040		mg/l	SW846 8260B
Naphthalene		0.388	0.0050		mg/l	SW846 8260B
LA12553-10	**MW-10**					
Xylene (total)		0.0023	0.0020		mg/l	SW846 8260B
LA12553-11	**MW-11**					
Benzene		0.128	0.0010		mg/l	SW846 8260B
Toluene		0.888	0.020		mg/l	SW846 8260B
Ethylbenzene		0.849	0.020		mg/l	SW846 8260B
Xylene (total)		3.79	0.040		mg/l	SW846 8260B
Naphthalene		0.262	0.0050		mg/l	SW846 8260B

Summary of Hits

Job Number: LA12553
Account: Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL
Collected: 10/07/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
LA12553-12	**MW-12**					
Benzene		0.0045	0.0010		mg/l	SW846 8260B
Methyl Tert Butyl Ether		0.0115	0.0010		mg/l	SW846 8260B
LA12553-13	**MW-13**					
Benzene		0.210	0.0010		mg/l	SW846 8260B
Toluene		0.0126	0.0010		mg/l	SW846 8260B
Ethylbenzene		0.153	0.0010		mg/l	SW846 8260B
Xylene (total)		0.176	0.0020		mg/l	SW846 8260B
Methyl Tert Butyl Ether		0.0099	0.0010		mg/l	SW846 8260B
Naphthalene		0.0983	0.0050		mg/l	SW846 8260B
LA12553-14	**RW-1**					
Benzene		0.0371	0.0050		mg/l	SW846 8260B
Toluene		0.891	0.0050		mg/l	SW846 8260B
Ethylbenzene		0.945	0.0050		mg/l	SW846 8260B
Xylene (total)		2.90	0.010		mg/l	SW846 8260B
Methyl Tert Butyl Ether		0.0051	0.0050		mg/l	SW846 8260B
Naphthalene		0.575	0.025		mg/l	SW846 8260B
LA12553-15	**RW-2**					
Benzene		6.07	0.020		mg/l	SW846 8260B
Toluene		6.37	0.020		mg/l	SW846 8260B
Ethylbenzene		2.41	0.020		mg/l	SW846 8260B
Xylene (total)		7.89	0.040		mg/l	SW846 8260B
Methyl Tert Butyl Ether		0.210	0.0010		mg/l	SW846 8260B
Naphthalene		0.656	0.10		mg/l	SW846 8260B

Lafayette

ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	LA12553-1	**Date Sampled:**	10/07/15
Matrix:	AQ - Water	**Date Received:**	10/09/15
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Circle K #2706682 171 East Glenn Avenue, Auburn, AL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1Q0018634.D	100	10/15/15	NN	n/a	n/a	V1Q523
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE, Naphthalene

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	10.7	0.10	mg/l	
108-88-3	Toluene	26.4	0.10	mg/l	
100-41-4	Ethylbenzene	2.46	0.10	mg/l	
1330-20-7	Xylene (total)	14.7	0.20	mg/l	
1634-04-4	Methyl Tert Butyl Ether	0.741	0.10	mg/l	
91-20-3	Naphthalene	0.853	0.50	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	105%		84-124%
2037-26-5	Toluene-D8	103%		83-115%
460-00-4	4-Bromofluorobenzene	102%		89-111%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	LA12553-2	**Date Sampled:**	10/07/15
Matrix:	AQ - Water	**Date Received:**	10/09/15
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Circle K #2706682 171 East Glenn Avenue, Auburn, AL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Q0018613.D	100	10/15/15	NN	n/a	n/a	V2Q522
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE, Naphthalene

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	15.5	0.10	mg/l	
108-88-3	Toluene	35.1	0.10	mg/l	
100-41-4	Ethylbenzene	2.52	0.10	mg/l	
1330-20-7	Xylene (total)	14.1	0.20	mg/l	
1634-04-4	Methyl Tert Butyl Ether	0.275	0.10	mg/l	
91-20-3	Naphthalene	0.874	0.50	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	103%		84-124%
2037-26-5	Toluene-D8	102%		83-115%
460-00-4	4-Bromofluorobenzene	100%		89-111%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	LA12553-3	**Date Sampled:**	10/07/15
Matrix:	AQ - Water	**Date Received:**	10/09/15
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Circle K #2706682 171 East Glenn Avenue, Auburn, AL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G027051.D	20	10/16/15	NN	n/a	n/a	V1G847
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE, Naphthalene

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	5.36	0.020	mg/l	
108-88-3	Toluene	5.70	0.020	mg/l	
100-41-4	Ethylbenzene	2.82	0.020	mg/l	
1330-20-7	Xylene (total)	10.2	0.040	mg/l	
1634-04-4	Methyl Tert Butyl Ether	0.0239	0.020	mg/l	
91-20-3	Naphthalene	1.78	0.10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	91%		84-124%
2037-26-5	Toluene-D8	98%		83-115%
460-00-4	4-Bromofluorobenzene	97%		89-111%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-4		
Lab Sample ID:	LA12553-4	**Date Sampled:**	10/07/15
Matrix:	AQ - Water	**Date Received:**	10/09/15
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Circle K #2706682 171 East Glenn Avenue, Auburn, AL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1Q0018550.D	10	10/14/15	NN	n/a	n/a	V1Q519
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE, Naphthalene

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.431	0.010	mg/l	
108-88-3	Toluene	2.95	0.010	mg/l	
100-41-4	Ethylbenzene	1.03	0.010	mg/l	
1330-20-7	Xylene (total)	5.99	0.020	mg/l	
1634-04-4	Methyl Tert Butyl Ether	0.0218	0.010	mg/l	
91-20-3	Naphthalene	0.456	0.050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	103%		84-124%
2037-26-5	Toluene-D8	102%		83-115%
460-00-4	4-Bromofluorobenzene	103%		89-111%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5		
Lab Sample ID:	LA12553-5	**Date Sampled:**	10/07/15
Matrix:	AQ - Water	**Date Received:**	10/09/15
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Circle K #2706682 171 East Glenn Avenue, Auburn, AL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1Q0018481A.D	1	10/14/15	CP	n/a	n/a	V1Q517
Run #2	1Q0018554.D	10	10/14/15	NN	n/a	n/a	V1Q519

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics, MTBE, Naphthalene

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.574 [a]	0.010	mg/l	
108-88-3	Toluene	1.87 [a]	0.010	mg/l	
100-41-4	Ethylbenzene	0.448 [a]	0.010	mg/l	
1330-20-7	Xylene (total)	2.69 [a]	0.020	mg/l	
1634-04-4	Methyl Tert Butyl Ether	0.138	0.0010	mg/l	
91-20-3	Naphthalene	0.233	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%	103%	84-124%
2037-26-5	Toluene-D8	97%	99%	83-115%
460-00-4	4-Bromofluorobenzene	98%	100%	89-111%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	LA12553-6	**Date Sampled:**	10/07/15
Matrix:	AQ - Water	**Date Received:**	10/09/15
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Circle K #2706682 171 East Glenn Avenue, Auburn, AL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G027049.D	1	10/16/15	NN	n/a	n/a	V1G847
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE, Naphthalene

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.0191	0.0010	mg/l	
108-88-3	Toluene	0.238	0.0010	mg/l	
100-41-4	Ethylbenzene	0.0385	0.0010	mg/l	
1330-20-7	Xylene (total)	0.295	0.0020	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	mg/l	
91-20-3	Naphthalene	0.0279	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	92%		84-124%
2037-26-5	Toluene-D8	101%		83-115%
460-00-4	4-Bromofluorobenzene	99%		89-111%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-7		
Lab Sample ID:	LA12553-7	**Date Sampled:**	10/07/15
Matrix:	AQ - Water	**Date Received:**	10/09/15
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Circle K #2706682 171 East Glenn Avenue, Auburn, AL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1Q0018477A.D	1	10/14/15	CP	n/a	n/a	V1Q517
Run #2	1Q0018594.D	10	10/15/15	NN	n/a	n/a	V1Q522

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics, MTBE, Naphthalene

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.0845	0.0010	mg/l	
108-88-3	Toluene	0.482 [a]	0.010	mg/l	
100-41-4	Ethylbenzene	0.477 [a]	0.010	mg/l	
1330-20-7	Xylene (total)	2.57 [a]	0.020	mg/l	
1634-04-4	Methyl Tert Butyl Ether	0.0051	0.0010	mg/l	
91-20-3	Naphthalene	0.260	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	99%	104%	84-124%
2037-26-5	Toluene-D8	99%	102%	83-115%
460-00-4	4-Bromofluorobenzene	100%	101%	89-111%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-8D		
Lab Sample ID:	LA12553-8	**Date Sampled:**	10/07/15
Matrix:	AQ - Water	**Date Received:**	10/09/15
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Circle K #2706682 171 East Glenn Avenue, Auburn, AL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1Q0018640.D	1	10/15/15	NN	n/a	n/a	V1Q523
Run #2	1Q0018638.D	10	10/15/15	NN	n/a	n/a	V1Q523

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics, MTBE, Naphthalene

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.0031	0.0010	mg/l	
108-88-3	Toluene	0.134	0.0010	mg/l	
100-41-4	Ethylbenzene	0.658 [a]	0.010	mg/l	
1330-20-7	Xylene (total)	3.97 [a]	0.020	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	mg/l	
91-20-3	Naphthalene	0.308	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	110%	105%	84-124%
2037-26-5	Toluene-D8	102%	103%	83-115%
460-00-4	4-Bromofluorobenzene	102%	102%	89-111%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-9		
Lab Sample ID:	LA12553-9	**Date Sampled:**	10/07/15
Matrix:	AQ - Water	**Date Received:**	10/09/15
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Circle K #2706682 171 East Glenn Avenue, Auburn, AL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1Q0018473A.D	1	10/14/15	CP	n/a	n/a	V1Q517
Run #2	1Q0018598.D	20	10/15/15	NN	n/a	n/a	V1Q522

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics, MTBE, Naphthalene

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.325	0.0010	mg/l	
108-88-3	Toluene	2.89 [a]	0.020	mg/l	
100-41-4	Ethylbenzene	2.24 [a]	0.020	mg/l	
1330-20-7	Xylene (total)	11.7 [a]	0.040	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	mg/l	
91-20-3	Naphthalene	0.388	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	102%	104%	84-124%
2037-26-5	Toluene-D8	99%	101%	83-115%
460-00-4	4-Bromofluorobenzene	102%	101%	89-111%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-10		
Lab Sample ID:	LA12553-10	**Date Sampled:**	10/07/15
Matrix:	AQ - Water	**Date Received:**	10/09/15
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Circle K #2706682 171 East Glenn Avenue, Auburn, AL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G027045.D	1	10/16/15	NN	n/a	n/a	V1G847
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE, Naphthalene

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	0.0010	mg/l	
108-88-3	Toluene	ND	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	mg/l	
1330-20-7	Xylene (total)	0.0023	0.0020	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	mg/l	
91-20-3	Naphthalene	ND	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	92%		84-124%
2037-26-5	Toluene-D8	100%		83-115%
460-00-4	4-Bromofluorobenzene	96%		89-111%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-11		
Lab Sample ID:	LA12553-11	**Date Sampled:**	10/07/15
Matrix:	AQ - Water	**Date Received:**	10/09/15
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Circle K #2706682 171 East Glenn Avenue, Auburn, AL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G026684.D	1	10/12/15	CP	n/a	n/a	V2G830
Run #2	1Q0018552.D	20	10/14/15	NN	n/a	n/a	V1Q519

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics, MTBE, Naphthalene

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.128	0.0010	mg/l	
108-88-3	Toluene	0.888 [a]	0.020	mg/l	
100-41-4	Ethylbenzene	0.849 [a]	0.020	mg/l	
1330-20-7	Xylene (total)	3.79 [a]	0.040	mg/l	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0010	mg/l	
91-20-3	Naphthalene	0.262	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	101%	102%	84-124%
2037-26-5	Toluene-D8	96%	101%	83-115%
460-00-4	4-Bromofluorobenzene	100%	100%	89-111%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	LA12553-12	**Date Sampled:**	10/07/15
Matrix:	AQ - Water	**Date Received:**	10/09/15
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Circle K #2706682 171 East Glenn Avenue, Auburn, AL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2G026682.D	1	10/12/15	CP	n/a	n/a	V2G830
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE, Naphthalene

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.0045	0.0010	mg/l	
108-88-3	Toluene	ND	0.0010	mg/l	
100-41-4	Ethylbenzene	ND	0.0010	mg/l	
1330-20-7	Xylene (total)	ND	0.0020	mg/l	
1634-04-4	Methyl Tert Butyl Ether	0.0115	0.0010	mg/l	
91-20-3	Naphthalene	ND	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	93%		84-124%
2037-26-5	Toluene-D8	96%		83-115%
460-00-4	4-Bromofluorobenzene	99%		89-111%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-13		
Lab Sample ID:	LA12553-13	**Date Sampled:**	10/07/15
Matrix:	AQ - Water	**Date Received:**	10/09/15
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Circle K #2706682 171 East Glenn Avenue, Auburn, AL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1G027047.D	1	10/16/15	NN	n/a	n/a	V1G847
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE, Naphthalene

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.210	0.0010	mg/l	
108-88-3	Toluene	0.0126	0.0010	mg/l	
100-41-4	Ethylbenzene	0.153	0.0010	mg/l	
1330-20-7	Xylene (total)	0.176	0.0020	mg/l	
1634-04-4	Methyl Tert Butyl Ether	0.0099	0.0010	mg/l	
91-20-3	Naphthalene	0.0983	0.0050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	92%		84-124%
2037-26-5	Toluene-D8	101%		83-115%
460-00-4	4-Bromofluorobenzene	99%		89-111%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RW-1		
Lab Sample ID:	LA12553-14	**Date Sampled:**	10/07/15
Matrix:	AQ - Water	**Date Received:**	10/09/15
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Circle K #2706682 171 East Glenn Avenue, Auburn, AL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1Q0018600.D	5	10/15/15	NN	n/a	n/a	V1Q522
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics, MTBE, Naphthalene

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	0.0371	0.0050	mg/l	
108-88-3	Toluene	0.891	0.0050	mg/l	
100-41-4	Ethylbenzene	0.945	0.0050	mg/l	
1330-20-7	Xylene (total)	2.90	0.010	mg/l	
1634-04-4	Methyl Tert Butyl Ether	0.0051	0.0050	mg/l	
91-20-3	Naphthalene	0.575	0.025	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	107%		84-124%
2037-26-5	Toluene-D8	101%		83-115%
460-00-4	4-Bromofluorobenzene	102%		89-111%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RW-2		
Lab Sample ID:	LA12553-15	**Date Sampled:**	10/07/15
Matrix:	AQ - Water	**Date Received:**	10/09/15
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Circle K #2706682 171 East Glenn Avenue, Auburn, AL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2Q0018454A.D	1	10/13/15	CP	n/a	n/a	V2Q517
Run #2	1Q0018602.D	20	10/15/15	NN	n/a	n/a	V1Q522

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics, MTBE, Naphthalene

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	6.07 [a]	0.020	mg/l	
108-88-3	Toluene	6.37 [a]	0.020	mg/l	
100-41-4	Ethylbenzene	2.41 [a]	0.020	mg/l	
1330-20-7	Xylene (total)	7.89 [a]	0.040	mg/l	
1634-04-4	Methyl Tert Butyl Ether	0.210	0.0010	mg/l	
91-20-3	Naphthalene	0.656 [a]	0.10	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	113%	105%	84-124%
2037-26-5	Toluene-D8	99%	100%	83-115%
460-00-4	4-Bromofluorobenzene	99%	103%	89-111%

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Lafayette ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

LA12553

ECS Chain Of Custody Record

Accutest Labs
109 Comission Boulevard
Lafayette, LA 70508
P: 800-304-5227 F:

ECS Project Manager:
- [x] Paul Naman
- [ ] Richard Stevens
- [ ]
- [ ]
- [ ]
- [ ]

Billing Information
Environmental Compliance Services
588 Silver Street
Agawam, MA 01001

Incident Number (S&E ONLY): [redacted]
SAP or CRMT Number: [redacted]

DATE:
PAGE: 1 of 2

CONSULTANT COMPANY: Environmental Compliance Services
ADDRESS: 9874 Main Street, Suite 100
CITY: Woodstock, GA 30188
TELEPHONE: (770) 926-8883 FAX: (770) 926-5383 EMAIL: pnaman@ecsconsult.com

PROJECT ADDRESS (Street, City and State): 171 East Glenn Avenue Auburn Alabama
PROJECT CONTACT (Report to): Paul Naman
CONSULTANT PROJECT NUMBER: 30-223216.00 Circle K Site No. 2706682
SAMPLER NAME(S) (Print): Ath Yim
LAB USE ONLY

TURNAROUND TIME (BUSINESS DAYS): [x] STANDARD [ ] 10 DAYS [ ] 5 DAYS [ ] 3 DAYS [ ] <24 HOURS
TEMPERATURE ON RECEIPT C°

SPECIAL INSTRUCTIONS OR NOTES :
FedEx Acct. No. 0705-0114-7

REQUESTED ANALYSIS if more than one method is listed, circle one

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	ICE	NO. OF CONT.	TPH - Purgeable (8015) GRO	TPH - Extractable (8015) DRO	BTEX/MTBE/Naphthalene (8260)	BTEX / MTBE + Oxygenates (8260B)	VOCs Full List + Oxygenates (8260B)	BTEX / MTBE (8021B)	VOCs Halogenated (8021B)	PAH (HPLC 610, 8310) 8270	Metals (Specify) ____	TRPH (418.1, FL-PRO)	Vapor VOCs BTEX, MTBE/GRO (EPA-18, TO-15)	Vapor VOCs Full List (EPA-18, TO-15)	Pre burn (8021, Halogenated, FL-Pro, As, Cd, Cr, Pb)	8 RCRA Metals	4 RCRA Metals (As, Cd, Cr, Pb)	Container PID Readings or Laboratory Notes
1	MW-1	10-7-15	14:00	W	X					3			X													3
2	MW-2	↓	13:25	W	↓					3			X													3
3	MW-3		12:05	W						3			X													3
4	MW-4		10:55	W						3			X													3
5	MW-5		9:45	W						3			X													3
6	MW-6		9:10	W						3			X													3
7	MW-7		11:30	W						3			X													3
8	MW-8D		10:20	W						3			X													3
9	MW-9		8:35	W						3			X													3
10	MW-10	↓	11:30	W	↓					3			X													3

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[illegible] 10-8-15 12:00	FedEx		
FedEx 10/9/15 9:00	Accutest		
Accutest	Mark Red	10/9/15	9:30

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.
05/1/01 Revision

cs/oc
Temp: 1.8 SV-260
RM-50 (13) A-2

4.1
4

LA12553: Chain of Custody
Page 1 of 4

ECS Chain Of Custody Record

Accutest Labs
109 Comission Boulevard
Lafayette, LA 70508
P: 800-304-5227 F:

ECS Project Manager: ☑ Paul Naman ☐ Richard Stevens

Billing Information
Environmental Compliance Services
588 Silver Street
Agawam, MA 01001

Incident Number (S&E ONLY): [redacted]
SAP or CRMT Number: [redacted]

DATE:
PAGE: 2 of 2

CONSULTANT COMPANY: Environmental Compliance Services
ADDRESS: ☑ STANDARD 10 ☐ 5 DAYS ☐ 3 DAYS ☐ <24 — 9874 Main Street, Suite 100
CITY: Woodstock, GA 30188
TELEPHONE: (770) 926-8883 FAX: (770) 926-5383 EMAIL: pnaman@ecsconsult.com
TURNAROUND TIME (BUSINESS DAYS):
TEMPERATURE ON RECEIPT C°

PROJECT ADDRESS (Street, City and State): 171 East Glenn Avenue Auburn Alabama
PROJECT CONTACT (Report to): Paul Naman
CONSULTANT PROJECT NUMBER: 30-223216.00 Circle K Site No. 2706682
SAMPLER NAME(S) (Print): Ath Yim
LAB USE ONLY

SPECIAL INSTRUCTIONS OR NOTES :
FedEx Acct. No. 0705-0114-7

REQUESTED ANALYSIS if more than one method is listed, circle one

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	ICE	NO. OF CONT.	TPH - Purgeable (8015) GRO	TPH - Extractable (8015) DRO	BTEX/MTBE/Naphthalene (8260)	BTEX / MTBE + Oxygenates (8260B)	VOCs Full List + Oxygenates (8260B)	BTEX / MTBE (8021B)	VOCs Halogenated (8021B)	PAH (HPLC 610, 8310) 8270	Metals (Specify) ____	TRPH (418.1, FL-PRO)	Vapor VOCs BTEX, MTBE/GRO (EPA-18, TO-15)	Vapor VOCs Full List (EPA-18, TO-15)	Pre burn (8021, Halogenated, FL-Pro, As, Cd, Cr, Pb)	8 RCRA Metals	4 RCRA Metals (As, Cd, Cr, Pb)	Container PID Readings or Laboratory Notes
1	MW-11	10-7-15	15:15	W	X					3			X													3
2	MW-12	↓	15:50	W	↓					3			X													3
3	MW-13		14:40	W						3			X													3
4	RW-1		16:45	W						3			X													3
5	RW-2	↓	12:50	W	↓					3			X													3

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Ath Yim	10-8-15	12:00	FedEx		
FedEx	10/9/15	9:00	Accutest		
Accutest			Mark Reed	10/9/15	9:30

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.
05/1/01 Revision

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LA12553: Chain of Custody
Page 2 of 4

FedEx Express NEW Package US Airbill

FedEx Tracking Number 8077 8072 8060

Form ID No. 0200

1 From

Date 10-8-15

Sender's Name Ath Kim Phone 770 926-8283

Company ECS

Address 9374 Main street STE 107 Dept./Floor/Suite/Room

City Woodstock State GA ZIP 30188

2 Your Internal Billing Reference 30-223216.00 / Circle K Job No. 2706682

3 To

Recipient's Name Simple Management Phone 3 7327 4775

Company Aerotest Labs

Address We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

Address 1M Commission Ave Use this line for the HOLD location address or for continuation of your shipping address.

City Lafayette State LA ZIP 7[illegible]

HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight. ☒

HOLD Saturday FedEx location address REQUIRED. Availability ONLY for FedEx Priority Overnight and FedEx 2Day to select locations. ☐

8077 8072 8060

4 Express Package Service *To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs. For packages over 150 lbs., use the new FedEx Express Freight US Airbill.

Next Business Day

- ☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☒ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

- ☐ FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- ☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging *Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

One box must be checked.

☐ No ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. ☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box. ☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐

☐ Sender Acct. No. in Section 1 will be billed. ☐ Recipient ☒ Third Party ☐ Credit Card ☐ Cash/Check

Total Packages ____ Total Weight ____ lbs. Credit Card Auth.

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

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fedex.com 1.800.GoFedEx 1.800.463.3339

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LA12553: Chain of Custody

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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: LA12553 **Client:** ECS **Project:** 171 EAST GLENN AVE.

Date / Time Received: 10/9/2015 9:30:00 AM **Delivery Method:** FedEx **Airbill #'s:** 807780728060

Cooler Temps (Initial/Adjusted): #1: (1.8/1.7);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Thermometer ID:	DV260;		
3. Cooler media:	Ice (direct contact)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:(800) 304-5227
500 Ambassador Caffery Parkway
Scott, Louisiana 70583
www.accutest.com

Lafayette

ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2G830-MB2	2G026644.D	1	10/12/15	CP	n/a	n/a	V2G830

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-11, LA12553-12

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	0.41	5.0	ug/l	J
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	98%	84-124%
2037-26-5	Toluene-D8	98%	83-115%
460-00-4	4-Bromofluorobenzene	100%	89-111%

Method Blank Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1Q517-MB2	1Q0018449A.D	1	10/13/15	CP	n/a	n/a	V1Q517

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-5, LA12553-7, LA12553-9

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	0.74	5.0	ug/l	J

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	97%	84-124%
2037-26-5	Toluene-D8	99%	83-115%
460-00-4	4-Bromofluorobenzene	97%	89-111%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2Q517-MB2	2Q0018450A.D	1	10/13/15	CP	n/a	n/a	V2Q517

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-15

CAS No.	Compound	Result	RL	Units	Q
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	99%	84-124%
2037-26-5	Toluene-D8	102%	83-115%
460-00-4	4-Bromofluorobenzene	98%	89-111%

Method Blank Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1Q519-MB2	1Q0018528.D	1	10/14/15	NN	n/a	n/a	V1Q519

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-4, LA12553-5, LA12553-11

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	0.57	5.0	ug/l	J
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	98%	84-124%
2037-26-5	Toluene-D8	100%	83-115%
460-00-4	4-Bromofluorobenzene	100%	89-111%

Method Blank Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1Q522-MB4	1Q0018576.D	1	10/15/15	NN	n/a	n/a	V1Q522

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-7, LA12553-9, LA12553-14, LA12553-15

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	0.67	5.0	ug/l	J
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	103%	84-124%
2037-26-5	Toluene-D8	100%	83-115%
460-00-4	4-Bromofluorobenzene	100%	89-111%

Method Blank Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2Q522-MB4	2Q0018577.D	1	10/15/15	NN	n/a	n/a	V2Q522

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-2

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	1.5	2.0	ug/l	J

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	101%	84-124%
2037-26-5	Toluene-D8	104%	83-115%
460-00-4	4-Bromofluorobenzene	100%	89-111%

Method Blank Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1Q523-MB2	1Q0018628.D	1	10/15/15	NN	n/a	n/a	V1Q523

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-1, LA12553-8

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	0.60	5.0	ug/l	J
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	103%	84-124%
2037-26-5	Toluene-D8	102%	83-115%
460-00-4	4-Bromofluorobenzene	98%	89-111%

Method Blank Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1G847-MB2	1G027023.D	1	10/16/15	NN	n/a	n/a	V1G847

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-3, LA12553-6, LA12553-10, LA12553-13

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.0	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
91-20-3	Naphthalene	0.64	5.0	ug/l	J
108-88-3	Toluene	ND	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
17060-07-0	1,2-Dichloroethane-D4	91%	84-124%
2037-26-5	Toluene-D8	100%	83-115%
460-00-4	4-Bromofluorobenzene	95%	89-111%

Blank Spike Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2G830-BS1	2G026640.D	1	10/12/15	CP	n/a	n/a	V2G830

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-11, LA12553-12

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.4	102	82-119
100-41-4	Ethylbenzene	20	22.6	113	84-117
1634-04-4	Methyl Tert Butyl Ether	20	20.1	101	70-126
91-20-3	Naphthalene	20	24.5	123	74-136
108-88-3	Toluene	20	20.9	105	80-121
1330-20-7	Xylene (total)	60	69.1	115	81-122

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	99%	84-124%
2037-26-5	Toluene-D8	99%	83-115%
460-00-4	4-Bromofluorobenzene	101%	89-111%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1Q517-BS1	1Q0018445A.D	1	10/13/15	CP	n/a	n/a	V1Q517

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-5, LA12553-7, LA12553-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.4	102	82-119
1634-04-4	Methyl Tert Butyl Ether	20	21.1	106	70-126
91-20-3	Naphthalene	20	20.7	104	74-136

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	101%	84-124%
2037-26-5	Toluene-D8	99%	83-115%
460-00-4	4-Bromofluorobenzene	97%	89-111%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2Q517-BS1	2Q0018446A.D1		10/13/15	CP	n/a	n/a	V2Q517

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-15

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1634-04-4	Methyl Tert Butyl Ether	20	19.3	97	70-126

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	100%	84-124%
2037-26-5	Toluene-D8	101%	83-115%
460-00-4	4-Bromofluorobenzene	101%	89-111%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1Q519-BS1	1Q0018524.D	1	10/14/15	NN	n/a	n/a	V1Q519

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-4, LA12553-5, LA12553-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.6	98	82-119
100-41-4	Ethylbenzene	20	19.4	97	84-117
1634-04-4	Methyl Tert Butyl Ether	20	21.4	107	70-126
91-20-3	Naphthalene	20	20.6	103	74-136
108-88-3	Toluene	20	19.8	99	80-121
1330-20-7	Xylene (total)	60	56.1	94	81-122

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	99%	84-124%
2037-26-5	Toluene-D8	100%	83-115%
460-00-4	4-Bromofluorobenzene	101%	89-111%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1Q522-BS2	1Q0018572.D	1	10/15/15	NN	n/a	n/a	V1Q522

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-7, LA12553-9, LA12553-14, LA12553-15

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.8	99	82-119
100-41-4	Ethylbenzene	20	18.6	93	84-117
1634-04-4	Methyl Tert Butyl Ether	20	22.3	112	70-126
91-20-3	Naphthalene	20	21.0	105	74-136
108-88-3	Toluene	20	20.0	100	80-121
1330-20-7	Xylene (total)	60	55.5	93	81-122

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	104%	84-124%
2037-26-5	Toluene-D8	100%	83-115%
460-00-4	4-Bromofluorobenzene	102%	89-111%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2Q522-BS3	2Q0018605.D	1	10/15/15	NN	n/a	n/a	V2Q522

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.6	103	82-119
100-41-4	Ethylbenzene	20	19.8	99	84-117
1634-04-4	Methyl Tert Butyl Ether	20	22.2	111	70-126
91-20-3	Naphthalene	20	20.8	104	74-136
108-88-3	Toluene	20	18.3	92	80-121
1330-20-7	Xylene (total)	60	59.3	99	81-122

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	102%	84-124%
2037-26-5	Toluene-D8	102%	83-115%
460-00-4	4-Bromofluorobenzene	100%	89-111%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1Q523-BS1	1Q0018624.D	1	10/15/15	NN	n/a	n/a	V1Q523

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-1, LA12553-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.8	104	82-119
100-41-4	Ethylbenzene	20	18.2	91	84-117
1634-04-4	Methyl Tert Butyl Ether	20	25.2	126	70-126
91-20-3	Naphthalene	20	20.8	104	74-136
108-88-3	Toluene	20	18.9	95	80-121
1330-20-7	Xylene (total)	60	52.4	87	81-122

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	107%	84-124%
2037-26-5	Toluene-D8	102%	83-115%
460-00-4	4-Bromofluorobenzene	101%	89-111%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1G847-BS2	1G027025.D	1	10/16/15	NN	n/a	n/a	V1G847

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-3, LA12553-6, LA12553-10, LA12553-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.0	100	82-119
100-41-4	Ethylbenzene	20	21.1	106	84-117
1634-04-4	Methyl Tert Butyl Ether	20	19.6	98	70-126
91-20-3	Naphthalene	20	21.6	108	74-136
108-88-3	Toluene	20	20.1	101	80-121
1330-20-7	Xylene (total)	60	66.3	111	81-122

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	95%	84-124%
2037-26-5	Toluene-D8	100%	83-115%
460-00-4	4-Bromofluorobenzene	100%	89-111%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA12456-2MS	2G026652.D	10	10/12/15	CP	n/a	n/a	V2G830
LA12456-2MSD	2G026654.D	10	10/12/15	CP	n/a	n/a	V2G830
LA12456-2	2G026646.D	5	10/12/15	CP	n/a	n/a	V2G830

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-11, LA12553-12

CAS No.	Compound	LA12456-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		200	205	103	200	203	102	1	31-161/15
100-41-4	Ethylbenzene	ND		200	224	112	200	220	110	2	47-146/30
1634-04-4	Methyl Tert Butyl Ether	ND		200	227	114	200	207	104	9	52-146/32
91-20-3	Naphthalene	ND		200	219	110	200	217	109	1	34-169/42
108-88-3	Toluene	2.2		200	217	107	200	212	105	2	36-155/17
1330-20-7	Xylene (total)	ND		600	683	114	600	672	112	2	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA12456-2	Limits
17060-07-0	1,2-Dichloroethane-D4	103%	99%	100%	84-124%
2037-26-5	Toluene-D8	99%	100%	100%	83-115%
460-00-4	4-Bromofluorobenzene	101%	101%	99%	89-111%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA12553-10MS	1Q0018487A.D	5	10/14/15	CP	n/a	n/a	V1Q517
LA12553-10MSD	1Q0018489A.D	5	10/14/15	CP	n/a	n/a	V1Q517
LA12553-10 [a]	1Q0018471A.D	1	10/14/15	CP	n/a	n/a	V1Q517

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-5, LA12553-7, LA12553-9

CAS No.	Compound	LA12553-10 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	0.42		100	69.0	69	100	67.0	67	3	31-161/15
1634-04-4	Methyl Tert Butyl Ether	ND		100	84.9	85	100	75.5	76	12	52-146/32
91-20-3	Naphthalene	1.6		100	78.8	77	100	73.0	71	8	34-169/42

CAS No.	Surrogate Recoveries	MS	MSD	LA12553-10	Limits
17060-07-0	1,2-Dichloroethane-D4	101%	103%		84-124%
2037-26-5	Toluene-D8	97%	99%		83-115%
460-00-4	4-Bromofluorobenzene	98%	101%		89-111%

(a) Sample used for QC purposes only.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA12553-2MS	2Q0018488A.D	50	10/14/15	CP	n/a	n/a	V2Q517
LA12553-2MSD	2Q0018490A.D	50	10/14/15	CP	n/a	n/a	V2Q517
LA12553-2 [a]	2Q0018462A.D	50	10/14/15	CP	n/a	n/a	V2Q517

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-15

CAS No.	Compound	LA12553-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1634-04-4	Methyl Tert Butyl Ether	251		1000	1250	100	1000	1230	98	2	52-146/32

CAS No.	Surrogate Recoveries	MS	MSD	LA12553-2	Limits
17060-07-0	1,2-Dichloroethane-D4	100%	100%		84-124%
2037-26-5	Toluene-D8	100%	101%		83-115%
460-00-4	4-Bromofluorobenzene	102%	100%		89-111%

(a) Sample used for QC purposes only.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA12594-3MS	1Q0018614.D	5	10/15/15	NN	n/a	n/a	V1Q522
LA12594-3MSD	1Q0018616.D	5	10/15/15	NN	n/a	n/a	V1Q522
LA12594-3	1Q0018612.D	1	10/15/15	NN	n/a	n/a	V1Q522

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-7, LA12553-9, LA12553-14, LA12553-15

CAS No.	Compound	LA12594-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	253		100	400	147	100	405	152	1	31-161/15
100-41-4	Ethylbenzene	84.4		100	185	101	100	184	100	1	47-146/30
1634-04-4	Methyl Tert Butyl Ether	98.4		100	235	137	100	230	132	2	52-146/32
91-20-3	Naphthalene	113		100	230	117	100	228	115	1	34-169/42
108-88-3	Toluene	7.8		100	93.7	86	100	93.9	86	0	36-155/17
1330-20-7	Xylene (total)	845	E	300	1410	188* [a]	300	1390	182* [a]	1	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA12594-3	Limits
17060-07-0	1,2-Dichloroethane-D4	107%	106%	107%	84-124%
2037-26-5	Toluene-D8	99%	101%	100%	83-115%
460-00-4	4-Bromofluorobenzene	103%	103%	102%	89-111%

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA12553-2MS	2Q0018615.D	100	10/15/15	NN	n/a	n/a	V2Q522
LA12553-2MSD	2Q0018617.D	100	10/15/15	NN	n/a	n/a	V2Q522
LA12553-2	2Q0018613.D	100	10/15/15	NN	n/a	n/a	V2Q522

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-2

CAS No.	Compound	LA12553-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	15500		2000	18000	125	2000	17400	95	3	31-161/15
100-41-4	Ethylbenzene	2520		2000	4840	116	2000	4530	101	7	47-146/30
1634-04-4	Methyl Tert Butyl Ether	275		2000	2560	114	2000	2610	117	2	52-146/32
91-20-3	Naphthalene	874		2000	3120	112	2000	2980	105	5	34-169/42
108-88-3	Toluene	35100		2000	38800	185* [a]	2000	36300	60	7	36-155/17
1330-20-7	Xylene (total)	14100		6000	21000	115	6000	19700	93	6	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA12553-2	Limits
17060-07-0	1,2-Dichloroethane-D4	106%	105%	103%	84-124%
2037-26-5	Toluene-D8	102%	104%	102%	83-115%
460-00-4	4-Bromofluorobenzene	101%	101%	100%	89-111%

(a) Outside control limits due to high level in sample relative to spike amount.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA12474-2MS	1Q0018642.D	50	10/15/15	NN	n/a	n/a	V1Q523
LA12474-2MSD	1Q0018644.D	50	10/15/15	NN	n/a	n/a	V1Q523
LA12474-2	1Q0018632.D	20	10/15/15	NN	n/a	n/a	V1Q523

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-1, LA12553-8

CAS No.	Compound	LA12474-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	700		1000	1560	86	1000	1660	96	6	31-161/15
100-41-4	Ethylbenzene	3060		1000	4000	94	1000	4110	105	3	47-146/30
1634-04-4	Methyl Tert Butyl Ether	ND		1000	1130	113	1000	1110	111	2	52-146/32
91-20-3	Naphthalene	745		1000	1870	113	1000	1730	99	8	34-169/42
108-88-3	Toluene	1170		1000	2060	89	1000	2130	96	3	36-155/17
1330-20-7	Xylene (total)	4430		3000	7410	99	3000	7650	107	3	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA12474-2	Limits
17060-07-0	1,2-Dichloroethane-D4	108%	103%	106%	84-124%
2037-26-5	Toluene-D8	100%	101%	103%	83-115%
460-00-4	4-Bromofluorobenzene	100%	105%	104%	89-111%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: LA12553
Account: PANGGAW Environmental Compliance Services, Inc.
Project: Circle K #2706682 171 East Glenn Avenue, Auburn, AL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
LA12608-1MS	1G027061.D	5	10/16/15	NN	n/a	n/a	V1G847
LA12608-1MSD	1G027063.D	5	10/16/15	NN	n/a	n/a	V1G847
LA12608-1	1G027053.D	1	10/16/15	NN	n/a	n/a	V1G847

The QC reported here applies to the following samples: **Method:** SW846 8260B

LA12553-3, LA12553-6, LA12553-10, LA12553-13

CAS No.	Compound	LA12608-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		100	102	102	100	98.1	98	4	31-161/15
100-41-4	Ethylbenzene	0.63		100	108	107	100	105	104	3	47-146/30
1634-04-4	Methyl Tert Butyl Ether	ND		100	95.7	96	100	92.8	93	3	52-146/32
91-20-3	Naphthalene	4.2		100	118	114	100	112	108	5	34-169/42
108-88-3	Toluene	1.1		100	103	102	100	99.0	98	4	36-155/17
1330-20-7	Xylene (total)	3.7		300	357	118	300	331	109	8	41-154/29

CAS No.	Surrogate Recoveries	MS	MSD	LA12608-1	Limits
17060-07-0	1,2-Dichloroethane-D4	99%	94%	88%	84-124%
2037-26-5	Toluene-D8	98%	99%	98%	83-115%
460-00-4	4-Bromofluorobenzene	97%	99%	98%	89-111%

* = Outside of Control Limits.

APPENDIX E

February 18, 2016

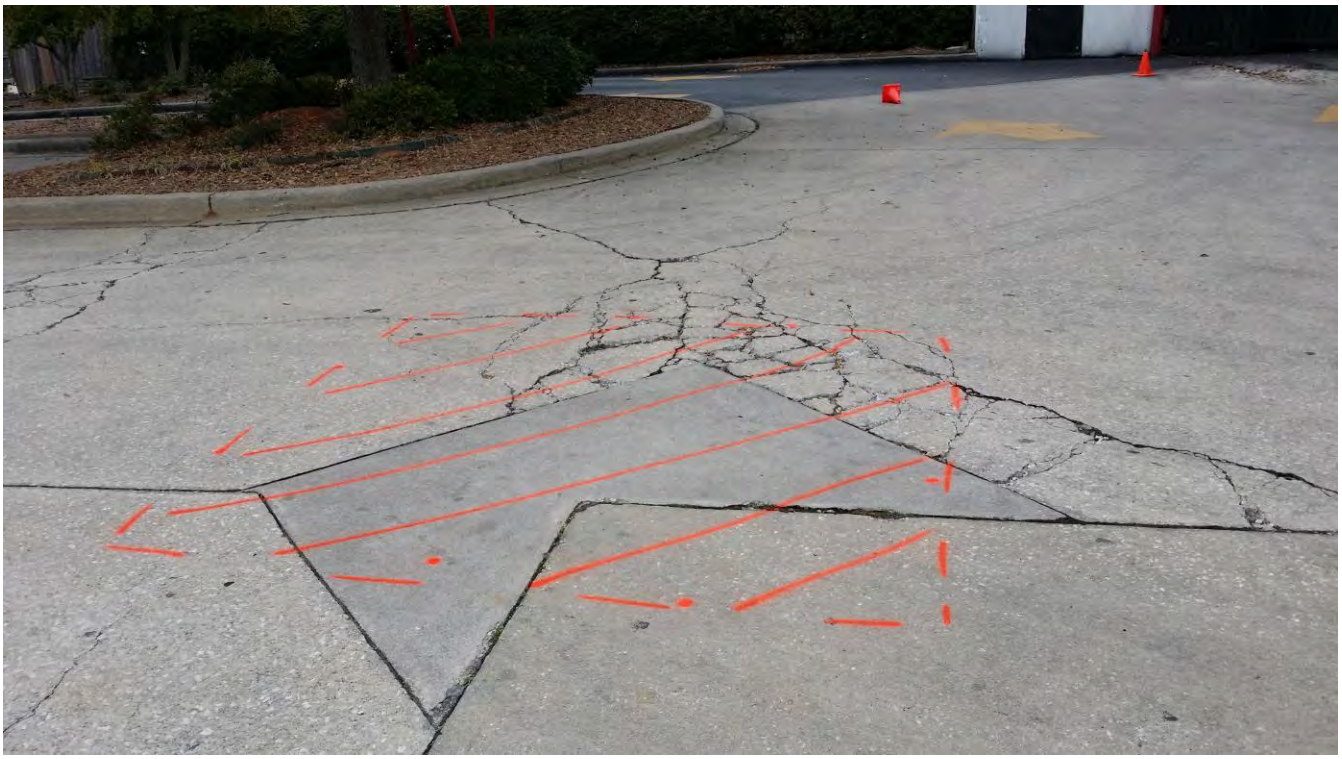
Terracon
Attn: ***Trey Noland***
110 12th Street N, Birmingham, AL, 35203
Phone: 205.441.5005
Email: trey.noland@terracon.com

Re: GPR Report of Investigation and Survey UST's
Date of Inspection: **2.18.16**

On February 18th, 2016 Ground Penetrating Radar Systems (GPRS) was requested on site at 206 N Gay St, Auburn, AL to perform a Ground Penetrating Radar (GPR) survey. The purpose of this survey was to determine the location of any underground storage tanks that may be present throughout the site. The areas were scanned with a GSSI GPR using a 400MHz antenna. This antenna allows for scanning up to 8' deep depending on site conditions. This particular site allowed for a maximum depth of approximately 4'. Each area was also scanned with an RD-7000 utility locator. There were 4 areas that stood out within the site. Although these areas did not show the typical characteristics of being a UST, they may be areas in which a UST was present at a previous time. On the following page you can find photos from the scanned areas. Please let me know if you have any more questions about this project.

Thank you,

Ryan Abueg
Ground Penetrating Radar Systems, Inc.
678.920.2842
ryan.abueg@gp-radar.com
www.gp-radar.com



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APPENDIX F

ALABAMA RISK-BASED CORRECTIVE ACTION (ARBCA) COMPUTATIONAL SOFTWARE

Developed to be consistent with:
Alabama Risk-Based Corrective Action Guidance Manual
April 2008

CONTINUE *Version 2.1, May 2009.* **EXIT**

Developed by:
Risk Assessment and Management (RAM) Group, Inc.
5433 Westheimer, Suite 725, Houston, TX 77056.
Ph: (713) 784-5151
Fax: (713) 784-6105
www.ramgp.com

ALABAMA RISK-BASED CORRECTIVE ACTION (ARBCA) COMPUTATIONAL SOFTWARE

TITLE | SITE INFORMATION | MAIN MENU

SITE No.	VCP Site No. 461-081-140
SITE NAME	Proposed Mixed-use Development
ADDRESS	Northeast Corner of East Glenn Ave and North Gay St Auburn, Lee County, Alabama

CONTACT NAME	Mr. Andrew Young
TELEPHONE NO.	(706) 543-1910

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MAIN MENU

I N P U T RM-1 ○ RM-2 ◉

SITE

ABBREVIATIONS

1. USER-SPECIFIED COCs & PROPERTIES (OPTIONAL)
2. SELECT COCs
3. EXPOSURE MODEL
4. TARGET RISK
5. PHYSICAL AND CHEMICAL PROPERTIES OF COCs
6. TOXICOLOGICAL PROPERTIES OF COCs
7. EXPOSURE FACTORS
8. FATE AND TRANSPORT PARAMETERS
9. PROTECTION OF GROUNDWATER USE
10. PROTECTION OF SURFACE WATER
11. SOIL & GW PROTECTIVE OF INDOOR INHALATION
12. CHEMICAL-SPECIFIC INPUTS FOR OTHER EXPOSURE PATHWAYS
13. CLEAN-UP LEVEL CALCULATION

O U T P U T

FORWARD MODE MENU

BACKWARD MODE MENU

SITE: VCP Site No. 461-081

USER-SPECIFIED CHEMICALS OF CONCERN & PROPERTIES
PHYSICAL AND CHEMICAL PROPERTIES

Chemicals	CAS #	MCL [mg/L]	Molecular Weight (MW) [g/g-mol]	Water Solubility (S) [mg/L]	Henry's Law Constant (H) [L-water/L-air]	Org. Carbon Adsorption Coeff. (K_{oc}) [cm^3/g]	Soil-Water Partition Coefficient (K_d) [cm^3/g]	Molecular Diffusion Coefficient in air (D^a) [cm^2/s]	Molecular Diffusion Coefficient in water (D^w) [cm^2/s]
Arsenic	7440-38-2	0.01	77.946				29		
Chromiun VI	18540-29-9		52	1700000			190		
Ethylbenzene	100-41-4	0.7	106.17	170	0.32	446		0.0685	0.00000846
Naphthalene	91-20-3		128	31	0.02	1540		0.0605	0.00000838
Toluene	108-88-3	1	92.142	526	0.271	234		0.0778	0.0000092

TOXICOLOGICAL PROPERTIES

Chemicals	Cancer Group	Slope Factor Oral (SF_o) [kg-day/mg]	Slope Factor Inh. (SF_i) [kg-day/mg]	Reference Dose Oral (RfD_o) [mg/kg-day]	Reference Dose Inh. (RfD_i) [mg/kg-day]	Absorption Factor Dermal (RAF_d) [--]	Absorption Factor Oral (RAF_o) [--]	Bioconcentration Factor in Fish (BCF) [L/kg]
Arsenic	I	1.5	15.05	0.0003	4.28571E-06	0.001	1	
Chromiun VI	I	0.5	294	0.003	2.85714E-05	0.001	1	
Ethylbenzene	V	0.011	0.00875	0.1	0.285714286	0.01	1	
Naphthalene	V		0.119	0.02	0.000857143	0.01	1	
Toluene	V			0.08	1.428571429	0.01	1	

*Type:
V: Volatile Organic Compounds
S: Semi-Volatile Organic Compounds
P: Pesticides & Herbicides
I: Inorganics

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EXPOSURE MODEL

SITE: VCP Site No. 461-081-140

Source and Exposure Pathways	Resident *	Commercial Worker	Trespasser	Construction Worker **
Air				
Indoor Air	☐	☐	☐	N/A
Outdoor Air	☐	☐	☐	☐
Surficial Soil (0 to 1 ft.)				
Dermal Contact	☑	☑	☑	☑
Ingestion	☑	☑	☑	☑
Outdoor Inhalation of Vapor Emissions	☐	☐	☐	☐
Outdoor Inhalation of Particulates	☑	☑	☑	☑
or				
Combined Pathway: Outdoor Inhalation of vapor emissions and particulates, Ingestion, and Dermal Contact	☐	☐	☐	☐
Subsurface Soil (> 1 ft. to watertable)				
Indoor Inhalation of Vapor Emissions	☐	☐	☐	N/A
Outdoor Inhalation of Vapor Emission	☐	☐	☐	N/A
Soil Vapor				
Indoor Inhalation of Vapor Emissions	☐	☐	☐	N/A
Outdoor Inhalation of Vapor Emissions	☐	☐	☐	☐
Groundwater (First Encountered Zone)				
Indoor Inhalation of Vapor Emissions	☑	☑	☑	N/A
Outdoor Inhalation of Vapor Emissions	☐	☐	☐	☐
Ingestion	☐	N/A	N/A	N/A

Other Exposure Pathways

Protection of Groundwater Use	☐
Protection of Surface Water	☐
Soil & Groundwater Protective of Indoor Inhalation	
Resident	☐
Commercial Worker	☐
Trespasser	☐

***** Includes calculations for child, and adult.

****** For construction worker, thickness of surficial soil is from ground surface to depth of construction.

N/A Not Applicable

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SITE: VCP Site No. 461-081-140 **TARGET RISK**

Parameter	Symbol	Default Value	Value Used	Comment
Potential Carcinogenic Health Effects				
Individual Excessive Lifetime Cancer Risk for all chemicals and all exposure pathways	TR_{cum}	1.00E-05	1.00E-05	Default Value
Potential Non-Carcinogenic Health Effects				
Hazard Index for all chemicals and all exposure pathways	HI	1.0	1.0	Default Value

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SITE: VCP Site No. 461-081-140

PHYSICAL AND CHEMICAL PROPERTIES OF CHEMICALS OF CONCERN

Chemicals of Concern	Molecular Weight (MW) [g/g-mol]	Water Solubility (S) [mg/L]	Henry's Law Constant (H) [L-water/L-air]	Org. Carbon Adsorption Coeff. (K_{oc}) [cm^3/g]	Soil-Water Sorption Coeff. Vadose Zone (K_{sv}) [cm^3-water /g-soil]	Soil-Water Sorption Coeff. Saturated zone (K_{SS}) [cm^3 /g]	Molecular Diffusion Coefficient		Saturated Soil Concentration [mg/kg]
							in air (D^a) [cm^2/s]	in water (D^w) [cm^2/s]	
Benzene	7.81E+01	1.80E+03	2.30E-01	5.90E+01	1.71E-01	1.71E-01	8.80E-02	9.80E-06	4.92E+02
Lead	2.07E+02	0.00E+00	NA	1.22E+02	3.54E-01	3.54E-01	1.12E-02	2.66E-05	0.00E+00
Arsenic	7.79E+01	NA	NA	NA	2.90E+01	2.90E+01	NA	NA	NA
Chromiun VI	5.20E+01	1.70E+06	NA	NA	1.90E+02	1.90E+02	NA	NA	3.23E+08
Ethylbenzene	1.06E+02	1.70E+02	3.20E-01	4.46E+02	1.29E+00	1.29E+00	6.85E-02	8.46E-06	2.39E+02
Naphthalene	1.28E+02	3.10E+01	2.00E-02	1.54E+03	4.47E+00	4.47E+00	6.05E-02	8.38E-06	1.41E+02
Toluene	9.21E+01	5.26E+02	2.71E-01	2.34E+02	6.79E-01	6.79E-01	7.78E-02	9.20E-06	4.13E+02

NA: Not Available

The values in red are calculated.

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SITE: VCP Site No. 461-081-140

TOXICOLOGICAL PROPERTIES OF CHEMICALS OF CONCERN

Chemicals of Concern	Slope Factor		Reference Dose		Absorption Factor	
	Oral (SF_o) [kg-day/mg]	Inh. (SF_i) [kg-day/mg]	Oral (RfD_o) [mg/kg-day]	Inh. (RfD_i) [mg/kg-day]	Oral (RAF_o) [--]	Dermal (RAF_d) [--]
Benzene	5.50E-02	2.73E-02	4.00E-03	8.57E-03	1	0.01
Lead	NA	NA	NA	NA	1	0.001
Arsenic	1.50E+00	1.51E+01	3.00E-04	4.29E-06	1	0.001
Chromiun VI	5.00E-01	2.94E+02	3.00E-03	2.86E-05	1	0.001
Ethylbenzene	1.10E-02	8.75E-03	1.00E-01	2.86E-01	1	0.01
Naphthalene	NA	1.19E-01	2.00E-02	8.57E-04	1	0.01
Toluene	NA	NA	8.00E-02	1.43E+00	1	0.01

NA: Not Available

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SITE: VCP Site No. 461-081-140 **EXPOSURE FACTORS**

(Page 1 of 2)

Parameter	Symbol	Unit	Default Value	Value Used	Comment
Averaging Time for Carcinogen	AT_c	year	70	70	Default Value
Averaging Time for Non-Carcinogen	AT_n	year	=ED	=ED	Default Value
Body Weight:					
Resident Child	BW	kg	15	15	Default Value
Resident Adult	BW	kg	70	70	Default Value
Trespasser	BW	kg	45	45	Default Value
Commercial Worker	BW	kg	70	70	Default Value
Construction Worker	BW	kg	70	70	Default Value
Exposure Duration:					
Resident Child	ED	year	6	6	Default Value
Resident Adult	ED	year	30	30	Default Value
Trespasser	ED	year	10	10	Default Value
Commercial Worker	ED	year	25	25	Default Value
Construction Worker	ED	year	1	1	Default Value
Exposure Frequency:					
Resident Child	EF	day/year	350	350	Default Value
Resident Adult	EF	day/year	350	350	Default Value
Trespasser	EF	day/year	350	350	Default Value
Commercial Worker	EF	day/year	250	250	Default Value
Construction Worker	EF	day/year	250	250	Default Value
Soil Ingestion Rate:					
Resident Child	IRS	mg/day	200	200	Default Value
Resident Adult	IRS	mg/day	100	100	Default Value
Trespasser	IRS	mg/day	100	100	Default Value
Commercial Worker	IRS	mg/day	75	75	Default Value
Construction Worker	IRS	mg/day	177	177	Default Value
Water Ingestion Rate:					
Resident Child	IRW	L/day	1	1	Default Value
Resident Adult	IRW	L/day	2	2	Default Value
Hourly Indoor Inhalation Rate:					
Resident Child	IR_{ai}	m^3/hr	0.5	0.500	Default Value
Resident Adult	IR_{ai}	m^3/hr	0.833	0.833	Default Value
Trespasser	IR_{ai}	m^3/hr	1.5	1.500	Default Value
Commercial Worker	IR_{ai}	m^3/hr	1.5	1.500	Default Value
Construction Worker	IR_{ai}	m^3/hr	1.5	1.500	Default Value
Exposure Time for Indoor Inhalation:					
Resident Child	ET_{in}	hr/day	24	24	Default Value
Resident Adult	ET_{in}	hr/day	24	24	Default Value
Trespasser	ET_{in}	hr/day	24	24	Default Value
Commercial Worker	ET_{in}	hr/day	10	10	Default Value
Construction Worker	ET_{in}	hr/day	10	10	Default Value
Daily Indoor Inhalation Rate:					
Resident Child	IR_{ai_d}	m^3/day	12.0	12.0	Calculated
Resident Adult	IR_{ai_d}	m^3/day	20.0	20.0	Calculated
Trespasser	IR_{ai_d}	m^3/day	36.0	36.0	Calculated
Commercial Worker	IR_{ai_d}	m^3/day	15.0	15.0	Calculated
Construction Worker	IR_{ai_d}	m^3/day	15.0	15.0	Calculated

The values in red are calculated.

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SITE: VCP Site No. 461-081-140 **EXPOSURE FACTORS**

(Page 2 of 2)

Parameter	Symbol	Unit	Default Value	Value Used	Comment
Hourly Outdoor Inhalation Rate:					
Resident Child	IR_{ao}	m^3/hr	0.5	0.500	Default Value
Resident Adult	IR_{ao}	m^3/hr	0.833	0.833	Default Value
Trespasser	IR_{ao}	m^3/hr	1.5	1.500	Default Value
Commercial Worker	IR_{ao}	m^3/hr	1.5	1.500	Default Value
Construction Worker	IR_{ao}	m^3/hr	1.5	1.500	Default Value
Exposure Time for Outdoor Inhalation:					
Resident Child	ET_{out}	hr/day	10	10	Default Value
Resident Adult	ET_{out}	hr/day	10	10	Default Value
Trespasser	ET_{out}	hr/day	10	10	Default Value
Commercial Worker	ET_{out}	hr/day	10	10	Default Value
Construction Worker	ET_{out}	hr/day	10	10	Default Value
Daily Outdoor Inhalation Rate:					
Resident Child	IR_{ao_d}	m^3/day	5.0	5.0	Calculated
Resident Adult	IR_{ao_d}	m^3/day	8.3	8.3	Calculated
Trespasser	IR_{ao_d}	m^3/day	15.0	15.0	Calculated
Commercial Worker	IR_{ao_d}	m^3/day	15.0	15.0	Calculated
Construction Worker	IR_{ao_d}	m^3/day	15.0	15.0	Calculated
Soil to Skin Adherence Factor:					
Resident Child	M	mg/cm^2	0.2	0.2	Default Value
Resident Adult	M	mg/cm^2	0.07	0.07	Default Value
Trespasser	M	mg/cm^2	0.2	0.2	Default Value
Commercial Worker	M	mg/cm^3	0.2	0.2	Default Value
Construction Worker	M	mg/cm^2	0.2	0.2	Default Value
Skin Surface Area for Dermal Contact:					
Resident Child	SA	cm^2/day	2800	2800	Default Value
Resident Adult	SA	cm^2/day	5700	5700	Default Value
Trespasser	SA	cm^2/day	5700	5700	Default Value
Commercial Worker	SA	cm^2/day	5700	5700	Default Value
Construction Worker	SA	cm^2/day	5700	5700	Default Value

The values in red are calculated.

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SITE: VCP Site No. 461-081-140 **FATE AND TRANSPORT PARAMETERS**

Parameter	Symbol	Unit	Default Value	Value Used	Comment
SOIL PARAMETERS:					
Length of soil source area parallel to wind direction	W_a	cm	**	9350	Site-Specific Value
Depth to subsurface soil sources	L_s	cm	30.48	45.72	Site-Specific Value
Lower depth of surficial soil zone	d	cm	30.48	45.72	Site-Specific Value
Depth to soil vapor measurement	d_{sv}	cm	30.48	30.48	Default Value
VADOSE ZONE:					
Total soil porosity	q_T	cm^3/cm^3-soil	0.30	0.350	Site-Specific Value
Volumetric water content	q_{ws}	cm^3/cm^3	0.10	0.13	Site-Specific Value
Volumetric air content	q_{as}	cm^3/cm^3	0.20	0.22	Calculated
Thickness	h_v	cm	295	372.45	Calculated
Dry soil bulk density	r_s	g/cm^3	1.8	1.768	Site-Specific Value
Fractional organic carbon content	f_{oc}	g-C/g-soil	0.002	0.0029	Site-Specific Value
FOUNDATION/WALL CRACKS:					
Total soil porosity	q_{Tcrack}	cm^3/cm^3-soil	0.30	0.350	Site-Specific Value
Volumetric water content	q_{wcrack}	cm^3/cm^3	0.10	0.13	Site-Specific Value
Volumetric air content	q_{acrack}	cm^3/cm^3	0.20	0.22	Calculated
CAPILLARY FRINGE:					
Total soil porosity	q_{Tcap}	cm^3/cm^3-soil	0.30	0.350	Site-Specific Value
Volumetric water content	q_{wcap}	cm^3/cm^3	0.27	0.32	Calculated
Volumetric air content	q_{acap}	cm^3/cm^3	0.03	0.04	Calculated
Thickness	h_{cap}	cm	5	50	Site-Specific Value
GROUNDWATER PARAMETERS:					
Depth to groundwater	L_{gw}	cm	300	422.45	Site-Specific Value
Width of GW source perpendicular to GW flow direction	Y	cm	**	1490	Site-Specific Value
Length of GW source parallel to GW flow direction	W	cm	**	5950	Site-Specific Value
Total soil porosity in the saturated zone	q_{TS}	cm^3/cm^3	0.30	0.35	Site-Specific Value
Dry soil bulk density in the saturated zone	r_{ss}	g/cm^3	1.8	1.768	Site-Specific Value
Fractional organic carbon content in the saturated zone	f_{ocs}	g-C/g-soil	0.002	0.0029	Site-Specific Value
Groundwater mixing zone thickness	d_{gw}	cm	200	200	Default Value
Hydraulic conductivity in the saturated zone	K	cm/year	31536	4325.688	Site-Specific Value
Hydraulic gradient in the saturated zone	i	cm/cm	0.005	0.025	Site-Specific Value
Groundwater darcy velocity	U_{gw}	cm/year	108.14	108.14	Calculated
Infiltration rate	I	cm/year	14.8	13.37	Site-Specific Value
AMBIENT AIR PARAMETERS:					
Breathing zone height	d_a	cm	200	200	Default Value
Wind speed within the breathing zone	Ua	cm/s	225	225	Default Value
ENCLOSED SPACE PARAMETERS:					
Enclosed Space Air Exchange Rate:					
Residential	ER	1/sec	0.00014	0.00014	Default Value
Trespasser	ER	1/sec	0.00014	0.00014	Default Value
Commercial/construction worker	ER	1/sec	0.00023	0.00023	Default Value
Enclosed Space Volume/Infiltration Area Ratio:					
Residential	L_B	cm	200	200	Default Value
Trespasser	L_B	cm	200	200	Default Value
Commercial/construction worker	L_B	cm	300	300	Default Value
Enclosed Space Foundation or Wall Thickness:					
Residential	L_{crack}	cm	15	15	Default Value
Trespasser	L_{crack}	cm	15	15	Default Value
Commercial/construction worker	L_{crack}	cm	15	15	Default Value
Area Fraction of Cracks in Foundation/Walls:					
Residential	h	cm^2/cm^2	0.01	0.01	Default Value
Trespasser	h	cm^2/cm^2	0.01	0.01	Default Value
Commercial/construction worker	h	cm^2/cm^2	0.01	0.01	Default Value
PARTICULATE EMISSION RATE:					
Residential and commercial	P_e	g/cm^2sec	6.90E-14	6.90E-14	Default Value
Trespasser	P_e	g/cm^2sec	6.90E-09	6.90E-09	Default Value
Construction worker	P_e	g/cm^2sec	6.90E-09	6.90E-09	Default Value
AVERAGING TIME FOR VAPOR FLUX:					
Resident child	t	sec	1.89E+08	1.89E+08	Calculated
Resident adult	t	sec	9.46E+08	9.46E+08	Calculated
Trespasser	t	sec	3.15E+08	3.15E+08	Calculated
Commercial worker	t	sec	7.88E+08	7.88E+08	Calculated
Construction worker	t	sec	3.15E+07	3.15E+07	Calculated

****:** The source area (assumed to be square) should be classified as either (i) small (270 yd^2) = (1500 cm X 1500 cm), (ii) medium (1/2 acre) = (4,498 cm X 4,498 cm), or (iii) large (1 acre) = (6,362 cm X 6,362 cm)

The values in red are calculated.

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When the cumulative risk criteria has to be satisfied clean-up levels are not unique. Several different combinations of clean-up levels can satisfy the cumulative risk criteria. Following are two of the many options available:

- ◉ **Option 1 -** Reduce each of the representative concentrations by the risk reduction factor. Risk reduction factor is the ratio of the calculated site-wide risk to the target cumulative risk.
- ○ **Option 2 -** Each of the representative concentration is reduced by a factor such that the risk from each COC and each ROE is identical.

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SITE: VCP Site No. 461-081-140 **ABBREVIATIONS**

Parameter	
HI	Hazard Index (sum of hazard quotient)
HQ	Hazard Quotient
IELCR	Individual Excess Lifetime Cancer Risk
M	The concentration is MCL.
N/A	The soil concentration at the source is not applicable since the groundwater concentration has been entered/selected.
NA	Volatilization factor was not calculated due to lack of Henry's law constant
NC	Pathway is not complete.
NCL	The clean-up level is not calculated since the target risk is not exceeded.
NCOC	The risk/clean-up level cannot be calculated since the chemical of concern is not selected/entered.
NCsw	The concentrations cannot be calculated since the conc. protective of surface water (Csw) is not available/entered.
NHL	The DAF/concentration cannot be calculated since the half-life for the COC is not available/entered.
NMZ	No mixing zone
NPCP	The risk/concentration cannot be calculated since the physical and chemical properties for the COC is not available.
NREP	The risk cannot be calculated since the representative concentration is not available/entered.
NTOX	The risk/concentration cannot be calculated since the toxicological properties for the COC is not available.
RM	Risk Management
--	The clean-up level/concentration cannot be calculated for this COC since the input properties is not available/entered.
*	Calculated concentration exceeded saturated soil concentration. Calculated value is shown.
+	Calculated concentration exceeded saturated vapor concentration. Calculated value is shown.
#	Calculated concentration exceeded solubility. Calculated value is shown.
>1E+300	When DAF is greater then >1+300, the concentrations shown is saturated soil concentration for soil and/or solubility for groundwater.

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SITE: VCP Site No. 461-081-140

REPRESENTATIVE CONCENTRATION FOR A RESIDENT

CHEMICALS OF CONCERN	AIR		SURFICIAL SOIL					SUBSURFACE SOIL		SOIL VAPOR		GROUNDWATER		
	Indoor	Outdoor	Dermal Contact	Ingestion	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Particulates	Combined Pathway	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Ingestion
	[mg/m^3-air]		[mg/kg]							[mg/m^3]		[mg/L]		
Benzene												3.40E-01		
Lead			4.01E+02	4.01E+02		4.01E+02		4.01E+02	4.01E+02					
Arsenic			8.93E+00	8.93E+00		8.93E+00		8.93E+00	8.93E+00					
Chromiun VI			2.27E+00	2.27E+00		2.27E+00		2.27E+00	2.27E+00					
Ethylbenzene												1.30E+00		
Naphthalene												2.62E-01		
Toluene												1.40E+00		

Soil concentrations are presented on a dry weight basis.

NA: Not Available

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SITE: VCP Site No. 461-081-1

REPRESENTATIVE CONCENTRATION FOR A COMMERCIAL WORKER

CHEMICALS OF CONCERN	AIR		SURFICIAL SOIL					SUBSURFACE SOIL		SOIL VAPOR		GROUNDWATER	
	Indoor	Outdoor	Dermal Contact	Ingestion	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Particulates	Combined Pathway	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions
	[mg/m^3-air]		[mg/kg]							[mg/m^3]		[mg/L]	
Benzene												3.40E-01	
Lead			4.01E+02	4.01E+02		4.01E+02		4.01E+02	4.01E+02				
Arsenic			8.93E+00	8.93E+00		8.93E+00		8.93E+00	8.93E+00				
Chromiun VI			2.27E+00	2.27E+00		2.27E+00		2.27E+00	2.27E+00				
Ethylbenzene												1.30E+00	
Naphthalene												2.62E-01	
Toluene												1.40E+00	

Soil concentrations are presented on a dry weight basis.

NA: Not Available

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SITE: VCP Site No. 461-081-1

REPRESENTATIVE CONCENTRATION FOR A TRESPASSER

CHEMICALS OF CONCERN	AIR		SURFICIAL SOIL					SUBSURFACE SOIL		SOIL VAPOR		GROUNDWATER	
	Indoor	Outdoor	Dermal Contact	Ingestion	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Particulates	Combined Pathway	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions
	[mg/m^3-air]		[mg/kg]							[mg/m^3]		[mg/L]	
Benzene												3.40E-01	
Lead			4.01E+02	4.01E+02		4.01E+02		4.01E+02	4.01E+02				
Arsenic			8.93E+00	8.93E+00		8.93E+00		8.93E+00	8.93E+00				
Chromiun VI			2.27E+00	2.27E+00		2.27E+00		2.27E+00	2.27E+00				
Ethylbenzene												1.30E+00	
Naphthalene												2.62E-01	
Toluene												1.40E+00	

Soil concentrations are presented on a dry weight basis.

NA: Not Available

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SITE: VCP Site No. 461-081-140

REPRESENTATIVE CONCENTRATION FOR A CONSTRUCTION WORKER

CHEMICALS OF CONCERN	AIR	SOIL UPTO DEPTH OF CONSTRUCTION					SOIL VAPOR	GROUNDWATER
	Outdoor	Dermal Contact	Ingestion	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Particulates	Combined Pathway	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions
	[mg/m^3-air]	[mg/kg]					[mg/m^3]	[mg/L]
Benzene								
Lead		4.01E+02	4.01E+02		4.01E+02			
Arsenic		8.93E+00	8.93E+00		8.93E+00			
Chromiun VI		2.27E+00	2.27E+00		2.27E+00			
Ethylbenzene								
Naphthalene								
Toluene								

Soil concentrations are presented on a dry weight basis.

NA: Not Available

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SITE: VCP Site No. 461-081-14

RM-2 IELCR FOR A RESIDENT CHILD

CUMULATIVE	2.06E-05
CUMULATIVE HI	6.18E-01

CHEMICALS OF CONCERN	AIR		SURFICIAL SOIL					SUBSURFACE SOIL		SOIL VAPOR		GROUNDWATER		
	Indoor	Outdoor	Dermal Contact	Ingestion	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Particulates	Combined Pathway	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Ingestion
Benzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	1.55E-06	NC	NC
Lead	NC	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC	NC	NC	NTOX	NC	NC
Arsenic	NC	NC	4.11E-08	1.47E-05	NC	5.28E-11	NC	NC	NC	NC	NC	NPCP	NC	NC
Chromiun VI	NC	NC	3.48E-09	1.24E-06	NC	2.62E-10	NC	NC	NC	NC	NC	NPCP	NC	NC
Ethylbenzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	1.90E-06	NC	NC
Naphthalene	NC	NC	NTOX	NTOX	NC	NREP	NC	NC	NC	NC	NC	1.21E-06	NC	NC
Toluene	NC	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC	NC	NC	NTOX	NC	NC
CUMULATIVE RISK														

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SITE: VCP Site No. 461-081-14

RM-2 HQ FOR A RESIDENT CHILD

CUMULATIVE 2.06E-05	AIR		SURFICIAL SOIL					SUBSURFACE SOIL		SOIL VAPOR		GROUNDWATER		
CUMULATIVE HI 6.18E-01	Indoor	Outdoor	Dermal Contact	Ingestion	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Particulates	Combined Pathway	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Ingestion
CHEMICALS OF CONCERN														
Benzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	7.71E-02	NC	NC
Lead	NC	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC	NC	NC	NTOX	NC	NC
Arsenic	NC	NC	1.07E-03	3.81E-01	NC	9.55E-06	NC	NC	NC	NC	NC	NPCP	NC	NC
Chromiun VI	NC	NC	2.71E-05	9.67E-03	NC	3.64E-07	NC	NC	NC	NC	NC	NPCP	NC	NC
Ethylbenzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	8.85E-03	NC	NC
Naphthalene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	1.38E-01	NC	NC
Toluene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	1.91E-03	NC	NC
CUMULATIVE RISK														

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SITE: VCP Site No. 461-081-14 **RM-2 CUMULATIVE RISK FOR A RESIDENT CHILD**

CUMULATIVE 2.06E-05 CUMULATIVE HI 6.18E-01 CHEMICALS OF CONCERN	SUM OF IELCR	SUM OF HQ (HI)
Benzene	1.55E-06	7.71E-02
Lead		
Arsenic	1.47E-05	3.82E-01
Chromiun VI	1.25E-06	9.70E-03
Ethylbenzene	1.90E-06	8.85E-03
Naphthalene	1.21E-06	1.38E-01
Toluene		1.91E-03
CUMULATIVE RISK	2.06E-05	6.18E-01

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SITE: VCP Site No. 461-081-14

RM-2 IELCR FOR A RESIDENT ADULT

CUMULATIVE 1.69E-05	AIR		SURFICIAL SOIL					SUBSURFACE SOIL		SOIL VAPOR		GROUNDWATER		
CUMULATIVE HI 1.23E-01	Indoor	Outdoor	Dermal Contact	Ingestion	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Particulates	Combined Pathway	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Ingestion
CHEMICALS OF CONCERN														
Benzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	2.76E-06	NC	NC
Lead	NC	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC	NC	NC	NTOX	NC	NC
Arsenic	NC	NC	3.14E-08	7.86E-06	NC	9.42E-11	NC	NC	NC	NC	NC	NPCP	NC	NC
Chromiun VI	NC	NC	2.66E-09	6.66E-07	NC	4.68E-10	NC	NC	NC	NC	NC	NPCP	NC	NC
Ethylbenzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	3.39E-06	NC	NC
Naphthalene	NC	NC	NTOX	NTOX	NC	NREP	NC	NC	NC	NC	NC	2.16E-06	NC	NC
Toluene	NC	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC	NC	NC	NTOX	NC	NC
CUMULATIVE RISK														

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SITE: VCP Site No. 461-081-14 **RM-2 HQ FOR A RESIDENT ADULT**

CUMULATIVE 1.69E-05	AIR		SURFICIAL SOIL					SUBSURFACE SOIL		SOIL VAPOR		GROUNDWATER		
CUMULATIVE HI 1.23E-01	Indoor	Outdoor	Dermal Contact	Ingestion	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Particulates	Combined Pathway	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Ingestion
CHEMICALS OF CONCERN														
Benzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	2.75E-02	NC	NC
Lead	NC	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC	NC	NC	NTOX	NC	NC
Arsenic	NC	NC	1.63E-04	4.08E-02	NC	3.41E-06	NC	NC	NC	NC	NC	NPCP	NC	NC
Chromiun VI	NC	NC	4.14E-06	1.04E-03	NC	1.30E-07	NC	NC	NC	NC	NC	NPCP	NC	NC
Ethylbenzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	3.16E-03	NC	NC
Naphthalene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	4.94E-02	NC	NC
Toluene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	6.82E-04	NC	NC
CUMULATIVE RISK														

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SITE: VCP Site No. 461-081-14 **RM-2 CUMULATIVE RISK FOR A RESIDENT ADULT**

CUMULATIVE 1.69E-05	SUM OF IELCR	SUM OF HQ (HI)
CUMULATIVE HI 1.23E-01		
CHEMICALS OF CONCERN		
Benzene	2.76E-06	2.75E-02
Lead		
Arsenic	7.90E-06	4.09E-02
Chromiun VI	6.69E-07	1.04E-03
Ethylbenzene	3.39E-06	3.16E-03
Naphthalene	2.16E-06	4.94E-02
Toluene		6.82E-04
CUMULATIVE RISK	1.69E-05	1.23E-01

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SITE: VCP Site No. 461-081-1

RM-2 IELCR FOR A RESIDENT

CUMULATIVE 2.43E-05	AIR		SURFICIAL SOIL					SUBSURFACE SOIL		SOIL VAPOR		GROUNDWATER		
CUMULATIVE HI 6.19E-01	Indoor	Outdoor	Dermal Contact	Ingestion	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Particulates	Combined Pathway	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Ingestion
CHEMICALS OF CONCERN														
Benzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	2.76E-06	NC	NC
Lead	NC	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC	NC	NC	NTOX	NC	NC
Arsenic	NC	NC	4.11E-08	1.47E-05	NC	9.42E-11	NC	NC	NC	NC	NC	NPCP	NC	NC
Chromiun VI	NC	NC	3.48E-09	1.24E-06	NC	4.68E-10	NC	NC	NC	NC	NC	NPCP	NC	NC
Ethylbenzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	3.39E-06	NC	NC
Naphthalene	NC	NC	NTOX	NTOX	NC	NREP	NC	NC	NC	NC	NC	2.16E-06	NC	NC
Toluene	NC	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC	NC	NC	NTOX	NC	NC
CUMULATIVE RISK														

For exclusive use by Gallet & Associates

SITE: VCP Site No. 461-081-1

RM-2 HQ FOR A RESIDENT

CUMULATIVE 2.43E-05	AIR		SURFICIAL SOIL					SUBSURFACE SOIL		SOIL VAPOR		GROUNDWATER		
CUMULATIVE HI 6.18E-01	Indoor	Outdoor	Dermal Contact	Ingestion	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Particulates	Combined Pathway	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Ingestion
CHEMICALS OF CONCERN														
Benzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	7.71E-02	NC	NC
Lead	NC	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC	NC	NC	NTOX	NC	NC
Arsenic	NC	NC	1.07E-03	3.81E-01	NC	9.55E-06	NC	NC	NC	NC	NC	NPCP	NC	NC
Chromiun VI	NC	NC	2.71E-05	9.67E-03	NC	3.64E-07	NC	NC	NC	NC	NC	NPCP	NC	NC
Ethylbenzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	8.85E-03	NC	NC
Naphthalene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	1.38E-01	NC	NC
Toluene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	1.91E-03	NC	NC
CUMULATIVE RISK														

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SITE: VCP Site No. 461-081-1

RM-2 CUMULATIVE RISK FOR A RESIDENT

CUMULATIVE 2.43E-05	SUM OF IELCR	SUM OF HQ (HI)
CUMULATIVE HI 6.18E-01		
CHEMICALS OF CONCERN		
Benzene	2.76E-06	7.71E-02
Lead		
Arsenic	1.47E-05	3.82E-01
Chromiun VI	1.25E-06	9.70E-03
Ethylbenzene	3.39E-06	8.85E-03
Naphthalene	2.16E-06	1.38E-01
Toluene		1.91E-03
CUMULATIVE RISK	2.43E-05	6.18E-01

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SITE: VCP Site No. 461-081-14

RM-2 IELCR FOR A COMMERCIAL WORKER

CUMULATIVE 5.37E-06	AIR		SURFICIAL SOIL					SUBSURFACE SOIL		SOIL VAPOR		GROUNDWATER	
CUMULATIVE HI 4.03E-02	Indoor	Outdoor	Dermal Contact	Ingestion	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Particulates	Combined Pathway	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions
CHEMICALS OF CONCERN													
Benzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	5.00E-07	NC
Lead	NC	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC	NC	NC	NTOX	NC
Arsenic	NC	NC	5.34E-08	3.51E-06	NC	1.01E-10	NC	NC	NC	NC	NC	NPCP	NC
Chromiun VI	NC	NC	4.52E-09	2.97E-07	NC	5.02E-10	NC	NC	NC	NC	NC	NPCP	NC
Ethylbenzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	6.14E-07	NC
Naphthalene	NC	NC	NTOX	NTOX	NC	NREP	NC	NC	NC	NC	NC	3.91E-07	NC
Toluene	NC	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC	NC	NC	NTOX	NC
CUMULATIVE RISK													

For exclusive use by Gallet & Associates

SITE: VCP Site No. 461-081-14

RM-2 HQ FOR A COMMERCIAL WORKER

CUMULATIVE 5.37E-06	AIR		SURFICIAL SOIL					SUBSURFACE SOIL		SOIL VAPOR		GROUNDWATER	
CUMULATIVE HI 4.03E-02	Indoor	Outdoor	Dermal Contact	Ingestion	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Particulates	Combined Pathway	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions
CHEMICALS OF CONCERN													
Benzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	5.99E-03	NC
Lead	NC	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC	NC	NC	NTOX	NC
Arsenic	NC	NC	3.32E-04	2.18E-02	NC	4.38E-06	NC	NC	NC	NC	NC	NPCP	NC
Chromiun VI	NC	NC	8.44E-06	5.55E-04	NC	1.67E-07	NC	NC	NC	NC	NC	NPCP	NC
Ethylbenzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	6.87E-04	NC
Naphthalene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	1.07E-02	NC
Toluene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	1.48E-04	NC
CUMULATIVE RISK													

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SITE: VCP Site No. 461-081-14 RM-2 CUMULATIVE RISK FOR A COMMERCIAL WORKER

CUMULATIVE 5.37E-06 CUMULATIVE HI 4.03E-02 CHEMICALS OF CONCERN	SUM OF IELCR	SUM OF HQ (HI)
Benzene	5.00E-07	5.99E-03
Lead		
Arsenic	3.56E-06	2.22E-02
Chromiun VI	3.02E-07	5.64E-04
Ethylbenzene	6.14E-07	6.87E-04
Naphthalene	3.91E-07	1.07E-02
Toluene		1.48E-04
CUMULATIVE RISK	5.37E-06	4.03E-02

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SITE: VCP Site No. 461-081-14 **RM-2 IELCR FOR A TRESPASSER**

CUMULATIVE 6.47E-05	AIR		SURFICIAL SOIL					SUBSURFACE SOIL		SOIL VAPOR		GROUNDWATER	
CUMULATIVE HI 1.28E+00	Indoor	Outdoor	Dermal Contact	Ingestion	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Particulates	Combined Pathway	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions
CHEMICALS OF CONCERN													
Benzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	2.58E-06	NC
Lead	NC	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC	NC	NC	NTOX	NC
Arsenic	NC	NC	4.65E-08	4.08E-06	NC	8.80E-06	NC	NC	NC	NC	NC	NPCP	NC
Chromiun VI	NC	NC	3.94E-09	3.46E-07	NC	4.37E-05	NC	NC	NC	NC	NC	NPCP	NC
Ethylbenzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	3.16E-06	NC
Naphthalene	NC	NC	NTOX	NTOX	NC	NREP	NC	NC	NC	NC	NC	2.02E-06	NC
Toluene	NC	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC	NC	NC	NTOX	NC
CUMULATIVE RISK													

For exclusive use by Gallet & Associates

SITE: VCP Site No. 461-081-14

RM-2 HQ FOR A TRESPASSER

CUMULATIVE 6.47E-05	AIR		SURFICIAL SOIL					SUBSURFACE SOIL		SOIL VAPOR		GROUNDWATER	
CUMULATIVE HI 1.28E+00	Indoor	Outdoor	Dermal Contact	Ingestion	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Particulates	Combined Pathway	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions	Indoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions
CHEMICALS OF CONCERN													
Benzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	7.71E-02	NC
Lead	NC	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC	NC	NC	NTOX	NC
Arsenic	NC	NC	7.23E-04	6.34E-02	NC	9.55E-01	NC	NC	NC	NC	NC	NPCP	NC
Chromiun VI	NC	NC	1.84E-05	1.61E-03	NC	3.64E-02	NC	NC	NC	NC	NC	NPCP	NC
Ethylbenzene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	8.85E-03	NC
Naphthalene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	1.38E-01	NC
Toluene	NC	NC	NREP	NREP	NC	NREP	NC	NC	NC	NC	NC	1.91E-03	NC
CUMULATIVE RISK													

For exclusive use by Gallet & Associates

SITE: VCP Site No. 461-081-14 **RM-2 CUMULATIVE RISK FOR A TRESPASSER**

CUMULATIVE 6.47E-05 CUMULATIVE HI 1.28E+00 CHEMICALS OF CONCERN	SUM OF IELCR	SUM OF HQ (HI)
Benzene	2.58E-06	7.71E-02
Lead		
Arsenic	1.29E-05	1.02E+00
Chromiun VI	4.40E-05	3.80E-02
Ethylbenzene	3.16E-06	8.85E-03
Naphthalene	2.02E-06	1.38E-01
Toluene		1.91E-03
CUMULATIVE RISK	6.47E-05	1.28E+00

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SITE: VCP Site No. 461-081-14

RM-2 IELCR FOR A CONSTRUCTION WORKER

CUMULATIVE 2.77E-06	AIR	SOIL UPTO DEPTH OF CONSTRUCTION					SOIL VAPOR	GROUNDWATER
CUMULATIVE HI 5.08E-01	Outdoor	Dermal Contact	Ingestion	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Particulates	Combined Pathway	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions
CHEMICALS OF CONCERN								
Benzene	NC	NREP	NREP	NC	NREP	NC	NC	NC
Lead	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC
Arsenic	NC	2.13E-09	3.31E-07	NC	4.04E-07	NC	NC	NC
Chromiun VI	NC	1.81E-10	2.81E-08	NC	2.01E-06	NC	NC	NC
Ethylbenzene	NC	NREP	NREP	NC	NREP	NC	NC	NC
Naphthalene	NC	NTOX	NTOX	NC	NREP	NC	NC	NC
Toluene	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC
CUMULATIVE RISK								

For exclusive use by Gallet & Associates

SITE: VCP Site No. 461-081-14 **RM-2 HQ FOR A CONSTRUCTION WORKER**

CUMULATIVE 2.77E-06	AIR	SOIL UPTO DEPTH OF CONSTRUCTION					SOIL VAPOR	GROUNDWATER
CUMULATIVE HI 5.08E-01	Outdoor	Dermal Contact	Ingestion	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Particulates	Combined Pathway	Outdoor Inhalation of Vapor Emissions	Outdoor Inhalation of Vapor Emissions
CHEMICALS OF CONCERN								
Benzene	NC	NREP	NREP	NC	NREP	NC	NC	NC
Lead	NC	NTOX	NTOX	NC	NTOX	NC	NC	NC
Arsenic	NC	3.32E-04	5.16E-02	NC	4.38E-01	NC	NC	NC
Chromiun VI	NC	8.44E-06	1.31E-03	NC	1.67E-02	NC	NC	NC
Ethylbenzene	NC	NREP	NREP	NC	NREP	NC	NC	NC
Naphthalene	NC	NREP	NREP	NC	NREP	NC	NC	NC
Toluene	NC	NREP	NREP	NC	NREP	NC	NC	NC
CUMULATIVE RISK								

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SITE: VCP Site No. 461-081-14 RM-2 CUMULATIVE RISK FOR A CONSTRUCTION WORKER

CUMULATIVE 2.77E-06 / CUMULATIVE HI 5.08E-01	SUM OF IELCR	SUM OF HQ (HI)
CHEMICALS OF CONCERN		
Benzene		
Lead		
Arsenic	7.38E-07	4.90E-01
Chromiun VI	2.03E-06	1.80E-02
Ethylbenzene		
Naphthalene		
Toluene		
CUMULATIVE RISK	2.77E-06	5.08E-01

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APPENDIX G

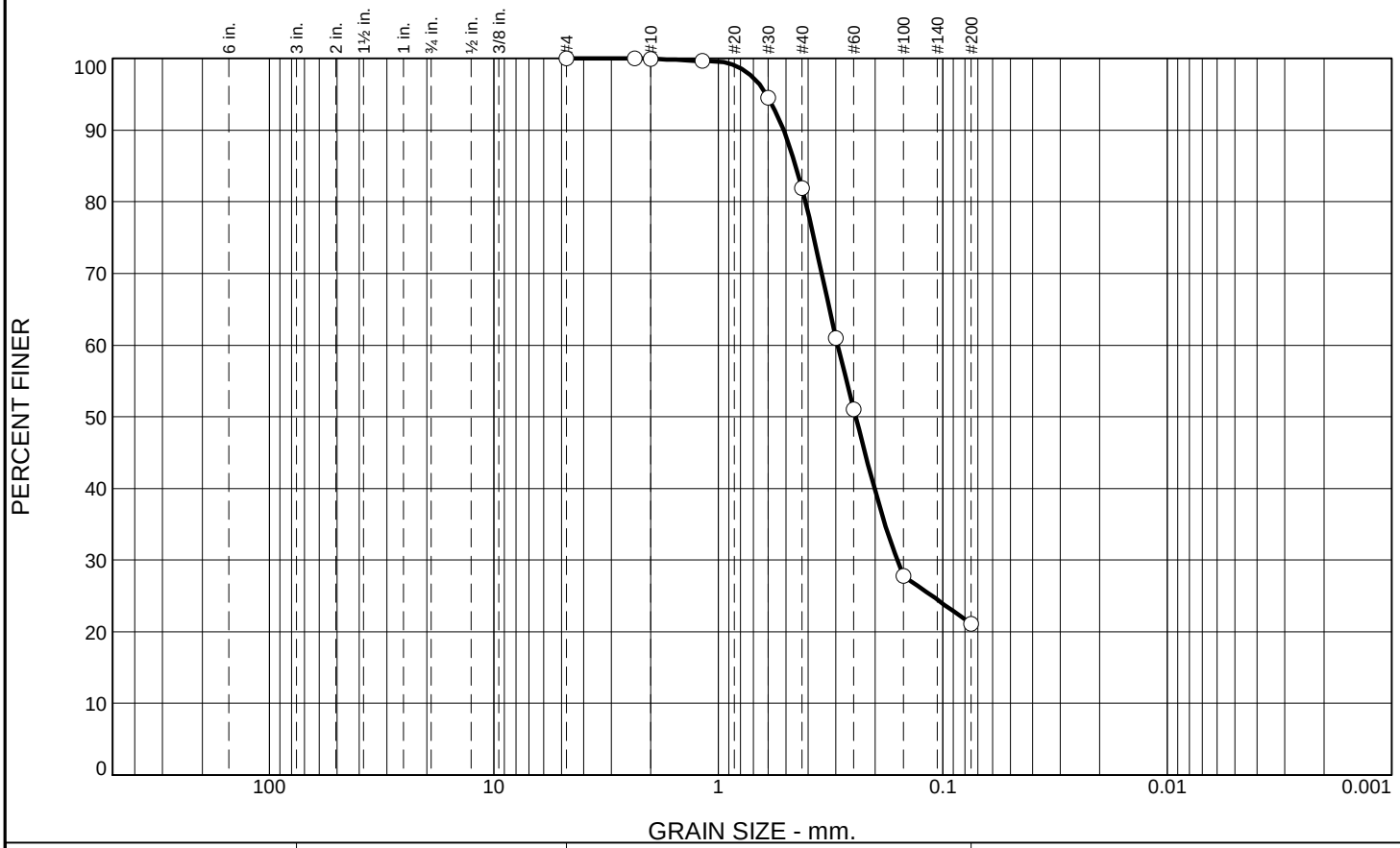
TUBE DENSITY

Project name: **East Glenn Ave. LS1** **Project Number:** **E1167114**

		ASTM Standard Utilized		
Boring #	**SB-2**			
Tube #				
Depth, ft	**4-6'**			
Sample #				
Lenth, in	**5.5**	**D7263**		
Diameter, in	**2.88**	**D7263**		
Volume, in^3	**35.83**	**D7263**		
Weight, g	**1184**	**D7263**		
Tare Name				
Tare+Wet, g	**845.5**			
Tare+Dry, g	**769.2**			
Tare Wt, g	**225.4**			
W.C., %	**14.0**	**D2216**		
Wet Den., pcf	**125.8**	**D7263**		
Dry Den., pcf	**110.4**	**D7263**		
Soil description	**Orange Tan sand**			
W.C. cc/cc	0.13	**D2216**		
Wet Den g/cc	2.015	**D7263**		
Dry Den g/cc	1.768	**D7263**		
Porosity	0.35	**D7263**		
Sp.Gr.	2.715	**D854**		

Terracon

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	18.1	60.8	21.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#8	100.0		
#10	100.0		
#16	99.7		
#30	94.6		
#40	81.9		
#50	61.0		
#60	51.0		
#100	27.8		
#200	21.1		

* (no specification provided)

Material Description

Orange tan sand

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 0.5125 D_{85}= 0.4529 D_{60}= 0.2948
D_{50}= 0.2453 D_{30}= 0.1602 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Source of Sample: Shelby Tube **Depth:** 4-6'
Sample Number: SB-2 **Date:** 5/23/16

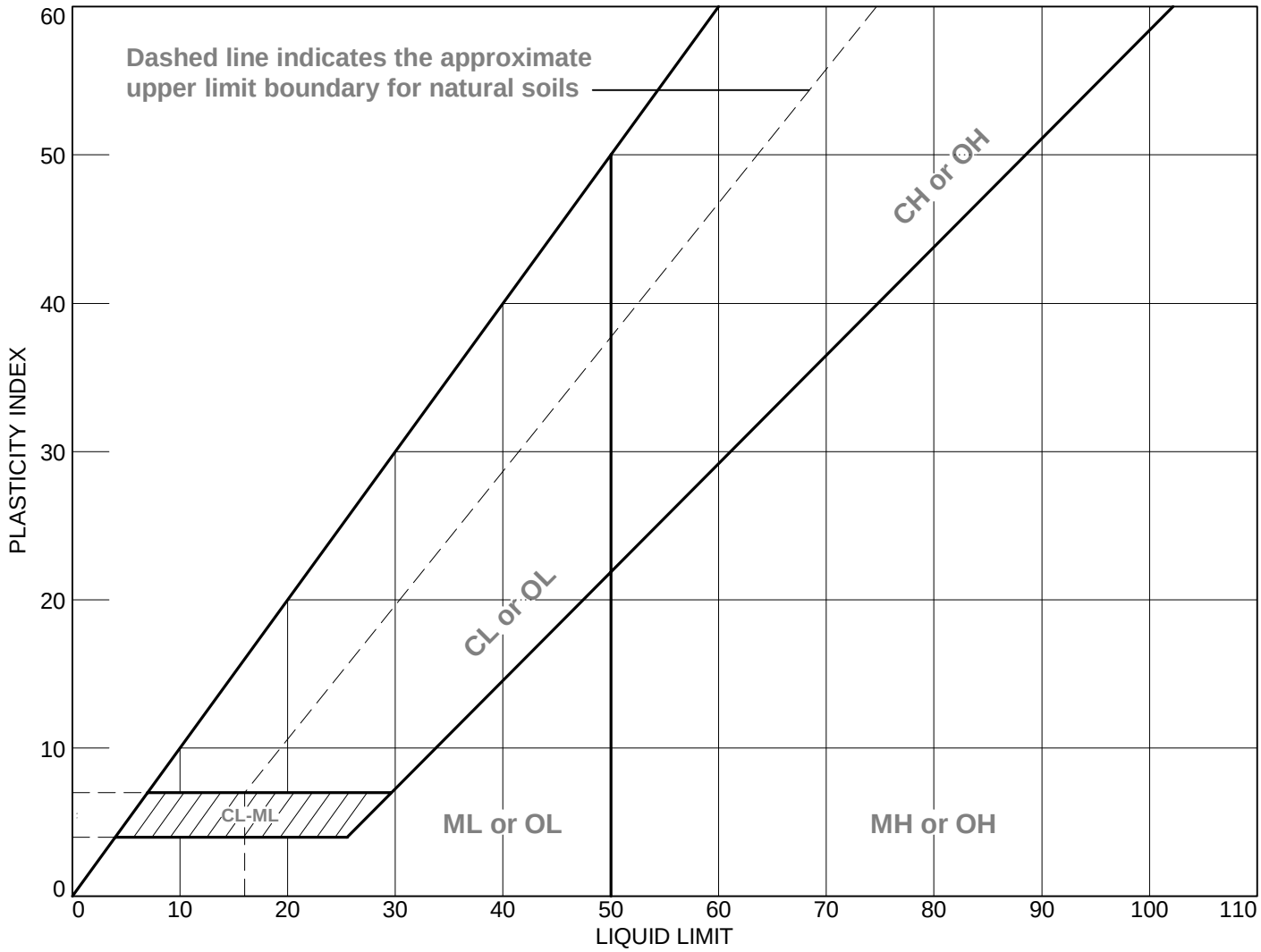
Terracon Consultants, Inc.

Birmingham, Alabama

Client:
Project: East Glenn Avenue
Project No: E1167114 **Figure**

Tested By: LW

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	Shelby Tube	SB-2	4-6'	14.0	NP	NV	NP	SM

Terracon Consultants, Inc.

Birmingham, Alabama

Client:

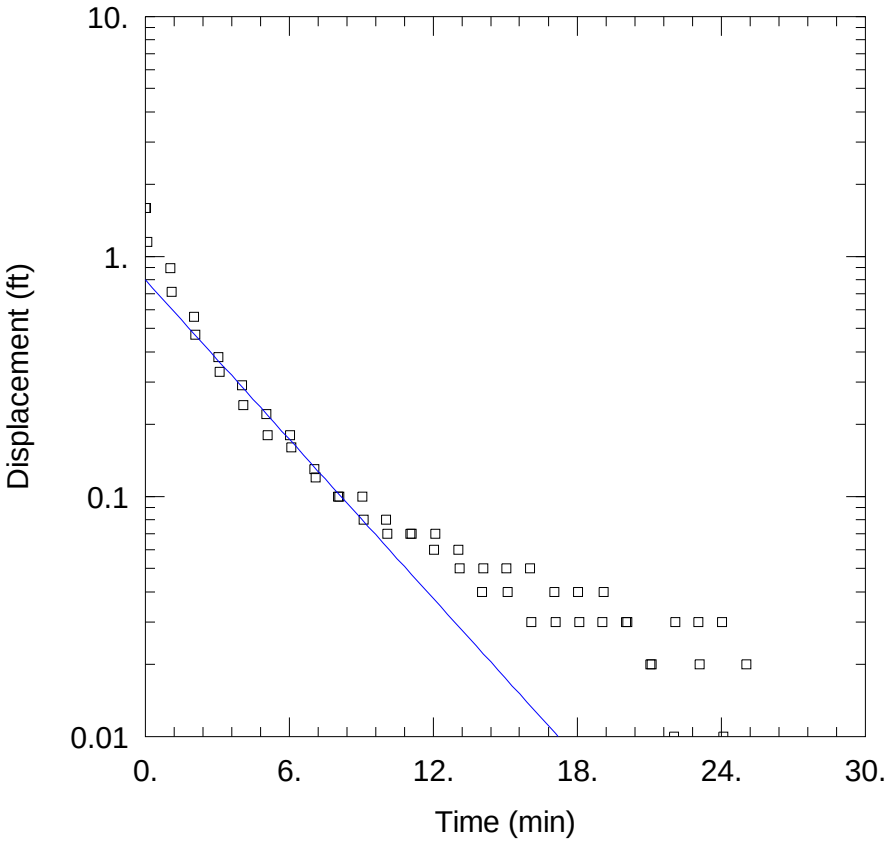
Project: East Glenn Avenue

Project No.: E1167114

Figure

Tested By: LW

APPENDIX H



WELL TEST ANALYSIS

Data Set: N:\...\MW-3 slug out.aqt
Date: 06/30/16 Time: 13:56:32

PROJECT INFORMATION

Company: Terracon
Client: Landmark Collegiate Aquistions
Project: E1167114
Location: Auburn, Alabama
Test Well: MW-3
Test Date: 05/26/2016

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.0001813 ft/min
y0 = 0.7984 ft

AQUIFER DATA

Saturated Thickness: 8.67 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-3)

Initial Displacement: 1.59 ft
Total Well Penetration Depth: 20.96 ft
Casing Radius: 0.083 ft

Static Water Column Height: 8.67 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

Data Set: N:\Projects\2016\E1167114\Working Files\Laboratory-Field Data-Boring Logs\MW-3 slug out.aqt
Date: 06/30/16
Time: 13:56:09

PROJECT INFORMATION

Company: Terracon
Client: Landmark Collegiate Aquistions
Project: E1167114
Location: Auburn, Alabama
Test Date: 05/26/2016
Test Well: MW-3

AQUIFER DATA

Saturated Thickness: 8.67 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: MW-3

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.59 ft
Static Water Column Height: 8.67 ft
Casing Radius: 0.083 ft
Well Radius: 0.083 ft
Well Skin Radius: 0.708 ft
Screen Length: 10. ft
Total Well Penetration Depth: 20.96 ft

No. of Observations: 51

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.05	1.59	8.1	0.1	17.05	0.04
0.1	1.15	9.05	0.1	17.1	0.03
1.05	0.89	9.1	0.08	18.05	0.04

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
1.1	0.71	10.05	0.08	18.1	0.03
2.05	0.56	10.1	0.07	19.05	0.03
2.1	0.47	11.05	0.07	19.1	0.04
3.05	0.38	11.1	0.07	20.05	0.03
3.1	0.33	12.05	0.06	20.1	0.03
4.05	0.29	12.1	0.07	21.05	0.02
4.1	0.24	13.05	0.06	21.1	0.02
5.05	0.22	13.1	0.05	22.05	0.01
5.1	0.18	14.05	0.04	22.1	0.03
6.05	0.18	14.1	0.05	23.05	0.03
6.1	0.16	15.05	0.05	23.1	0.02
7.05	0.13	15.1	0.04	24.05	0.03
7.1	0.12	16.05	0.05	24.1	0.01
8.05	0.1	16.1	0.03	25.05	0.02

SOLUTION

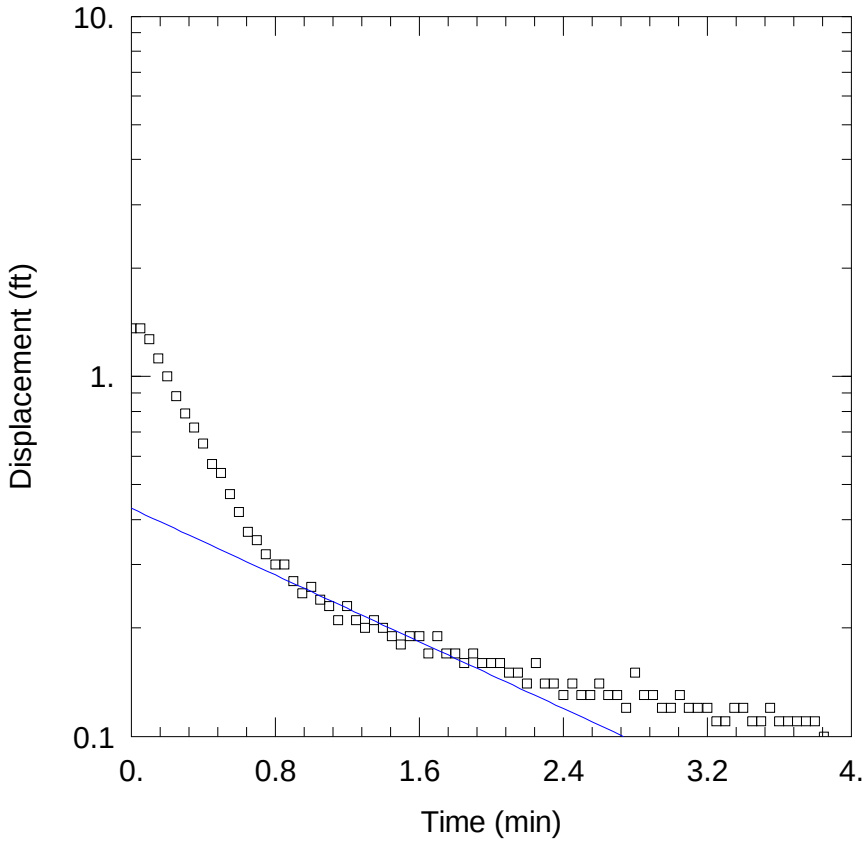
Slug Test
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
ln(Re/rw): 0.

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0001813	ft/min
y0	0.7984	ft

K = 9.209E-5 cm/sec
T = K*b = 0.001572 ft^2/min (0.02434 sq. cm/sec)



WELL TEST ANALYSIS

Data Set: N:\...\MW-5 slug out.aqt
Date: 06/30/16 Time: 13:55:08

PROJECT INFORMATION

Company: Terracon
Client: Landmark Collegiate Aquistions
Project: E1167114
Location: Auburn, Alabama
Test Well: MW-5
Test Date: 05/26/2016

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.0003582 ft/min
y0 = 0.4301 ft

AQUIFER DATA

Saturated Thickness: 9.48 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-5)

Initial Displacement: 1.36 ft
Total Well Penetration Depth: 25.16 ft
Casing Radius: 0.083 ft

Static Water Column Height: 9.48 ft
Screen Length: 10. ft
Well Radius: 0.083 ft

Data Set: N:\Projects\2016\E1167114\Working Files\Laboratory-Field Data-Boring Logs\MW-5 slug out.aqt
Date: 06/30/16
Time: 13:54:20

PROJECT INFORMATION

Company: Terracon
Client: Landmark Collegiate Aquistions
Project: E1167114
Location: Auburn, Alabama
Test Date: 05/26/2016
Test Well: MW-5

AQUIFER DATA

Saturated Thickness: 9.48 ft
Anisotropy Ratio (Kz/Kr): 1.

SLUG TEST WELL DATA

Test Well: MW-5

X Location: 0. ft
Y Location: 0. ft

Initial Displacement: 1.36 ft
Static Water Column Height: 9.48 ft
Casing Radius: 0.083 ft
Well Radius: 0.083 ft
Well Skin Radius: 0.708 ft
Screen Length: 10. ft
Total Well Penetration Depth: 25.16 ft

No. of Observations: 77

Observation Data

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.05	1.36	1.35	0.21	2.65	0.13
0.1	1.27	1.4	0.2	2.7	0.13
0.15	1.12	1.45	0.19	2.75	0.12

Time (min)	Displacement (ft)	Time (min)	Displacement (ft)	Time (min)	Displacement (ft)
0.2	1.	1.5	0.18	2.8	0.15
0.25	0.88	1.55	0.19	2.85	0.13
0.3	0.79	1.6	0.19	2.9	0.13
0.35	0.72	1.65	0.17	2.95	0.12
0.4	0.65	1.7	0.19	3.	0.12
0.45	0.57	1.75	0.17	3.05	0.13
0.5	0.54	1.8	0.17	3.1	0.12
0.55	0.47	1.85	0.16	3.15	0.12
0.6	0.42	1.9	0.17	3.2	0.12
0.65	0.37	1.95	0.16	3.25	0.11
0.7	0.35	2.	0.16	3.3	0.11
0.75	0.32	2.05	0.16	3.35	0.12
0.8	0.3	2.1	0.15	3.4	0.12
0.85	0.3	2.15	0.15	3.45	0.11
0.9	0.27	2.2	0.14	3.5	0.11
0.95	0.25	2.25	0.16	3.55	0.12
1.	0.26	2.3	0.14	3.6	0.11
1.05	0.24	2.35	0.14	3.65	0.11
1.1	0.23	2.4	0.13	3.7	0.11
1.15	0.21	2.45	0.14	3.75	0.11
1.2	0.23	2.5	0.13	3.8	0.11
1.25	0.21	2.55	0.13	3.85	0.1
1.3	0.2	2.6	0.14		

SOLUTION

Slug Test
Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
ln(Re/rw): 4.27

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	0.0003582	ft/min
y0	0.4301	ft

K = 0.000182 cm/sec
T = K*b = 0.003396 ft^2/min (0.05258 sq. cm/sec)