**Waste Management Division**
**PO Box 95, 29 Hazen Drive**
**Concord, NH 03302**

**Type of Submittal (Check One-Most Applicable)**

| | |
|---|---|
| ☐ Work Scope<br>☐ Reimbursement Request | ☐ Remedial Action<br>• Remedial Action Plan<br>• Bid Plans and Specifications<br>• Remedial Action Implementation Report<br>☐ Treatment System and POE O&M<br>☐ Activity and Use Restriction |
| ☐ UST Facility Report<br>☐ AST Facility Report | |
| ☐ Emergency/Initial Response Action<br>☐ Groundwater Quality Assessment | ☐ Temporary Surface Water Discharge Permit |
| ☐ Initial Site Characterization<br>☐ Site Investigation<br>• Site Investigation Report<br>• Supplemental Site Investigation Report<br>• GMZ Delineation<br>• Source Area Investigation<br>• Data Submittal<br>• Annual Summary Report<br>☒ Unsolicited Phase II Environmental Site Assessment<br>☐ Closure Documentation | ☐ Groundwater Management Permit<br>• Permit Application<br>• Renewal Application<br>• Deed Recordation Documentation<br>• Abutter Notification Documentation<br>• Release of Recordation<br>☐ Data Submittal<br>☐ Annual Summary Report |

# PHASE II ENVIRONMENTAL SITE ASSESSMENT

R & D Paving
81 Memorial Street
Franklin, New Hampshire
NHDES Site #201409001

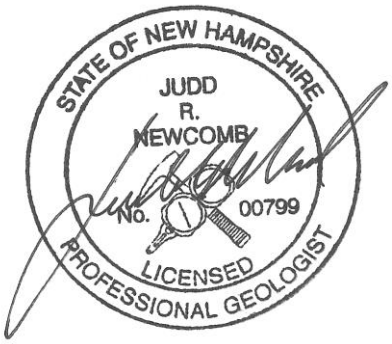
City of Franklin
124 Memorial Street
Franklin, New Hampshire 03235
Phone: (603) 934-2341
Contact: Mr. Dick Lewis

Prepared For:
Lakes Region Planning Commission, Brownfields Assessment Grant
103 Main Street #3
Meredith, New Hampshire 03253
Phone: (603) 279-8171
Contact: Mr. Jeff Hayes

Judd Newcomb

Digitally signed by Judd Newcomb
DN: cn=Judd Newcomb, o=Credere Associates, LLC, ou, email=jnewcomb@crederellc.com, c=US
Date: 2015.04.03 14:57:51 -04'00'

Prepared By:
**CREDERE ASSOCIATES, LLC**
776 Main Street
Westbrook, ME 04902
Phone: (207) 828-1272 ext. 16
Contact: Judd Newcomb, CG, PG




April 2, 2015

**Recommended Risk Category (check one)**

| | | |
|---|---|---|
| ☐ 1. Immediate Human Health Risk (Impacted water supply well, etc.) | ☐ 4. Surface Water Impact | ☐ 7. Alternate Water Available/Low Level Groundwater Contamination (<1,000 X AGQS) |
| ☐ 2. Potential Human Health Risk (Water supply well within 1,000' or Site within SWPA) | ☐ 5. No Alternate Water Available/No Existing Wells in Area | ☒ 8. No AGQS Violation/No Source Remaining |
| ☐ 3. Free Product or Source Hazard | ☐ 6. Alternate Water Available/High Level Groundwater Contamination (>1,000 X AGQS) | ☐ Closure Recommended |

# Phase II Environmental Site Assessment

**R & D Paving**
**81 Memorial Street**
**Franklin, New Hampshire 03235**
**NHDES Site # 201409001**

*Prepared for:*
**City of Franklin**
**124 Memorial Street**
**Franklin, New Hampshire 03235**

*Funded by:*
**Brownfields Assessment Grant #: BF-96176301**
**Lakes Region Planning Commission**
**103 Main Street #3**
**Meredith, NH 03253**

**April 2, 2015**

*In Reference to:*
Project No. 14001247

*Submitted by:*
Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092

CREDERE ASSOCIATES, LLC
776 Main Street
Westbrook, Maine 04092
Phone: 207-828-1272
Fax: 207-887-1051

April 2, 2015

Dick Lewis
City of Franklin Planning Department
124 Memorial Street
Franklin, NH 03235

Jeff Hayes
Lakes Region Planning Commission
103 Main Street #3
Meredith, NH 03253

**Subject:** **Phase II Environmental Site Assessment**
**R & D Paving**
**81 Memorial Street, Franklin, New Hampshire**
**NHDES Site # 201409001**

Dear Mr. Lewis and Mr. Hayes:

This report has been prepared to present the results of a Phase II Environmental Site Assessment completed for the above referenced property (the Site). Sections 6 and 7 of this report include the conclusions and recommendations generated during the performance of the Phase II Environmental Site Assessment.

Please do not hesitate to contact me at (207) 828-1272 extension 15 if you have any questions, comments, or require additional information regarding this investigation.

Sincerely,

**CREDERE ASSOCIATES, LLC**

Allison S. Drouin
Primary Author/Geologist

Judd Newcomb, PG, CG
Geologist/Project Manager

Enclosure: Phase II ESA

CC: Rebecca Williams, NHDES
Alan Peterson, EPA

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# EXECUTIVE SUMMARY

Credere Associates, LLC (Credere) was retained by the Lakes Region Planning Commission (LRPC) to conduct a Phase II Environmental Site Assessment (ESA) at R & D Paving located at 81 Memorial Street in Franklin, New Hampshire (the Site). This Phase II ESA was completed in general conformance with the ASTM International (ASTM) E 1903-11 *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process* and with Credere's US Environmental Protection Agency (EPA) and New Hampshire Department of Environmental Services (NHDES) approved Site-Specific Quality Assurance Project Plan (SSQAPP) for the Site dated October 10, 2014.

The primary objective of this Phase II ESA is to confirm or dismiss the recognized environmental conditions (RECs) and environmental findings, and fulfill the recommendations identified in Credere's September 11, 2014, Phase I ESA. The following objectives were established to aid in designing the scope of work:

- Assess the presence of historical onsite and upgradient underground storage tanks (USTs) and any associated environmental impacts
- Assess for environmental impacts associated with the historical use of the Site as a garage with an earthen floor
- Assess for potential contaminant migration onto the Site from the historical upgradient cleaners located at 31 to 33 Memorial Street
- Assess the Site building for the presence of hazardous building materials
- Assess for environmental impacts associated with the most recent use of the Site as a paving company

The following sampling program was conducted to accomplish the above objectives.

- Performed a ground penetrating radar (GPR) survey of the Site
- Advanced soil borings and collected soil samples from each boring location
- Collected surface soil samples
- Installed groundwater monitoring wells and collected groundwater samples
- Performed an asbestos survey of the Site building and collected samples of suspect asbestos-containing materials (ACM)
- Performed a polychlorinated biphenyls (PCB)-containing building material survey of the Site building and collected samples of suspect PCB-containing materials
- Performed a lead-based paint (LBP) screening of the Site building
- Performed an inventory of universal, hazardous, and/or other wastes present in the Site building

The location of the historical onsite UST was surveyed using GPR to assess if the UST was still present. The area was identified as an anomaly; however, the anomaly was consistent with disturbed soil and was not characteristic of a UST, indicating the UST was likely removed and the excavation backfilled. Soil boring/monitoring well CA-SB-2/CA-MW-2 was installed in the suspected area of the historical onsite UST, and CA-SB-1/CA-MW-1 was installed on the property line nearest the offsite UST. Soil and groundwater analytical results for samples collected from both locations did not exhibit evidence of petroleum impacts.

Three surface soil samples (CA-SS-1, CA-SS-2, and CA-SB-5) were collected from immediately beneath the asphalt at the Site. All three samples resulted in polycyclic aromatic hydrocarbon (PAH) exceedances of the NHDES soil remediation standards (SRSs) with the highest concentrations at CA-SS-2 in the front (west side) of the Site building. These detections may be the results of surface releases to the Site during use as a garage or paving company during approximately 50 years of operations; however, PAHs are also a component of asphalt and may also be the result of leaching. In addition, possible comingled coal ash was observed in some samples on and off the Site, which is unregulated in the State of New Hampshire and is common in mill areas, and could also be a source of PAHs at the Site. PAH impacts are also typical of mill yards through general industrial operations or stack emissions; however, surface samples collected from nearest to the Site on the adjacent Ferrari Realty Trust and Franklin Business Center properties did not exhibit similar elevated PAHs. Sample results for CA-SS-2 may be reflective of greater garage activity in the front of the Site building than on the sides or rear. Total petroleum hydrocarbon analysis or data from beneath the concrete slab may indicate if the source of contamination was from the earthen floor; however, based on available data, PAHs cannot be attributed to a specific source.

Trichloroethene (TCE) was detected in groundwater below the NHDES Ambient Groundwater Quality Standards (AGQS) in two monitoring wells at the Site (CA-MW-2 and CA-MW-3). Groundwater at the Site was assessed to be flowing westward, and contaminants of concern (COCs) were not detected in the upgradient most well (CA-MW-4), indicating TCE does not appear to be coming from an offsite source (e.g. 31-33 Memorial Street). Available data does not indicate an obvious onsite source area of TCE; however, due to the density of TCE being greater than the density water, TCE may increase in concentration with depth in the aquifer and therefore, the full extent of TCE within the aquifer has not been fully assessed. Under the current conceptual Site model (CSM) and future use of the Site, there are no receptors or exposure pathways to TCE in groundwater since concentrations are below the AGQS and below the indoor air screening levels, which indicates vapor intrusion is not likely, and since public water is available to the Site and surrounding area.

The Site building was surveyed for the presence of ACM, PCB-containing building materials, and LBP. Due to the building's concrete block construction with a metal roof, no materials that typically contain asbestos or PCBs were identified in the Site building. Painted surfaces were screened for LBP and no LBP was identified. Additionally, the current Site occupants indicated the painted surfaces had been recently painted.

Based on these results, Credere made the following conclusions with regard to the RECs and environmental findings identified in the Phase I ESA:

- REC #1 – Historical USTs at the Site and immediately upgradient of the Site: DISMISSED
- REC #2 – Possible release of petroleum during historical use of the Site as a garage with an earthen floor: CONFIRMED
- REC #3 – Historical use of the upgradient 31 to 33 Memorial Street property: DISMISSED
- Environmental Finding #1 – Possible hazardous building materials throughout the Site: DISMISSED
- Environmental Finding #2 – Current use of the Site by a paving company: DISMISSED

Based on the findings and conclusions of this investigation, Credere makes the following recommendations:

- Maintenance of the current asphalt to prevent exposure to current and future occupants prior to redevelopment
- Observation and possible further assessment of soil beneath the Site building after future building demolition
- Preparation of a Soil Management Plan to ensure proper handling of PAH impacted soil during future redevelopment of the Site

# 1. INTRODUCTION

Credere Associates, LLC (Credere) was retained by the Lakes Region Planning Commission (LRPC) on behalf of the City of Franklin to conduct a Phase II Environmental Site Assessment (ESA) at R & D Paving located at 81 Memorial Street in Franklin, New Hampshire (the Site). This Phase II ESA was completed in general conformance with the ASTM International (ASTM) E 1903-11 *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process* and with Credere's US Environmental Protection Agency (EPA) and New Hampshire Department of Environmental Services (NHDES) approved Site Specific Quality Assurance Project Plan (SSQAPP) for the Site dated October 10, 2014. A copy of the SSQAPP is included in **Appendix A**.

## 1.1 PURPOSE

Phase II activities were performed to assess recognized environmental conditions (RECs) identified in Credere's September 11, 2014, Phase I ESA and to support redevelopment planning at the Site.

## 1.2 STATEMENT OF OBJECTIVES

This section was developed to provide clarity and transparency in communicating and interpreting Phase II ESA results. The primary objective of this Phase II ESA is to confirm or dismiss the RECs and environmental findings, and fulfill the recommendations identified in Credere's September 11, 2014, Phase I ESA. The following objectives were established to aid in designing the scope of work:

- Assess the presence of historical onsite and upgradient underground storage tanks (USTs) and any associated environmental impacts
- Assess for environmental impacts associated with the historical use of the Site as a garage with an earthen floor
- Assess for potential contaminant migration onto the Site from the historical upgradient cleaners located at 31 to 33 Memorial Street
- Assess the Site building for the presence of hazardous building materials
- Assess for environmental impacts associated with the most recent use of the Site as a paving company

# 2. BACKGROUND INFORMATION

## 2.1 SITE DESCRIPTION

The 0.242-acre Site is part of the Franklin Falls Historic District and consists of a single-story slab-on-grade garage building with three garage bay doors and an office. The property is identified by the City of Franklin as Map 117, Lot 261. During Phase II work, the Site building was actively being remodeled into an emergency response facility with ambulance parking and equipment storage in the main southern garage bay and sleeping quarters, lounges and an office in the remainder of the Site building. The exterior of the Site is asphalt paved. The Site is currently owned by the Franklin Business and Industrial Development Corporation (FBIDC), who leases the Site to the emergency response company. A Site Location Plan has been provided as **Figure 1**.

## 2.2 SITE HISTORY

*The Site*

The Site was developed as early as 1884 as a lumber yard for storage of cord wood. By 1892, the Site was occupied by portions of the F. F. Company (possibly Franklin Falls Power and Light Company). By 1911, the Site was developed with a two-story structure occupied by a wheel wright, painter, and black smith shop, and by a garage from at least 1923 through 1929. Between 1948 and 1986, the southern end of the Site was occupied by a three bay truck garage that was part of the adjacent grocer building. The current Site building was constructed between 1948 and 1956 and was originally a private garage with an earthen floor. By 1986, the truck garage on the southern portion of the Site was removed, and Site conditions remain relatively unchanged from that time through to the present. R & D Paving purchased and completely renovated the Site building in 2003 with poured concrete floors, a new office, bare plywood partitions, and new exterior siding. The Site was most recently remodeled into an emergency response facility.

Historical Sanborn Fire Insurance® maps reviewed during the Phase I ESA indicate the Site had a gasoline UST in 1923, and a second gasoline UST was located near the southern property boundary in 1948 (see **Figure 2**). Closure documentation for these USTs was not found during review of NHDES records for the Phase I ESA.

*Surrounding Area*

The surrounding area was occupied by a lumber yard as early as 1884 and by the F. F. Company as early as 1892. Beginning in at least 1897, the surrounding area to the southeast was occupied by the Shepard Wholesale Grocer. A steam laundry shop was located at 31 to 33 Memorial Street, south and upgradient of the Site from at least 1897 through at least 1967. The adjoining property west of the Site was developed with the Acme Knitting Machine and Needle Company by 1911. By 1986, the adjoining Shepard Grocery building and associated truck garage were removed. Kar Z Karma Motors was located at the 31 to 33 Memorial Street property from 2003 through 2008.

## 2.3 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

**Phase I Environmental Site Assessment (ESA), September 11, 2014, Credere**

Credere prepared a Phase I ESA for the Site dated September 11, 2014. Based on reviews of historical sources, environmental databases, interviews, information provided by the City of Franklin, Site reconnaissance, and judgment by the Environmental Professional; the following RECs were identified in connection with the Site:

- REC #1 – Historical USTs at the Site and immediately upgradient of the Site
- REC #2 – Possible release of petroleum during historical use of the Site as a garage with an earthen floor
- REC #3 – Historical use of the presumed upgradient 31 to 33 Memorial Street property

The following was identified as a *de minimis* condition (DMC), which is defined as an environmental concern that generally does not present a threat to human health or the environment and generally would not be the subject of an enforcement action if brought to the attention of regulatory agencies:

- DMC #1 – Drum storage area within the Site building

Additionally, the following environmental findings, which did not meet the definition of a REC, historical REC (HREC), controlled REC (CREC), or DMC; however, warranted the opinion of an Environmental Professional, were identified:

- Environmental Finding #1 – Possible hazardous building materials throughout the Site
- Environmental Finding #2 – Current use of the Site by a paving company

Based on the RECs, DMC, and environmental findings identified during this Phase I ESA, Credere made the following recommendations:

- A ground penetrating radar (GPR) survey to locate possible historical USTs that may be present at the Site
- A Phase II subsurface investigation to confirm or dismiss the RECs and environmental findings identified in this Phase I ESA
- A Hazardous Building Material Survey (HBMS) to assess the presence of hazardous building materials and/or universal wastes throughout the Site

## 2.4 REDEVELOPMENT SCENARIO

The Site has been acquired by FBIDC and future plans for the Site include leasing to an emergency response company in the short term. Long term plans for the Site have not been finalized; however, they include demolition of the Site building and repurposing the Site as City parking or a regional transportation hub.

# 3. SCOPE OF WORK & METHODOLOGY

The following sampling program was developed to investigate select environmental media and building materials at the Site and meet the objectives identified in **Section 1**. Sampling was conducted in accordance with Credere's October 10, 2014, SSQAPP for the Site, which is included in **Appendix A**. A photo log of field activities in included as **Appendix B**.

## 3.1 GEOPHYSICAL SURVEY

On October 20, 2014, Credere contracted with Vermont Underground Locators (VUL) of South Burlington, Vermont, to perform a GPR survey at the Site to assess for the presence of a historical UST. Proposed boring locations were also cleared of anomalies prior to drilling.

VUL performed the GPR survey by transecting the Site in a grid pattern in approximate 5-foot intervals. Identified anomalies were scanned at closer intervals to estimate their extent.

## 3.2 SOIL BORING ADVANCEMENT & SOIL SAMPLING

On October 27 and 30, 2014, Credere oversaw Geosearch, Inc. of Fitchburg, Massachusetts, advance five (5) soil borings (CA-SB-1 through CA-SB-5) at the Site using a direct-push Geoprobe® 7820 DT track mounted rig. Soil borings CA-SB-1 through CA-SB-4 were advanced to 20 feet below ground surface (bgs) and CA-SB-5 was advanced to 15 feet bgs. Soil cores were collected continuously using dedicated, disposable polyethylene liners. Macrocores were individually logged, evidence of contamination was noted, and soil was field screened for total volatile organic compounds (VOCs) using a MiniRae 2000 photoionization detector (PID) calibrated with a 100 part per million by volume ($ppm_v$) isobutylene gas standard with an instrument response factor of 1.0 $ppm_v$. Soil was screened in accordance with the NHDES HWRB-12 jar headspace technique SOP. Soil boring logs are provided in **Appendix C**.

Six (6) soil borings were proposed in the SSQAPP: two of which were proposed within the Site building. Due to remodeling activities inside the Site building, sensitivity of the current occupant's equipment (e.g. emergency medical equipment), and lower overhead clearance than anticipated, the owner requested we not perform soil borings within the Site building. As a compromise, one soil boring (CA-SB-5) was advanced immediately outside the main garage bay door, and it was recommended to the current Site owner that soil beneath the Site building be assessed following future demolition of the Site building.

Surface soil samples were collected to support future Site reuse planning and to assess surficial impacts associated with current and historical Site use (CA-SS-1, CA-SS-2, and CA-SB-5). Subsurface samples were collected from the groundwater interface to assess possible impacts from historical USTs (CA-SB-2), historical use of the Site (CA-SB-3), and upgradient/offsite sources (CA-SB-1 and CA-SB-4). Visible asphalt and base materials, landscaping materials, and other organic detritus were removed prior to sampling.

In all soil samples, representative soil from a 2-foot interval was sampled from the macrocore using decontaminated hand tools and placed in a decontaminated stainless steel bowl. Volatile samples (VOCs) were collected directly from the macrocores using a dedicated soil syringe immediately after opening to prevent loss of volatiles and degradation. Soil for other analyses was taken from the macrocore, homogenized in a decontaminated stainless steel bowl, and placed in laboratory provided glassware. Soil samples were stored on ice and submitted to Absolute Resource Associates (ARA) of Portsmouth, New Hampshire, for analysis.

Sample locations are depicted on **Figure 2**, and a summary of soil samples collected from the Site is provided in **Table 1**.

Excess soil from each boring or surface sample location was returned to its place of origin within the borehole or to the surface surrounding the borehole.

## 3.3 MONITORING WELL INSTALLATION & GROUNDWATER SAMPLING

Soil borings CA-SB-1 through CA-SB-4 were completed as groundwater monitoring wells (CA-MW-1 through CA-MW-4) using 1-inch diameter PVC materials, with 0.010-inch slotted screen and solid riser. Each well was installed with a 10-foot slotted screen with at least 5 feet of screen below the depth of the water table. The well annulus was constructed using No. 2 washed silica sand and a bentonite seal was installed above the screen. The wells were completed with flush mounted road boxes. Each well was developed by over pumping and agitation methods. The wells were purged until a total of at least three well volumes have been removed and turbidity had been reduced to less than 20 NTUs.

Following installation, the top of PVC elevation was determined for each monitoring well using a rod and level. A granite corner monument located off the northwest corner of the Site building was utilized as a permanent benchmark (assumed elevation of 302.00 feet AMSL based on the United States Geological Survey (USGS) Topographic Map of the Franklin Quadrangle, New Hampshire) to allow for the determination of relative groundwater elevations and the calculation of groundwater flow at the Site.

Following development, Credere allowed at least 14 days for the monitoring wells to equilibrate with the surrounding aquifer prior to sampling. On November 12 and 13, 2014, depth to groundwater and non-aqueous phase liquid (NAPL) thickness, if present, was measured. Groundwater elevations were calculated relative to the top of the well casing and elevations were mapped to assess the groundwater flow direction. A summary of well construction details and gauging data is provided in **Table 2**, and a groundwater contour map showing well locations is provided as **Figure 3**.

Groundwater samples were collected to assess groundwater impacts from a historical onsite UST, historical offsite UST, historical offsite/upgradient cleaner, and historical use of the Site as a garage with earthen floor. On November 12 and 13, 2014, Credere sampled each well using low-flow sampling methodologies. During sampling, groundwater was periodically monitored for temperature, pH, oxidation-reduction potential (ORP), specific conductivity, dissolved

oxygen, and turbidity using a multi-parameter meter and an in-line flow through cell until parameters stabilized over a period of three readings, spaced at least 5 minutes apart or at a spacing to allow for a complete exchange of flow through the flow through cell calculated based on the flow through cell volume and flow rate. Upon stabilization of field parameters, or in the case parameters would not stabilize upon purging at least 3 to 5 well volumes, groundwater samples were collected from immediately after the pump in order of decreasing volatility. Groundwater samples were stored on ice and submitted to ARA for analysis. Field logs from the groundwater sampling event are included in **Appendix C**.

## 3.4 ASBESTOS SAMPLING

On October 20, 2014, the Site was surveyed by a Credere New Hampshire Certified Asbestos Inspector for the presence of suspect asbestos containing materials (ACM). Due to the nature of the original construction (concrete block) and new construction of the remainder of the Site building, no suspect ACM was identified in the Site building, and no samples were collected.

## 3.5 PCBS-CONTAINING BUILDING MATERIALS SAMPLING

On October 20, 2014, the buildings was surveyed to locate the materials that in Credere's experience are more likely to contain concentrations of polychlorinated biphenyls (PCBs) exceeding the PCB bulk waste criteria. No materials that typically contain PCBs were identified. One area of painted concrete blocks was observed; however, the occupants reported they had recently painted that surface and that the building was bare concrete block at the start of their lease. Therefore, no building materials were sampled for PCB analysis.

## 3.6 LEAD-BASED PAINT SCREENING

On October 20, 2014, painted surfaces were screened for the presence of lead in the form of lead-based paint (LBP) using an X-ray fluorescence (XRF) meter. Each accessible color and type of paint throughout the Site building was screened. A summary of areas screened for LBP is provided in **Table 3** and screening locations are provided on **Figure 4**.

## 3.7 UNIVERSAL/HAZARDOUS/OTHER WASTE INVENTORY

Materials that, once removed from use, meet the definition of universal/hazardous waste include, but are not limited to, fluorescent lighting, smoke detectors, thermostats (that contain mercury), and lead acid batteries. In addition, other types of wastes that require special disposal are frequently present in buildings including Freon-containing appliances, cathode ray tubes (CRTs), etc. These types of materials at the Site were inventoried and manually counted.

A summary of the universal/hazardous waste inventory from the Site is provided in **Table 4**.

## 3.8 REGULATORY CRITERIA

Sample results were compared to the following applicable state and federal standards and/or guidelines.

### Soil

Soil analytical results were compared to the New Hampshire Code of Administrative Rules Chapter Env-Or 600 – Contaminated Site Management Table 600-2 Soil Remediation Standards (SRSs).

### Groundwater

Groundwater analytical results were compared to the New Hampshire Code of Administrative Rules Chapter Env-Or 600 – Contaminated Site Management Table 600-1 Ambient Groundwater Quality Standards (AGQS) and Table 2, Method 1 Groundwater Standards as revised in February 2013. TCE results were also compared to the February 7, 2013, Table 1 Vapor Intrusion Screening Levels for Groundwater to Indoor Air Screening Levels (i.e. GW-2 standards) to assess for the potential for vapor intrusion into the current or future Site buildings.

### Asbestos

No asbestos samples were collected; however, per the SSQAPP, laboratory analytical results for asbestos bulk samples would have been compared to the 1% limit specified in NHDES Chapter Env-A 1800 – Asbestos Management and Control.

### PCBs in Building Materials

No PCB-containing building material samples were collected; however, per the SSQAPP, results would have been compared to the 40 CFR 761.3 definition of PCB bulk product waste (50 milligrams per kilogram [mg/kg]).

### Lead-Based Paint Screening Results

Screening results were compared to the 1.0 $mg/cm^2$ HUD Guideline and New Hampshire Statutes Chapter 130.

# 4. RESULTS

The following subsections present the results of the data collected during the field work portion of this Phase II ESA.

## 4.1 GEOPHYSICAL SURVEY RESULTS

The GPR survey was conducted across the Site; however, the focus of the survey was to assess for the presence of a historical UST. One anomaly was identified in the area where the historical UST was mapped; however, the anomaly was not characteristic of a UST (i.e. the reflection was not hyperbolic). The anomaly was reportedly more characteristic of disturbed soil.

A pipe or underground utility was also identified along the southern property boundary and was marked on the asphalt during the survey as clearance for soil borings CA-SB-1 and CA-SB-4.

## 4.2 SOIL SCREENING RESULTS

Soil was screened in the field for VOCs using the jar headspace methodology. Screening results ranged from non-detect (0.0 $ppm_v$) to 0.6 $ppm_v$. Soil screening results are provided on **Table 1** and in the soil boring logs included within **Appendix C**.

## 4.3 SOIL ANALYTICAL RESULTS

Soil analytical results are summarized on **Table 5** and **Figure 4**, and the complete laboratory analytical report is provided in **Appendix D**.

### VOCs

VOC results were below the laboratory reporting limits in soil samples collected from the Site.

### SVOCs

Several semi-volatile organic compounds (SVOCs), more specifically polycyclic aromatic hydrocarbons (PAHs), were detected in soil samples CA-SB-5, CA-SS-1, and CA-SS-2. Concentrations exceeded the NHDES SRS for the following:

- CA-SB-5 (0.5-2.5/1.5): benzo(a)anthracene (1.9 mg/kg), benzo(b)fluoranthene (1.3 mg/kg), and benzo(a)pyrene (1.5 mg/kg)
- CA-SS-1 (0-2): benzo(a)pyrene (0.9 mg/kg)
- CA-SS-2 (0-2): benzo(a)anthracene (16 mg/kg), benzo(b)fluoranthene (9.9 mg/kg), benzo(k)fluoranthene (13 mg/kg), benzo(a)pyrene (13 mg/kg), dibenzo(a,h)anthracene (2 mg/kg), indeno(1,2,3-cd)pyrene (3.8 mg/kg)

**PCBs**

PCB results were below the laboratory reporting limits in soil samples collected from the Site.

**Metals**

Arsenic, barium, chromium, and lead were detected in samples CA-SB-1, CA-SB-2, CA-SB-5, CA-SS-1, and CA-SS-2. Mercury was also detected in CA-SB-5 and CA-SS-2. Detected concentrations were below the respective NHDES SRSs.

## 4.4 GROUNDWATER ANALYTICAL RESULTS

Groundwater analytical results are summarized on **Table 6** and **Figure 5**, and the complete laboratory analytical report is provided in **Appendix D**.

**VOCs**

Trichloroethene (TCE) was detected in monitoring wells CA-MW-2 and CA-MW-3 below the NHDES AGQS and Method 1 GW-2 Groundwater Standards. TCE was not detected in monitoring wells CA-MW-1 or CA-MW-4, and other VOC analytes were below the laboratory reporting limits in all groundwater samples.

**SVOCs**

SVOC results were below the laboratory reporting limits in groundwater samples collected from the Site.

**Metals**

Trace barium concentrations were detected in CA-MW-4 (0.07 micrograms per lite [µg/L]); however, results were well below the NHDES AGQS for barium (2,000 µg/L). Other metal concentrations were below the laboratory reporting limits.

## 4.5 ASBESTOS RESULTS

No suspect ACM was observed during survey of the Site building and therefore, no suspect ACM was sampled.

## 4.6 PCBS-CONTAINING BUILDING MATERIALS

No suspect PCB-containing materials were observed during survey of the Site building and therefore, no building materials were sampled for PCBs.

## 4.7 LBP SCREENING RESULTS

A total of three (3) painted surfaces within/on the Site building were screened for lead. All three paints were observed to be of relatively new application and did not test positive for lead. A summary of LBP screening results is provided in **Table 3**.

## 4.8 UNIVERSAL/HAZARDOUS/OTHER WASTE INVENTORY RESULTS

Fluorescent light fixtures (i.e. bulbs and ballasts) and an air conditioning window unit were noted at the Site. Quantities of these materials counted at the Site are provided on **Table 4**.

## 4.9 DATA USABILITY

The contracted laboratory, ARA, provided analytical data in accordance with Credere's New Hampshire Generic Quality Assurance Project Plan (QAPP, RFA#14123) and the R & D Paving SSQAPP Addendum. The laboratories provided the following information in analytical reports:

- Data results sheets
- Method blank results
- Surrogate recoveries and acceptance limits
- Duplicate results/acceptance limits
- Spike/duplicate results/acceptance limits
- Laboratory control sample results
- Description of analytical methods and results
- Other pertinent results/limits as deemed appropriate

As outlined in the SSQAPP, at the completion of the field tasks and upon receipt of the analytical results, a data usability analysis was conducted to document the precision, bias, accuracy, representativeness, comparability, and completeness of the results. The following sections present this analysis.

### General Summary

In general, the data reviewed for this project are usable for making project decisions and the non-conformances below did not result in qualification of any reported analytical results. Samples were analyzed in accordance with the SSQAPP. Asbestos and PCB-containing building material samples were not collected; however, no suspect materials were identified in/on the Site building to be sampled.

### Precision

Precision is a measure of the mutual agreement between concentrations of samples (e.g., duplicates) collected at the same time from the same location. Precision is measured by performing duplicate measurements in the field or laboratory. Precision is expressed in terms of relative percent difference (RPD) using the following equation:

$$RPD = [(C1-C2) /(C1+C2)/2)] \times 100$$

Where:
C1 = The larger of the two concentrations.
C2 = The smaller of the two concentrations.

The following duplicate samples were collected during this Phase II ESA:

- DUP-1: Duplicate soil sample collected from CA-SB-5 (0.5-2.5/1.5)
- DUP-GW-1: Duplicate groundwater sample collected from CA-MW-2

All analyte results were either non-detect (for at least one of the samples), less than 5 times the laboratory practical quantitation limit (PQL), or the calculated RPDs were less than the acceptable limit of 50% for soil and 30% for groundwater with the exception of the following:

- CA-SB-5/DUP-1 results for fluoranthene and pyrene differed by 126% and 115%, respectively. Additionally, 13 other SVOC compounds were detected in the CA-SB-5 sample but not in the duplicate. Despite being homogenized prior to sampling, this differentiation is attributed to the variability of fill constituents and is not attributed to poor laboratory precision.

**Tables 5** and **6** provide the original and duplicate sample results.

**Bias**

Bias is the systematic or persistent distortion of a measurement process that causes errors in one direction. Bias assessments are made using personnel, equipment, and spiking materials or reference materials as independent as possible from those used in the calibration of the measurement system. Bias assessments were based on the analysis of spiked samples so that the effect of the matrix on recovery is incorporated into the assessment. A documented spiking protocol and consistency in following that protocol are important in obtaining meaningful data quality estimates.

Matrix spike and matrix spike duplicate samples (MS/MSD) were used to assess bias as prescribed in EPA Method 6010C. Recovery values were within the recoveries specified by each of the analysis methods. Control samples for assessing bias were analyzed at a rate as specified in the analytical SOPs and specified analytical methods.

The laboratory provides quality control non-conformance reports that indicate if Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD) and/or MS/MSD had low, failing, or high recoveries, and if the sample result was affected. Likewise, the laboratory reports any compounds that had failing RPDs in the LCS/LCSD pair or the MS/MSD pair. This indicates the percent difference between the laboratory sample and its duplicate or the spike and it's duplicate. The following were reported by the laboratory as being outside their acceptable limits:

- The LCS for VOCs in soil reported the bromomethane percent recovery below the acceptable range. Since less than 10% of analytes were affected and since bromomethane was not detected in any soil samples, no corrective action was taken. The data is not expected to be impacted by this non-conformance.

- The LCS for VOCs in groundwater reported the dichlorodifluoromethane, t-butanol, and 1,4-dioxane percent recoveries below the acceptable range. Since less than 10% of analytes were affected and since none of the affected analytes were detected in the groundwater samples, no corrective action was taken. The data is not expected to be impacted by this non-conformance.

- The LCS for SVOCs in groundwater reported the phenol and hexachlorobutadiene percent recoveries below the acceptable range. Since less than 10% of analytes were affected and since none of the affected analytes were detected in the groundwater samples, no corrective action was taken. The data is not expected to be impacted by this non-conformance.

**Accuracy**

Accuracy is a statistical measurement of correctness and includes components of random error (variability due to imprecision) and systemic error. It, therefore, reflects the total error associated with a measurement. A measurement is accurate when the value reported does not differ from the true value or known concentration of the spike or standard. For VOCs and PAHs, surrogate compound recoveries are also used to assess accuracy and method performance for each sample analyzed. Analysis of performance evaluation samples are also used to provide additional information for assessing the accuracy of the analytical data being produced. Both accuracy and precision are calculated for each analytical batch, and the associated sample results are interpreted by considering these specific measurements.

The laboratory provides a non-conformance summary that reports if all of the quality control criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for analysis are within acceptable limits. The following non-conformances were reported by the laboratory:

- The surrogate percent recovery for 2-fluorobiphenyl was below the laboratory established lower limit for the base/neutral analysis of CA-SB-3 (8-10/9); however, the percent recovery was within the allowable range for the method. Additionally, only one of the three base/neutral class was out of range (two non-conformances per class required for action), and all results for the associated sample were all below the laboratory reporting limits. Therefore, no corrective action was taken. The data is not expected to be impacted by this non-conformance.

## Representativeness

Sample representativeness was assessed through an analysis of the blank results. The concentrations and frequencies of target analytes detected in blanks provide an indication of data representativeness. The five times and ten times rules were used judiciously to eliminate potential false positive results indicated by the blank data. Regulatory criteria were considered when using the five and ten times rule to avoid elevation of the reporting limit above the criteria for certain compounds. No non-conformances were identified during data evaluation.

Sample representativeness was also assessed through an evaluation of the sample results compared to the sample design (locations and conceptual site model) to determine if the results are representative of the environment from which the samples were collected.

All objectives for sampling and analytical representativeness for samples that were analyzed, as specified in the SSQAPP Addendum, were met.

## Comparability

Comparability is the confidence with which one data set can be compared to another data set (i.e. how well the data can be reproduced). The objective for this quality assurance/quality control (QA/QC) program is to produce data with the greatest possible degree of comparability. Comparability was achieved by using standard methods for sampling and analysis, reporting data in standard units, normalizing results to standard conditions and using standard and comprehensive reporting formats. Complete field documentation was used, including standardized data collection forms to support the assessment of comparability.

## Completeness

Completeness is calculated by comparing the number of samples successfully analyzed to the number of samples collected. The goal for completeness is 95 percent. The completeness for this project was 100 percent, as there were no samples that could not be analyzed due to holding time violations, samples spilled or broken, or any other reason.

# 5. UPDATED CONCEPTUAL SITE MODEL

The conceptual site model (CSM) was updated using the results of this Phase II ESA and prior reports and will be updated in subsequent reports as new information becomes available. This CSM includes a description of the physical setting of the Site, contaminants of concern (COCs), exposure pathways, and potential human and environmental receptors.

## 5.1 PHYSICAL SETTING

### Topography

Based on Credere's observations and the United States Geological Survey (USGS) Topographic Map of the Franklin Quadrangle, New Hampshire, topography at the Site is generally flat to gently sloping to the west; however, the area immediately around the building is graded such that stormwater flows away from the building. The Site elevation is approximately 300 feet above mean sea level. An excerpt from this map has been included as **Figure 1**.

### Geological Characteristics

*Surficial Geology*

Soil at the Site consisted of approximately 4 to 6 feet of sand and gravel underlain by finer grained sand and silt. Soil stratigraphy and type was characteristic of fluvial deposits. Additionally, nearby test pits revealed a native soil of orange rounded cobbles. The entire exterior of the Site was covered in asphalt.

*Bedrock Geology*

According to the Bedrock Geologic Map of New Hampshire, bedrock beneath the Site consists of Lower Silurian meta-argillite, meta-conglomerate, and calc-silicate rocks of the lower part of the Rangley Formation. Rocks were formed by metamorphosis of sedimentary deposits in the Central Maine Composite Terrane (Central Maine Trough) and igneous intrusive rocks. No bedrock outcrops were observed and bedrock was not encountered in soil borings that were advanced to a maximum depth of 20 feet at the Site.

### Hydrology

The nearest surface water body to the Site is the Winnipesaukee River, which is located approximately 150-feet north and 280-feet west of the Site. The Winnipesaukee River flows west and joins the Pemigewasset River approximately 0.6-miles south of the Site. Storm drains were observed along Memorial Street, which likely accept runoff from the entirely impermeable Site.

Groundwater was encountered at depths ranging from 11.69 to 12.71 feet bgs and was mapped to flow generally to the west towards the oxbow of the Winnipesaukee River. A groundwater contour map is provided as **Figure 3**.

## 5.2 CURRENT CONTAMINANTS OF CONCERN

Based on the results of this Phase II ESA the current COCs consist of PAHs in soil and TCE in groundwater. PAHs were detected in exceedance of the NHDES SRSs, and although TCE was detected below the NHDES AGQS, the deeper aquifer has not been fully assessed. Metal results for soil were below the NHDES SRSs and only a trace concentration of barium was detected in one groundwater sample, which was below the NHDES AGQS. PCBs were not detected in any sample collected at the Site. Therefore, VOCs other than TCE, metals and PCBs have been dismissed as COCs.

Additionally, building materials that typically contain asbestos or PCBs were not identified at the Site, and LBP screening results did not identify LBP at the Site. Therefore, asbestos, PCBs in building materials, and lead in LBP have been dismissed as COCs.

## 5.3 MIGRATION ANALYSIS & EXTENT OF CONTAMINATION

PAH compounds were detected in exceedance of the NHDES SRSs in the three surface samples collected from the Site. Results were highest at CA-SS-2 in the front of the Site building. Based on these results, Credere assumes surface soil beneath the asphalt parking lot across the Site to be similarly impacted extending to a depth of at least 2 feet, although additional characterization may be necessary during redevelopment to determine the actual extent. Under the assumption that impacts extend across the Site to a depth of 2 feet, 700 to 800 cubic yards of impacted soil are estimated to be present beneath the asphalt. PAH impacted soil is considered stable under current conditions due to the presence of asphalt across the Site, insolubility, and general persistence in the environment.

TCE was detected in groundwater below the AGQS in two wells at the Site. Based on the lack of observed contamination (e.g. PID response or odor), wells were installed at the groundwater interface and the deeper aquifer was not assessed. TCE is expected to be migrating in groundwater both with groundwater flow to the west and possibly downward in the aquifer; however, no evidence of free product was observed.

Fluorescent light fixtures (i.e. ballasts and bulbs), and an air conditioner were inventoried at the Site. These materials are still in use and are contained to the Site building.

## 5.4 EXPOSURE PATHWAYS AND POTENTIAL RECEPTORS

Exposure pathways describe how a human or environmental receptor comes into contact with contaminants that may be present at the Site. Exposure pathways at the Site include the following:

| | |
|---|---|
| Dermal Absorption: | Exposure via dermal absorption occurs when receptors are exposed to chemical concentrations present in soil, groundwater, surface water, or hazardous building materials through direct contact with the skin. |

| | |
|---|---|
| Incidental Uptake: | This pathway is applicable when receptors may incidentally inhale or ingest impacted media in the form of contaminated dust, chips, or airborne asbestos fibers. |

Potential Receptors are categorized by duration of exposure and intensity of use at the Site. The receptor categories described in the CSM include the following:

| | |
|---|---|
| Recreational or Park User: | Park users (including trespassers) are characterized by low duration, i.e. less than two hours per day, and low intensity usage such as that which would occur during activities such as walking, shopping, and bird watching. |
| Outdoor Commercial Worker: | Outdoor commercial receptors are those which are present at the Site for long durations but with low intensity exposure such as groundskeepers, parking lot attendants, and mechanics. This category is also conservatively applied for indoor office workers at the Site. |
| Excavation or Construction Worker: | Excavation or construction workers are present at the Site for short durations though intensity of use is high, such as during non-routine activities including construction or utility work. Examples include utility and construction contractors and landscapers. |

## 5.5 CSM SUMMARY

COCs at the Site include PAHs in soil, TCE in groundwater, and some universal waste components within the Site building.

Under current use, potential receptors at the Site include commercial workers and trespassers; however, direct contact exposure to PAH impacted soil is limited due to the presence of asphalt across the entire Site. If the asphalt is removed and/or the use changes to a more public transportation oriented use, receptors of PAH impacted soil may include patrons of the facility, facility workers, and construction workers during construction of the new facility. Exposure pathways would then include dermal absorption through contact with impacted soil and incidental uptake of contaminated dust.

Under current and future use of the Site, there are no receptors or exposure pathways to TCE in groundwater since concentrations are below the AGQS and Method 1 GW-2 standards (i.e. Table 1 Vapor Instrusion Screening Levels for Groundwater to Indoor Air).

The universal wastes are still in use at the Site. As long as the materials remain intact exposure to COCs can be prevented; however, exposure may increase if the fluorescent light bulbs are broken.

# 6. CONCLUSIONS

We have performed a Phase II ESA at R & D Paving located at 81 Memorial Street in Franklin, New Hampshire, in general conformance with the scope and limitations of ASTM E 1903-11 and for the following objectives:

- Assess the presence of historical onsite and upgradient underground storage tanks (USTs) and any associated environmental impacts
- Assess for environmental impacts associated with the historical use of the Site as a garage with an earthen floor
- Assess for potential contaminant migration onto the Site from the historical upgradient cleaners located at 31 to 33 Memorial Street
- Assess the Site building for the presence of hazardous building materials
- Assess for environmental impacts associated with the most recent use of the Site as a paving company

Credere's conclusions considering the cumulative work conducted in relation to the identified environmental condition and the investigation results are presented below:

**REC #1 – Historical USTs at the Site and immediately upgradient of the Site: DISMISSED**

Historical Sanborn Fire Insurance maps (Sanborns) depict a gasoline UST was installed at the Site between 1911 and 1923 and was depicted through 1929. A second UST was also depicted immediately upgradient of the Site near the southern property boundary in 1948.

The location of the historical onsite UST was surveyed using GPR to assess if the UST was still present. The area was identified as an anomaly; however, the anomaly was consistent with disturbed soil and was not characteristic of a UST, indicating the UST was likely removed and the excavation backfilled. Soil boring/monitoring well CA-SB-2/CA-MW-2 was installed in the suspected area of the historical onsite UST, and CA-SB-1/CA-MW-1 was installed on the property line nearest the offsite UST. Soil and groundwater analytical results for samples collected from both locations did not exhibit evidence of petroleum impacts.

Based on the GPR survey and soil and groundwater analytical results, the presence of UST and any associated impacts has been dismissed.

**REC #2 – Possible release of petroleum during historical use of the Site as a garage with an earthen floor: Contamination CONFIRMED but the source is INCONCLUSIVE**

The current Site building was constructed between 1948 and 1956. The 1964 Sanborn map indicated the building was originally a private garage with an earthen floor and according to the prior owner, the Site building did not have a concrete floor until soon after they purchased the Site in 1995. Credere could not assess beneath the concrete slab within the Site building due to lower than anticipated overhead clearance and a request from the current owner to not disturb the

current occupant's operations. Therefore, Credere assessed exterior portions of the Site and installed one boring planned for interior assessment just outside the largest garage bay of the Site building.

Three surface soil samples (CA-SS-1, CA-SS-2, and CA-SB-5) were collected from immediately beneath the asphalt at the Site. All three samples resulted in PAH exceedances of the NHDES SRSs with the highest concentrations at CA-SS-2 in the front (west side) of the Site building. These detections may be the results of surface releases to the Site during use as a garage or paving company during approximately 50 years of operations; however, PAHs are also a component of asphalt and may also be the result of leaching. In addition, possible comingled coal ash was observed in some samples on and off the Site, which is unregulated in the State of New Hampshire and is common in mill areas, and could also be a source of PAHs at the Site. PAH impacts are also typical of mill yards through general industrial operations or stack emissions; however, surface samples collected from nearest to the Site on the adjacent Ferrari Realty Trust and Franklin Business Center properties did not exhibit similar elevated PAHs. Sample results for CA-SS-2 may be reflective of greater garage activity in the front of the Site building than on the sides or rear. Total petroleum hydrocarbon analysis or data from beneath the concrete slab may indicate if the source of contamination was from the earthen floor; however, based on available data, PAHs cannot be attributed to a specific source.

TCE was detected in groundwater below NHDES AGQS; however, due to the behavior of TCE, concentrations deeper in the aquifer have not been fully assessed. Available data does not indicate an obvious source of contamination on the Site. Under current and future use of the Site, there are no receptors or exposure pathways to TCE in groundwater since concentrations are below the AGQS, which indicates direct contact is not a concern, and below the indoor air screening levels, which indicates vapor intrusion is not likely.

Although Site related COCs were identified, based on the available data, it is Credere opinion that the PAHs and TCE detected at the Site cannot be attributed to a specific source; therefore, the presence of contaminants has been confirmed but since the source is unknown assessment of the REC is inconclusive.

All three surface samples collected from beneath the asphalt resulted in PAH NHDES SRS exceedances. Therefore, Credere assumes similar concentrations to be present beneath the asphalt across the Site. Based on this assumption, 700 to 800 cubic yards of PAH impacted soil is estimated to be present at the Site; however, the vertical and actual lateral extent of impact has not been assessed and the volume may vary with further delineation.

**REC #3 – Historical use of the upgradient 31 to 33 Memorial Street property: DISMISSED**

According to historical sources, the presumed upgradient 31 to 33 Memorial Street property was occupied by a laundry facility from 1897 through at least 1967 and by Kar Z Karma Motors from at least 2003 to 2008. Monitoring wells were installed at the Site to assess the potential for contaminant migration onto the Site. Based on the relative elevation survey, groundwater was assessed to be flowing to the west, which indicates the 31 to 33 Memorial Street property is not

upgradient. Additionally, COCs were not detected in the upgradient most well (CA-MW-4), indicating onsite contamination does not appear to be migrating onto the Site from an offsite source.

Based on the mapped groundwater flow direction and results of groundwater samples in the upgradient well, this REC has been dismissed.

**Environmental Finding #1 – Possible hazardous building materials throughout the Site: DISMISSED**

The Site building was surveyed for the presence of ACM, PCB-containing building materials, and LBP. Due to the building's concrete block construction with a metal roof, no materials that typically contain asbestos or PCBs were identified in the Site building. Painted surfaces were screened for LBP and no LBP was identified. Additionally, the current Site occupants indicated the painted surfaces had been recently painted as part of the remodel. Based on these results, the presence of hazardous building materials in/on the Site building has been dismissed.

**Environmental Finding #2 – Current use of the Site by a paving company: DISMISSED**

The Site was used as a paving company prior to the current occupants; by the time of the Phase II field work, all equipment and materials associated with the paving company were removed from the Site. Based on the lack of evidence of release, no investigation was recommended in the Phase I ESA. PAHs were detected in surface soil at the Site; however, the impacts were detected beneath the asphalt at the Site, which based on its condition, appeared to have been present prior to the paving company purchased the Site in 1995. These PAH impacts are therefore attributed to historical use of the Site as a garage and therefore, this environmental finding has been dismissed.

# 7. RECOMMENDATIONS

Based on the findings and conclusions of this investigation, Credere makes the following recommendations:

- Maintenance of the current asphalt to prevent exposure to current and future occupants prior to redevelopment
- Observation and possible further assessment of soil beneath the Site building after future building demolition
- Preparation of a Soil Management Plan to ensure proper handling of PAH impacted soil during future redevelopment of the Site

# 8. LIMITATIONS

This report has been prepared by Credere for the LRPC Brownfields Assessment program in order to provide LRPC or other project stakeholders with information upon which it can rely concerning the existence or likely existence of various environmental contaminants on or adjacent to the property evaluated.

This report does not reflect:

1. Conditions in untested areas and the characteristics of untested media.
2. Variations in chemical concentrations that can occur between sample locations.
3. The total understanding of historical Site activities, uses, equipment, or fixtures that may have contributed or are currently contributing to Site contamination, particularly relating to building material history.
4. Knowledge of the potential presence of compound sources other than what was surficially visible at the time of survey performance.
5. The potential presence of analytes that were not analyzed or that may be present below minimum Laboratory Reporting Limits for the methods tested.
6. Potential variation in the Site conditions that may have occurred at a time other than when the Site survey was completed.

In the event that any conditions different from those described herein are encountered at a later time, Credere requests an opportunity to review such differences and modify the assessment and conclusions of this report. This report was prepared expressly for the purpose described. The information in this report may not be suitable for any other use without adaptation for the specific purpose intended. Any such reuse of this report, without adaptation, shall be at the sole risk and liability of the party undertaking the reuse.

# 9. SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

The following individual(s) meet the qualifications for individuals completing or overseeing all appropriate inquiries, and possess sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding the existence of environmental conditions on the Site. Any work completed on this ESA by an individual who is not considered an environmental professional was completed under the supervision or responsible charge of the environmental professional.

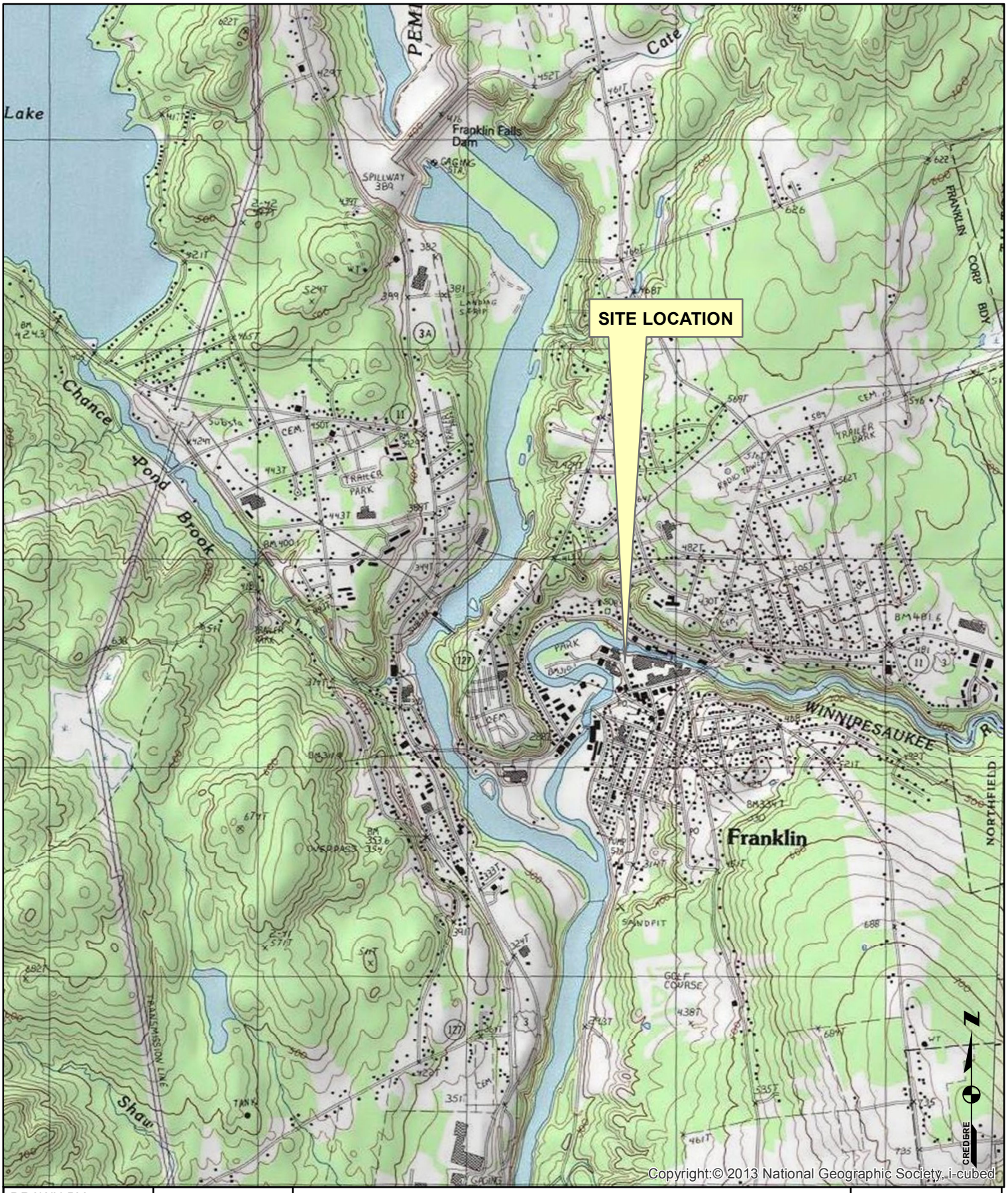
Allison Drouin
Project Geologist

Judd Newcomb, CG, PG
Project Manager/Geologist

Rip Patten, PE, LSP
Vice President

Theresa Patten, PE
President

# FIGURES






| | |
|---|---|
| DRAWN BY: MTG | DATE: 1/7/15 |
| CHECKED BY: ASD | PROJECT: 14001247 |

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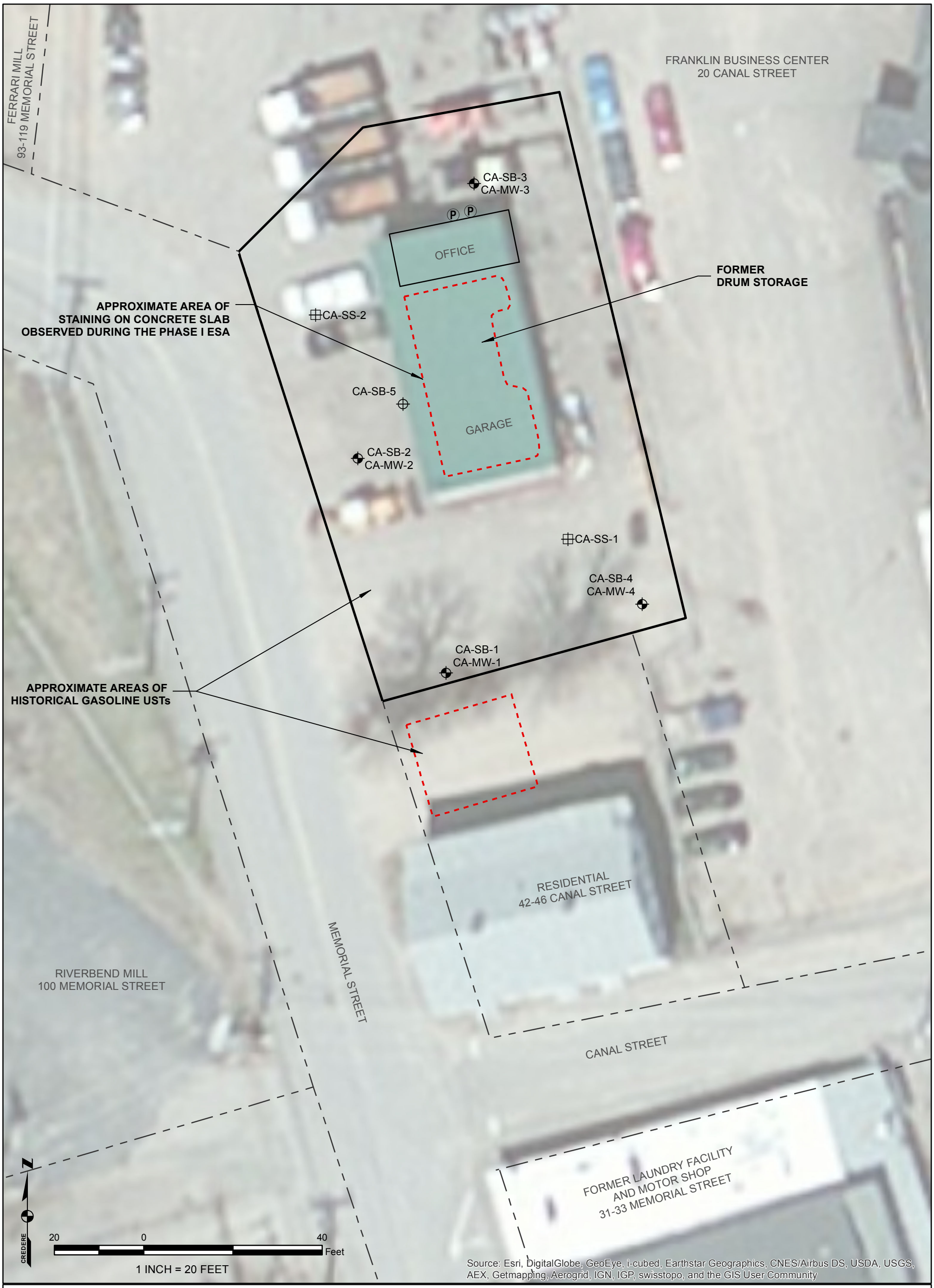
# FIGURE 1
# SITE LOCATION PLAN

R & D PAVING
81 MEMORIAL STREET
FRANKLIN, NEW HAMPSHIRE 03235

1,000 0 2,000 Feet

1 INCH = 2,000 FEET


Document Path: T:\Data\NH\Town\Franklin\14001247 - LRPC Brownfields\RD Paving\Figure_1.mxd




NOTES:
1. EXISTING CONDITIONS FEATURES SHOWN ON THIS PLAN ARE APPROXIMATE AND BASED ON INFORMATION OBTAINED FROM THE CITY OF FRANKLIN TAX MAP 117, 2013 ORTHO IMAGES, THE SITE RECONNAISSANCE PERFORMED ON JULY 9, 2014, AND PHASE II INVESTIGATION ACTIVITIES CONDUCTED ON OCTOBER 27 AND 30, 2014, AND NOVEMBER 12 AND 13, 2014.

| | |
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| DRAWN BY: MTG | DATE: 01/13/15 |
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# FIGURE 2
# SAMPLE LOCATION PLAN

R & D PAVING
81 MEMORIAL STREET
FRANKLIN, NEW HAMPSHIRE 03235

- SITE BOUNDARY
- PARCEL BOUNDARY
- AREA OF CONCERN
- STRUCTURE
- MONITORING WELL
- SOIL BORING
- SURFACE SOIL SAMPLE
- PROPANE TANK


NOTES:
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2. GROUNDWATER CONTOURS BASED ON GAUGING ON NOVEMBER 12 AND 13, 2014, AND THE SITE BENCHMARK.

| | |
|---|---|
| DRAWN BY: MTG | DATE: 01/13/15 |
| CHECKED BY: ASD | PROJECT:14001247 |

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# FIGURE 3
# GROUNDWATER CONTOUR MAP

R & D PAVING
81 MEMORIAL STREET
FRANKLIN, NEW HAMPSHIRE 03235

- INTERPOLATED GROUNDWATER ELEVATION CONTOURS IN FEET
- CA-MW-1 WELL ID
- 291.22 GROUNDWATER ELEVATION IN FEET
- SITE BOUNDARY
- PARCEL BOUNDARY
- AREA OF CONCERN
- STRUCTURE
- MONITORING WELL
- SOIL BORING
- SURFACE SOIL SAMPLE
- BENCHMARK
- PROPANE TANK

| CA-SS-2 | 0-2 |
|---|---|
| 2-methylnaphthalene | 5.2 |
| acenaphthylene | 4.9 |
| acenaphthene | 2.1 |
| anthracene | 8.1 |
| benzo(a)anthracene | 16 |
| benzo(b)fluoranthene | 9.9 |
| benzo(k)fluoranthene | 13 |
| benzo(a)pyrene | 13 |
| benzo(g,h,i)perylene | 3.6 |
| chrysene | 15 |
| dibenzofuran | 3.2 |
| dibenzo(a,h,)anthracene | 2 |
| fluorene | 10 |
| fluoranthene | 39 |
| indeno(1,2,3-cd)pyrene | 3.8 |
| naphthalene | 3.4 |
| phenanthrene | 53 |
| pyrene | 33 |
| arsenic | 5.2 |
| barium | 68 |
| chromium | 8 |
| lead | 130 |
| mercury | 0.19 |

| CA-SB-3 | 8-10/9 |
|---|---|
| All analytes | ND |

| CA-SB-5 | 0.5-2.5/1.5 | DUP-1 |
|---|---|---|
| acenaphthylene | 0.10 | ND<0.06 |
| anthracene | 0.27 | ND<0.06 |
| benzo(a)anthracene | 1.9 | ND<0.06 |
| benzo(b)fluoranthene | 1.3 | ND<0.06 |
| benzo(k)fluoranthene | 1.2 | ND<0.06 |
| benzo(a)pyrene | 1.5 | ND<0.06 |
| benzo(g,h,i)perylene | 0.61 | ND<0.06 |
| chrysene | 1.5 | ND<0.06 |
| dibenzo(a,h,)anthracene | 0.33 | ND<0.06 |
| fluorene | 0.06 | ND<0.1 |
| fluoranthene | 3.1 | 0.07 |
| indeno(1,2,3-cd)pyrene | 0.66 | ND<0.1 |
| naphthalene | 0.06 | ND<0.1 |
| phenanthrene | 0.87 | ND<0.1 |
| pyrene | 2.6 | 0.07 |
| arsenic | 2.6 | 3.5 |
| barium | 41 | 43 |
| chromium | 13 | 13 |
| lead | 19 | 27 |
| mercury | 0.28 | 0.44 |

| CA-SS-1 | 0-2 |
|---|---|
| benzo(a)anthracene | 1.0 |
| benzo(b)fluoranthene | 0.9 |
| benzo(k)fluoranthene | 1.0 |
| benzo(a)pyrene | 0.9 |
| chrysene | 1.0 |
| fluoranthene | 1.6 |
| pyrene | 1.5 |
| arsenic | 6.6 |
| barium | 49 |
| chromium | 12 |
| lead | 89 |

| CA-SB-4 | 10-12/11 |
|---|---|
| All analytes | ND |

| CA-SB-2 | 12-14/13 |
|---|---|
| arsenic | 4.5 |
| barium | 28 |
| chromium | 9 |
| lead | 3.6 |

| CA-SB-1 | 10-12/10.5 |
|---|---|
| arsenic | 2.4 |
| barium | 41 |
| chromium | 11 |
| lead | 5 |

KEY

| Sample ID | (Depth interval/ volatile) results in mg/kg |
|---|---|
| Detected compound | 1.52 |
| Non-detected compound | ND<0.1 |
| Result exceeds applicable NHDES SRS | 0.69 |
| Not sampled | NS |
| Value is estimated | 100 J |

N

CREDERE

20 0 40 Feet

1 INCH = 20 FEET

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

NOTES:
1. EXISTING CONDITIONS FEATURES SHOWN ON THIS PLAN ARE APPROXIMATE AND BASED ON INFORMATION OBTAINED FROM THE CITY OF FRANKLIN TAX MAP 117, 2013 ORTHO IMAGES, THE SITE RECONNAISSANCE PERFORMED ON JULY 9, 2014, AND PHASE II INVESTIGATION ACTIVITIES CONDUCTED ON OCTOBER 27 AND 30, 2014, AND NOVEMBER 12 AND 13, 2014.
2. SOIL SAMPLE DATA FROM SAMPLES COLLECTED ON OCTOBER 27 AND 30, 2014.

| DRAWN BY: MTG | DATE: 01/22/15 |
|---|---|
| CHECKED BY: ASD | PROJECT:14001247 |


**Credere Associates, LLC**
776 MAIN STREET
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Tel. 207.828.1272
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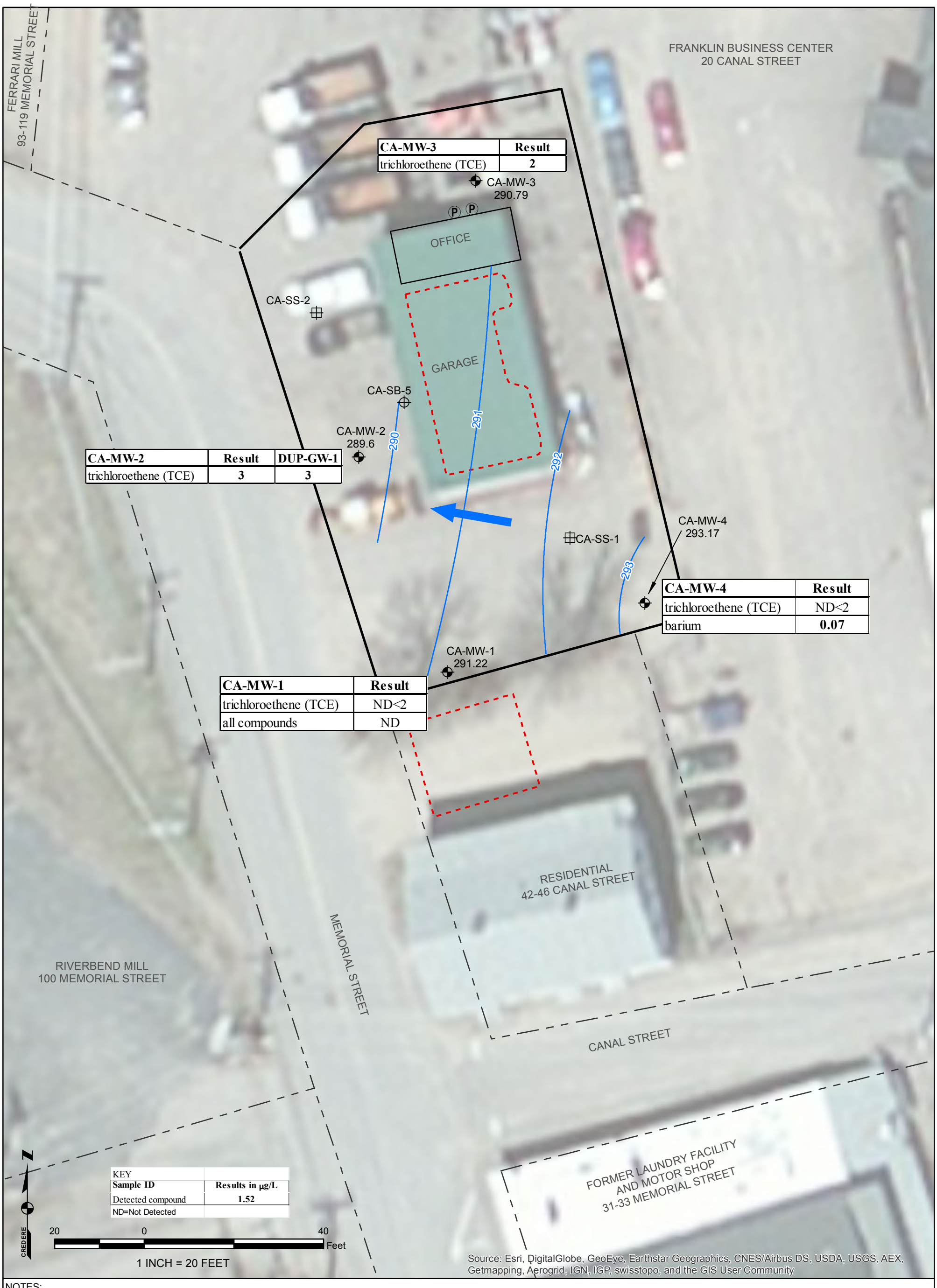
# FIGURE 4
# SOIL ANALYTICAL RESULTS MAP

R & D PAVING
81 MEMORIAL STREET
FRANKLIN, NEW HAMPSHIRE 03235

- SITE BOUNDARY
- PARCEL BOUNDARY
- AREA OF CONCERN
- STRUCTURE
- MONITORING WELL
- SOIL BORING
- SURFACE SOIL SAMPLE
- PROPANE TANK




NOTES:
1. EXISTING CONDITIONS FEATURES SHOWN ON THIS PLAN ARE APPROXIMATE AND BASED ON INFORMATION OBTAINED FROM THE CITY OF FRANKLIN TAX MAP 117, 2013 ORTHO IMAGES, THE SITE RECONNAISSANCE PERFORMED ON JULY 9, 2014, AND PHASE II INVESTIGATION ACTIVITIES CONDUCTED ON OCTOBER 27 AND 30, 2014, AND NOVEMBER 12 AND 13, 2014.
2. GROUNDWATER DATA FROM SAMPLES COLLECTED ON NOVEMBER 12 AND 13, 2014.

| | |
|---|---|
| DRAWN BY: MTG | DATE: 01/13/15 |
| CHECKED BY: ASD | PROJECT:14001247 |

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# FIGURE 5
# GROUNDWATER ANALYTICAL RESULTS MAP

R & D PAVING
81 MEMORIAL STREET
FRANKLIN, NEW HAMPSHIRE 03235

SITE BOUNDARY
PARCEL BOUNDARY
AREA OF CONCERN
STRUCTURE
MONITORING WELL
SOIL BORING
SURFACE SOIL SAMPLE
PROPANE TANK

# TABLES

**Table 1**
**Soil Sample Summary Table**
**R and D Paving**
**81 Memorial Street, Franklin, New Hampshire**

| Location | Depth (feet bgs) | Screening Results at Sampled Interval ($ppm_v$) | Analytical Sample ID | Requested Analyses | Sample Rationale |
|---|---|---|---|---|---|
| CA-SB-1 | 10 | 0 | CA-SB-1 (10-12/10.5) | VOCs, SVOCs, and RCRA 8 Metals | Assess upgradient and onsite historical USTs and impacts from historical use |
| CA-SB-2 | 12 | 0 | CA-SB-2 (12-14/13) | VOCs, SVOCs, and RCRA 8 Metals | Assess impacts from historical onsite UST and historical use of the Site |
| CA-SB-3 | 8 | 0 | CA-SB-3 (8-10/9) | VOCs and SVOCs | Assess impacts downgradient of the Site building |
| CA-SB-4 | 10 | 0 | CA-SB-4 (10-12/11) | VOCs and SVOCs | Assess upgradient/offsite historical use impacts and former truck garage. |
| CA-SB-5 | 1 | 0.1 | CA-SB-5 (0.5-2.5/1.5) | VOCs, SVOCs, RCRA 8 Metals, and PCBs | Assess impacts to the Site from historical use as a garage with an earthen floor |
| CA-SS-1 | 0 | 0 | CA-SS-1 (0-2) | PAHs, RCRA 8 Metals, and PCBs | Assess surface soil impacts from historical use of the Site |
| CA-SS-2 | 0 | 0 | CA-SS-2 (0-2) | PAHs, RCRA 8 Metal,s and PCBs | Assess surface soil impacts from historical use of the Site |

Notes:
$ppm_v$ - parts per million by volume
bgs - below ground surface
VOCs - Volatile organic compounds
SVOCs - Semi-volatile organic compounds
PAHs - polycyclic aromatic hydrocarbons
PCBs - polychlorinated biphenyls
RCRA - Resource Conservation and Recovery Act

**Table 2**
**Monitoring Well Construction Details**
**R and D Paving**
**81 Memorial Street, Franklin, New Hampshire**

| Monitoring Well ID | Screened interval (feet bgs) | Top of Riser Elevation[1] (AMSL) | Gauging Date | Depth to Water (feet bgs) | Water Level Elevation (AMSL) |
|---|---|---|---|---|---|
| CA-MW-1 | 10-20 | 302.91 | 11/12/2014 | 11.69 | 291.22 |
| CA-MW-2 | 10-20 | 302.31 | 11/12/2014 | 12.71 | 289.60 |
| CA-MW-3 | 7-17 | 302.76 | 11/13/2014 | 11.97 | 290.79 |
| CA-MW-4 | 10-20 | 305.05 | 11/12/2014 | 11.88 | 293.17 |

bgs - below ground surface

AMSL - above mean sea level

[1)] Monitoring wells were surveyed from the top of PVC riser relative to the granite corner monument off the northwest corner of the Site building, assumed to be 302.00 feet AMSL.

**Table 3**
**Lead-Based Paint Screening Results for the Site Building**
**R & D Paving**
**81 Memorial Street, Franklin, New Hampshire**

| Room/Location | Painted Surface | Color | Lead Concentration ($mg/cm^2$) |
|---|---|---|---|
| Standardization | | | |
| Standardization | | | |
| 0 calibration check | | | 0.0 |
| 0 calibration check | | | 0.0 |
| 0 calibration check | | | 0.0 |
| 1.02 calibration check | | | 0.98 |
| 1.02 calibration check | | | 0.94 |
| 1.02 calibration check | | | 0.97 |
| Interior | Drywall | Light Green | 0.0 |
| Interior | Cement Block | Gray | 0.0 |
| Interior | Drywall | Off White | 0.0 |
| Standardization | | | |

Notes:
$mg/cm^2$ – milligrams per square centimeter
Gray – calibration and standardization data

**Table 4**
**Universal/Hazardous/Other Waste Inventory**
**R and D Paving**
**81 Memorial Street, Franklin, New Hampshire**

| Universal Waste | Quantity Inventoried |
|---|---|
| Flourecent Light Fixtures | Approx. 20 |
| A/C Window Units (freon) | 2 |

**Table 5**
**Summary of Soil Analytical Results**
**R and D Paving**
**81 Memorial Street, Franklin, New Hampshire**

| Parameter | Regulatory Criteria[1] (mg/kg) | Sample ID, Depth (interval/VOC), Sample Date* | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | CA-SB-1 | CA-SB-2 | CA-SB-3 | CA-SB-4 | CA-SB-5 | | CA-SS-1 | CA-SS-2 |
| | | 10-12/10.5 | 12-14/13 | 8-10/9 | 10-12/11 | 0.5-2.5/1.5 | DUP-1 | 0-2 | 0-2 |
| | | 10/27/2014 | 10/27/2014 | 10/30/2014 | 10/27/2014 | 10/30/2014 | 10/30/2014 | 10/27/2014 | 10/27/2014 |
| **Volatile Organic Compounds (VOCs) by EPA Method 8260C (mg/kg)** | | | | | | | | | |
| All analytes | NA | ND | ND | ND | ND | ND | ND | NS | NS |
| | | | | | | | | | |
| **Semi-Volatile Petroleum Hydrocarbons (SVOCs) and Polycyclic Aromatic Hydrocarbons by EPA Method 8270D (mg/kg)** | | | | | | | | | |
| 2-methylnaphthalene | 96 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.6 | ND<0.06 | ND<0.6 | **5.2** |
| acenaphthylene | 490 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | **0.10** | ND<0.06 | ND<0.6 | **4.9** |
| acenaphthene | 340 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.6 | ND<0.06 | ND<0.6 | **2.1** |
| anthracene | 1,000 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | **0.27** | ND<0.06 | ND<0.6 | **8.1** |
| benzo(a)anthracene | 1 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | **1.9** | ND<0.06 | **1.0** | **16** |
| benzo(b)fluoranthene | 1 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | **1.3** | ND<0.06 | **0.9** | **9.9** |
| benzo(k)fluoranthene | 12 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | **1.2** | ND<0.06 | **1.0** | **13** |
| benzo(a)pyrene | 0.7 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | **1.5** | ND<0.06 | **0.9** | **13** |
| benzo(g,h,i)perylene | 960 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | **0.61** | ND<0.06 | ND<0.6 | **3.6** |
| chrysene | 120 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | **1.5** | ND<0.06 | **1.0** | **15** |
| dibenzofuran | NE | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.6 | ND<0.06 | ND<0.6 | **3.2** |
| dibenzo(a,h,)anthracene | 0.7 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | **0.33** | ND<0.06 | ND<0.6 | **2** |
| fluorene | 77 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | **0.06** | ND<0.06 | ND<0.6 | **10** |
| fluoranthene | 960 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | **3.1** | **0.07** | **1.6** | **39** |
| indeno(1,2,3-cd)pyrene | 1.0 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | **0.66** | ND<0.06 | ND<0.6 | **3.8** |
| naphthalene | 5 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | **0.06** | ND<0.06 | ND<0.6 | **3.4** |
| phenanthrene | 960 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | **0.87** | ND<0.06 | ND<0.6 | **53** |
| pyrene | 720 | ND<0.06 | ND<0.06 | ND<0.06 | ND<0.06 | **2.6** | **0.07** | **1.5** | **33** |
| | | | | | | | | | |
| **Polychlornated Biphenyls (PCBs) by EPA Method 8082A (mg/kg)** | | | | | | | | | |
| All aroclors | 1 | NS | NS | NS | NS | ND<0.2 | ND<0.2 | ND<0.2 | ND<0.2 |
| | | | | | | | | | |
| **Metals by EPA Method 6010C and 7471B (mg/kg)** | | | | | | | | | |
| arsenic | 11 | **2.4** | **4.5** | NS | NS | **2.6** | **3.5** | **6.6** | **5.2** |
| barium | 1,000 | **41** | **28** | NS | NS | **41** | **43** | **49** | **68** |
| chromium | 130 | **11** | **9** | NS | NS | **13** | **13** | **12** | **8** |
| lead | 400 | **5.0** | **3.6** | NS | NS | **19** | **27** | **89** | **130** |
| mercury | 6 | ND<0.22 | ND<0.19 | NS | NS | **0.28** | **0.44** | ND<0.19 | **0.19** |
| | | | | | | | | | |

**NOTES:**
*Only analytes with detections are shown, all other sample results were below the laboratory reporting limits.
1 - New Hampshire Department of Environmental Services (NHDES) Code of Administrative Rules Chapter Env-Or 600, Table 600-2, February 2013
mg/kg - milligrams per kilogram
ND<0.2 - Results were below the laboratory reporting limits, laboratory reporting limit shown
ND - Results were below the laboratory reporting limits, reporting limits vary between analytes
NS - not sampled
**Bold** Exceeds laboratory reporting limit
**Exceeds applicable regulatory guideline**

# Table 6
# Summary of Groundwater Analytical Results
# R and D Paving
# 81 Memorial Street, Franklin, New Hampshire

| Parameter | Regulatory Criteria (µg/L) | | Sample ID, Sample Date*^ | | | | |
|---|---|---|---|---|---|---|---|
| | AGQS[1] | Method 1 GW-2[1]/Vapor Instrusion Screening Levels[2] | CA-MW-1 | CA-MW-2 | | CA-MW-3 | CA-MW-4 |
| | | | 11/12/2014 | 11/12/2014 | DUP-GW-1 | 11/13/2014 | 11/12/2014 |
| **Volatile Organic Compounds (VOCs) by EPA Method 8260C (µg/L)** | | | | | | | |
| trichloroethene (TCE) | 5 | 20 | ND<2 | **3** | **3** | **2** | ND<2 |
| **Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270D (µg/L)** | | | | | | | |
| All analytes | Variable | Variable | ND | ND | ND | ND | ND |
| **Dissolved Metals by EPA Method 6010C and 7470A (µg/L)** | | | | | | | |
| barium | 2,000 | NE | ND<50 | ND<50 | ND<50 | ND<50 | **70** |

**NOTES:**

*Only analytes with detections are shown, all other sample results were below the laboratory reporting limits.

^ - All groundwater samples analyzed for VOCs, SVOCs, and dissolved RCRA 8 Metals

1 - New Hampshire Department of Environmental Services (NHDES) Code of Administrative Rules Chapter Env-Or 600, Table 600-1 Ambient Groundwater Quality Standards (AGQS), and Table 2, Method 1 Groundwater Standards from the NHDES Risk Characterization and Management Policy (Section 7.4(4)), Febraury 2013

2 - NHDES, Vapor Instrusion Guidance, Table 1 Vapor Instrusion Screening Levels for Groundwater to Indoor Air, revised February 2013

µg/L - micrograms per liter

ND<0.2 - Results were below the laboratory reporting limits, laboratory reporting limit shown

ND - Results were below the laboratory reporting limits, reporting limits vary between analytes.

NE - Not established

**Bold** Exceeds laboratory reporting limit

**Exceeds applicable regulatory guideline**

# APPENDIX A

# SITE-SPECIFIC QUALITY ASSURANCE PROJECT PLAN

**Waste Management Division**
**PO Box 95, 29 Hazen Drive**
**Concord, NH 03302**

**Type of Submittal (Check One-Most Applicable)**

| | |
|---|---|
| ☒ Work Scope<br>☐ Reimbursement Request | ☐ Remedial Action<br>• Remedial Action Plan<br>• Bid Plans and Specifications<br>• Remedial Action Implementation Report<br>☐ Treatment System and POE O&M<br>☐ Activity and Use Restriction |
| ☐ UST Facility Report<br>☐ AST Facility Report | |
| ☐ Emergency/Initial Response Action<br>☐ Groundwater Quality Assessment | ☐ Temporary Surface Water Discharge Permit |
| ☐ Initial Site Characterization<br>☐ Site Investigation<br>• Site Investigation Report<br>• Supplemental Site Investigation Report<br>• GMZ Delineation<br>• Source Area Investigation<br>• Data Submittal<br>• Annual Summary Report<br>☐ Unsolicited Phase I Environmental Site Assessment<br>☐ Closure Documentation | ☐ Groundwater Management Permit<br>• Permit Application<br>• Renewal Application<br>• Deed Recordation Documentation<br>• Abutter Notification Documentation<br>• Release of Recordation<br>☐ Data Submittal<br>☐ Annual Summary Report |

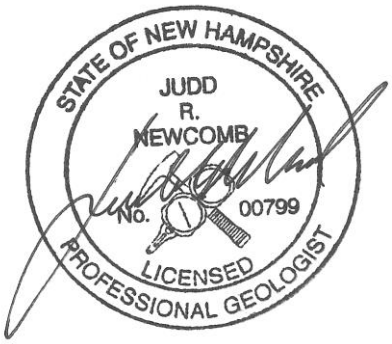
# SITE SPECIFIC QUALITY ASSURANCE PROJECT PLAN

R & D Paving
81 Memorial Street
Franklin, New Hampshire
NHDES Site #201409001


City of Franklin
124 Memorial Street
Franklin, New Hampshire 03235
Phone: (603) 934-2341
Contact: Mr. Dick Lewis

Prepared For:
Lakes Region Planning Commission, Brownfields Assessment Grant
103 Main Street #3
Meredith, New Hampshire 03253
Phone: (603) 279-8171
Contact: Mr. Jeff Hayes

Prepared By:
**CREDERE ASSOCIATES, LLC**
776 Main Street
Westbrook, ME 04902
Phone: (207) 828-1272 ext. 16
Contact: Judd Newcomb, CG, PG


October 10, 2014

**Recommended Risk Category (check one)**

| | | |
|---|---|---|
| ☐ 1. Immediate Human Health Risk (Impacted water supply well, etc.) | ☐ 4. Surface Water Impact | ☐ 7. Alternate Water Available/Low Level Groundwater Contamination (<1,000 X AGQS) |
| ☐ 2. Potential Human Health Risk (Water supply well within 1,000' or Site within SWPA) | ☐ 5. No Alternate Water Available/No Existing Wells in Area | ☐ 8. No AGQS Violation/No Source Remaining |
| ☐ 3. Free Product or Source Hazard | ☐ 6. Alternate Water Available/High Level Groundwater Contamination (>1,000 X AGQS) | ☐ Closure Recommended |

# 1. TITLE AND APPROVAL PAGE

SITE-SPECIFIC QUALITY ASSURANCE PROJECT PLAN (SSQAPP)
ADDENDUM TO NEW HAMPSHIRE GENERIC QAPP RFA #14123

**PROPERTY:**
R & D Paving
NHDES #201409001
81 Memorial Street, Franklin, New Hampshire
EPA Brownfields Assessment Grant # BF-96176301

**PREPARED BY:**
Credere Associates, LLC
776 Main Street, Westbrook, Maine 04092
(207) 828-1272

**October 10, 2014**

Below is a listing of the names, titles, signatures, and signature dates of officials approving this Site Specific Quality Assurance Project Plan (SSQAPP) Addendum:

Alan Peterson — Date: 10/10/14
EPA Brownfields Project Officer

Nora Conlon — Date: 10/16/14
EPA Quality Assurance Officer

Jeff Hayes — Date: 10/14/14
Lakes Region Planning Commission, Brownfields Assessment Grantee

Rebecca Williams — Date: 10/16/2014
NHDES Project Manager

Judd Newcomb, PG, CG — Date: 10/10/2014
Credere Associates, LLC QA/QC Manager

Rip Patten, PE, LSP, LEED-AP — Date: 10/10/2014
Credere Associates, LLC Program Manager

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## FIGURES



## TABLES



## APPENDICES

# 2. INTRODUCTION

Credere Associates, LLC (Credere) was retained by Lakes Region Planning Commission (LRPC) to prepare this Site-Specific Quality Assurance Project Plan (SSQAPP). LRPC is using funding from a U.S. Environmental Protection Agency (EPA) Brownfields Assessment Grant (Grant number: BF-96176301) to conduct assessment activities at R & D Paving located at 81 Memorial Street in the City of Franklin, New Hampshire (the Site).

This SSQAPP presents the following information:

- Problem definition including a Site description and summary of background information for the Site
- Project description and timeline
- Preliminary conceptual site model (CSM)
- Assessment objectives and proposed sampling design and rationale
- Site-specific field sampling and analytical methodology
- Regulatory standards applicable to the Site for each proposed sampling media

This SSQAPP was prepared to be used in concert with Credere's Generic Quality Assurance Project Plan (QAPP) EPA Quality Assurance Tracking: Request for Assistance (RFA) #14123, revision dated September 4, 2014, which was prepared for all of Credere's EPA Brownfields work in New Hampshire. The quality assurance and quality control (QA/QC) procedures outlined in Credere's Generic QAPP will be followed for this investigation program including sample collection, handling, and analysis of samples; chain-of-custody; and data management, documentation, validation and usability assessment. Sampling as outlined in this SSQAPP will not occur until receipt of approval from EPA and the New Hampshire Department of Environmental Services (NHDES).

**Figure 1** shows the general location of the Site in Franklin, New Hampshire; **Figure 2** presents pertinent Site features and proposed sampling locations; and **Figure 3** is a Project Organization Flow Chart for the R & D Paving project team.

# 3. PROBLEM DEFINITION

## 3.1 SITE DESCRIPTION

The 0.242-acre Site is part of the Franklin Falls Historic District and consists of a single-story slab on grade garage building with three garage bays and an office. The garage bays have been partitioned into two areas (one single bay area and one double bay area) that are used for material, equipment, and drum storage, and vehicle maintenance or parking, respectively. The remainder of the Site is asphalt paved, and paving equipment is stored along the eastern side of the Site building. The Site is currently owned by R & D Paving, Incorporated and is identified by the City of Franklin as Map 117, Lot 261.

## 3.2 SITE HISTORY

*The Site*

The Site was developed as early as 1884 as a lumber yard for storage of cord wood. By 1892, the Site was occupied by portions of the F. F. Company (possibly Franklin Falls Power and Light Company). By 1911, the Site was developed with a two-story structure occupied by a wheel wright, painter, and black smith shop, and by a garage from at least 1923 through 1929. Between 1948 and 1986, the southern end of the Site was occupied by a three bay truck garage that was part of the adjacent grocer building. The current Site building was constructed between 1948 and 1956 and was originally a private garage with an earthen floor. By 1986, the truck garage on the southern portion of the Site was removed, and Site conditions remain relatively unchanged from that time through to the present. R&D Paving purchased and completely renovated the Site building in 2003 with poured concrete floors, a new office, bare plywood partitions, and new exterior siding.

Historical Sanborn Fire Insurance® maps indicate the Site had a gasoline underground storage tank (UST) in 1923, and a second gasoline UST was located near the southern property boundary in 1948 (see **Figure 2**). It is unknown if these USTs have been physically removed.

*Surrounding Area*

The surrounding area was occupied by a lumber yard as early as 1884 and by the F. F. Company as early as 1892. Beginning in at least 1897, the surrounding area to the southeast was occupied by the Shepard Wholesale Grocer. A steam laundry shop was located at 31 to 33 Memorial Street, south and upgradient of the Site from at least 1897 through at least 1967. The adjoining property west of the Site was developed with the Acme Knitting Machine and Needle Company by 1911. By 1986, the adjoining Shepard Grocery building and associated truck garage were removed. Kar Z Karma Motors was located at the 31 to 33 Memorial Street property from 2003 through 2008.

## 3.3 PRIOR INVESTIGATIONS

**Phase I Environmental Site Assessment (ESA), August 11, 2014, Credere**

Credere prepared a Phase I ESA for the Site dated August 11, 2014. Based on reviews of historical sources, environmental databases, interviews, information provided by the City of Franklin, Site reconnaissance, and judgment by the Environmental Professional; the following recognized environmental conditions (RECs) were identified in connection with the Site:

- REC #1 – Historical USTs at the Site and immediately upgradient of the Site
- REC #2 – Possible release of petroleum during historical use of the Site as a garage with an earthen floor
- REC #3 – Historical use of the upgradient 31 to 33 Memorial Street property

The following was identified as a *de minimis* condition (DMC), which is defined as an environmental concern that generally does not present a threat to human health or the environment and generally would not be the subject of an enforcement action if brought to the attention of regulatory agencies:

- DMC #1 – Drum storage area within the Site building

Additionally, the following environmental findings, which did not meet the definition of a REC, historical REC (HREC), controlled REC (CREC), or *de minimis* condition (DMC); however, warranted the opinion of an Environmental Professional, were identified:

- Environmental Finding #1 – Possible hazardous building materials throughout the Site
- Environmental Finding #2 – Current use of the Site by a paving company

Based on the RECs, DMC, and environmental findings identified during this Phase I ESA, Credere made the following recommendations:

- A ground penetrating radar (GPR) survey to locate possible historical USTs that may be present at the Site
- A Phase II subsurface investigation to confirm or dismiss the RECs and environmental findings identified in this Phase I ESA
- A Hazardous Building Material Survey (HBMS) to assess the presence of hazardous building materials and/or universal wastes throughout the Site

# 4. PROJECT DESCRIPTION & TIMELINE

## 4.1 REDEVELOPMENT SCENARIO

Future plans for the Site include acquisition of the property by the City of Franklin for use as storage in the short term. Long term plans for the Site have not been finalized; however, they include a City parking lot or regional bus hub.

## 4.2 PROPOSED PROJECT TIMELINE

The following schedule is proposed for the assessment work. This is a dynamic schedule and tasks may be performed later based on document regulatory review time and contractor availability.

| TENTATIVE DATE | ACTION |
|---|---|
| September 2014 | DRAFT SSQAPP |
| September-October 2014 | EPA and NHDES Review Period |
| October 2014 | Finalize SSQAPP and Begin Phase II ESA and HBMS |
| November 2014 | Submit Draft Phase II ESA and HBMS Summary Report |
| December 2014 | NHDES Review Period |
| January 2015 | Finalize Phase II ESA and HBMS Summary Report |

# 5. CONCEPTUAL SITE MODEL

A CSM was developed using the findings from prior environmental investigations and the Phase I ESA and will be updated in subsequent reports as new information becomes available. This CSM includes a description of the physical setting of the Site, contaminants of concern (COCs), extent of contamination, exposure pathways, and potential human and environmental receptors.

## 5.1 PHYSICAL SETTING

### Topography

Based on Credere's observations and the United States Geological Survey (USGS) Topographic Map of the Franklin Quadrangle, New Hampshire, topography at the Site is generally flat to gently sloping to the north; however, the area immediately around the building is graded such that stormwater flows away from the building. The Site elevation is approximately 300 feet above mean sea level. An excerpt from this map has been included as **Figure 1**.

### Geology

*Surficial Geology*

According to the physical Setting Source Summary in the Environmental Database Report (EDR) reviewed during the Phase I ESA, which is derived from the US Department of Agriculture's Soil Conservation Service National Cooperative Survey, Site soils are mapped as Paxton soils, which typically consist of well drained very stony fine sandy loam with slow infiltration rates.

*Bedrock Geology*

According to the Bedrock Geologic Map of New Hampshire, bedrock beneath the Site consists of Lower Silurian meta-argillite, meta-conglomerate, and calc-silicate rocks of the lower part of the Rangley Formation. Rocks were formed by metamorphosis of sedimentary deposits in the Central Maine Composite Terrane (Central Maine Trough) and igneous intrusive rocks. No bedrock outcrops were observed during Credere's Site reconnaissance.

### Hydrology

The nearest surface water body to the Site is the Winnipesaukee River, which is located approximately 150-feet north of the Site. The Winnipesaukee River flows west and joins the Pemigewasset River approximately 0.6-miles south of the Site. Storm drains were observed along Memorial Street, which likely accept runoff from the entirely impermeable Site.

Investigations at adjoining and nearby properties indicated groundwater was encountered at a depth of approximately 10 feet and bedrock was encountered at a similar depth. The Winnipesaukee River is located approximately 15 to 20 feet below the Site. Based on this information, groundwater at the Site is expected to be encountered between 10 and 15 feet.

Groundwater in the area is inferred to flow generally to the north towards the Winnipesaukee River. However, due to the oxbow path of the river, groundwater at the adjoining property to the southwest and west likely flows southwest as documented by prior investigations at the property.

## 5.2 CURRENT CONTAMINANTS OF CONCERN

Based on the current and historical use of the Site and upgradient properties, current COCs include volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) associated with the use of petroleum products and solvents at the Site, the historical USTs, and use of chlorinated solvents at an upgradient property; and polychlorinated biphenyls (PCBs) and metals associated with oils that may have been used at the Site while the Site building had an earthen floor. Polycyclic aromatic hydrocarbons (PAHs) and Resource Conservation and Recovery Act (RCRA) 8 metals are also considered COCs due to the long history of industrial use of the surrounding area.

Asbestos-containing materials (ACMs) may be present in Site building materials. Based on the timing of construction of the Site building between 1948 and 1956, lead-based paint (LBP), and PCBs in building materials may also be present in/on the current Site building. ACMs, LBP and PCBs are considered COCs.

## 5.3 EXTENT OF CONTAMINATION

The extent of COCs at the Site is currently unknown based on lack of prior environmental assessment at the Site; however, based on Site observations and historical information reviewed during the Phase I ESA, COCs are presumed to be located in the following areas:

- VOCs and SVOCs are presumed to be located along the southern property boundary associated with the upgradient former dry cleaner and auto shop, and the upgradient historical UST; in the area of the onsite historical UST; beneath the current concrete foundation slab due to the garage's prior earthen floor; and possibly downgradient of the Site building.
- PCBs are expected to be located in soil beneath the current concrete foundation slab or in surficial soil located outside the garage bays where oils have been tracked or spilled.
- PAHs and metals are expected to be confined to surface soil across the Site.
- If ACM, PCBs, and LBP are identified in/on the Site buildings they are presumed to be confined to the Site building or immediately surrounding the Site building in soil.

## 5.4 EXPOSURE PATHWAYS AND POTENTIAL RECEPTORS

Exposure pathways describe how a human or environmental receptor comes into contact with contaminants that may be present at the Site. Exposure pathways presented in the CSM include the following:

Inhalation: This pathway is primarily associated with groundwater contamination within

30 feet of an occupied structure when groundwater elevation is less than 15 feet below surface grade, or when depth to groundwater is unknown. This pathway is applicable when receptors may inhale impacted media in the form of contaminated vapor.

| | |
|---|---|
| Dermal Absorption: | Exposure via dermal absorption occurs when receptors are exposed to chemical concentrations present in soil, groundwater, surface water, or hazardous building materials through direct contact with the skin. |
| Incidental Uptake: | This pathway is applicable when receptors may incidentally inhale or ingest impacted media in the form of contaminated dust, chips, or airborne asbestos fibers. |

Potential Receptors are categorized by duration of exposure and intensity of use at the Site. The receptor categories described in the CSM include the following:

| | |
|---|---|
| Commercial Workers: | Commercial receptors are those which are present at the Site for long durations but with low intensity exposure such as indoor office workers. |
| Recreational or Park User: | Park users are characterized by low duration, i.e. less than two hours per day, and low intensity usage such as that which would occur during activities such as walking, shopping, and bird watching. |
| Excavation or Construction Worker: | Excavation or construction workers are present at the Site for short durations though intensity of use is high, such as during non-routine activities including construction or utility work. Examples include utility and construction contractors and landscapers. |
| Terrestrial Biota: | These receptors include flora and fauna which may be exposed to contaminants in their respective environments. |

## 5.5 CONCEPTUAL SITE MODEL SUMMARY

Under current conditions, exposure to possible remaining or unassessed contamination at the Site is limited due to the presence of asphalt covering the Site and lack of occupancy of the current Site building. However, future use of the Site may increase exposure to future occupants of the Site.

Potential future receptors include construction workers during demolition or construction, future employees of the Site, and future patrons or visitors to the Site, as well as terrestrial biota. Exposure pathways include inhalation through indoor air due to the potential for impacts to soil beneath the building's concrete slab or groundwater by VOCs, dermal absorption through future occupants' use of the Site and construction workers contact with soil or groundwater during demolition or construction, and incidental uptake of contaminated dust, LBP chips, or asbestos fibers both during construction and by future occupants.

# 6. SAMPLING DESIGN

## 6.1 OBJECTIVE

The main objective of this project is to assess the environmental findings and fulfill the recommendations identified during the Phase I ESA to confirm or dismiss the presence of oil and/or hazardous materials at the Site. Data collected at the Site during this assessment will be considered in the planning stages for possible cleanup activities, and during Site reuse planning. The following tasks are proposed to address this objective:

- Perform a GPR survey of the Site
- Advance soil borings and collect soil samples from each boring location
- Collect surface soil samples
- Install groundwater monitoring wells and collect groundwater samples
- Perform an asbestos survey of the Site building and collect samples of suspect ACM
- Perform PCB-containing building material survey of the Site building and collect samples of suspect PCB-containing materials
- Perform a LBP screening of the Site building
- Perform an inventory of universal and/or hazardous wastes present in the Site building

Specific sampling methodologies are described in **Section 7**. **Table 1** includes the number and type of samples that are proposed to be collected with accompanying rationale, selected analytical methods, and sample volume and preservation details. **Table 2** is a Standard Operating Procedure (SOP) reference table detailing the version of each SOP that will be used during the field sampling program.

## 6.2 GROUND PENETRATING RADAR SURVEY

Credere will contract with Vermont Underground Locators (VUL) to perform a GPR survey at the Site to assess if the historical UST at the Site is currently present and clear soil boring locations for utilities.

## 6.3 SOIL BORING ADVANCEMENT & SOIL SAMPLING

Six (6) soil borings (CA-SB-1 through CA-SB-6) will be advanced at the Site. Soil samples will be collected from each boring to assess possible impacts associated with the historical onsite and upgradient USTs, historical use of the Site as a garage with an earthen floor, and historical use of the upgradient 31 to 33 Memorial Street as a laundromat/dry cleaner and auto shop.

One (1) subsurface soil sample will be collected from each soil boring from the depth interval of greatest observed contamination based on the highest photoionization detector (PID) response, visual evidence of contaminants (e.g. staining, the presence of urban fill, etc.), or olfactory indicators of impact. In the absence of evidence of contamination, the subsurface samples beneath the Site building will be collected from directly beneath the concrete floor and any new

concrete base materials to assess the current drum storage and historical earthen floor; and exterior subsurface samples will be collected from the groundwater interface.

Two (2) surface soil sample (CA-SS-1 and CA-SS-2) will be collected from 0 to 2 feet using hand tools (hand auger or trowel) or the direct-push drill rig while onsite to assess surficial conditions at the Site in support of future redevelopment planning. The surrounding area has historically been used as a mill district since at least the late 1800s and surficial impacts are common under these conditions.

Proposed sample locations are depicted on **Figure 2,** and the rationale for each sample is summarized in **Table 1**.

## 6.4 MONITORING WELL INSTALLATION & GROUNDWATER SAMPLING

Soil borings CA-SB-1 through CA-SB-4 will be completed as groundwater monitoring wells (CA-MW-1 through CA-MW-4). Groundwater samples will be collected from the newly installed wells after development and at least a 14 day stabilization period. Groundwater samples will be collected to assess groundwater impacts from upgradient offsite sources (CA-MW-1 and CA-MW-4), from the historical onsite UST (CA-MW-2), and downgradient of the current Site building historically used as a garage with an earthen floor (CA-MW-3).

Proposed monitoring well locations are depicted on **Figure 2,** and the rationale for each sample is summarized on **Table 1**.

## 6.5 ASBESTOS SAMPLING

Credere will perform a survey of the Site buildings to identify suspect ACM, and each suspect ACM will be sampled. Sample results will be used to properly manage ACM during renovation to the Site buildings. Eight (8) suspect ACM samples will be collected in triplicate (i.e. 24 total ACM samples). This sampling will be performed in accordance with NHDES Chapter Env-A 1800 – Asbestos Management and Control. The number of samples actually collected will be dependent on the number and volume of suspect ACMs that are encountered, but will not exceed 24 individual samples without project team approval.

## 6.6 PCB-CONTAINING BUILDING MATERIAL SAMPLING

To assess the potential presence of PCB-containing building materials, the buildings will be inspected and suspect materials will be inventoried and considered for sampling. Materials that typically contain PCBs include caulk/sealants, paint, and mastics/adhesives that were manufactured between approximately 1930 and 1980 and are most commonly in areas that endure high wear, weather, high heat, or moisture. Typical materials and locations that PCBs are encountered include, but are not limited to:

- exterior caulks and sealants around doors and windows or within expansion joints
- wall paints in high heat or moisture areas such as boiler rooms, equipment rooms, or basements

- floor paints in high traffic areas such as hallways, stairs, or building entrances
- mastics beneath floor tiles

Considering the small size of the Site building, bare plywood or concrete interior walls, and the building's renovation in approximately 1995, little variety of building materials is expected to be inventoried. Four (4, CA-PCB-1 through CA-PCB-4) suspect PCB-containing building materials that are more likely to contain PCBs will be collected for analysis. Samples will be collected to assess if any hazards are present associated with PCBs in building materials and if the building materials are regulated as PCB bulk product waste as defined by 40 CFR 761.3. If based on the initial results, additional assessment of PCB-containing building materials is needed, approval for additional samples will be proposed and approved under a separate SSQAPP amendment. Data will be used to properly manage building materials that may contain PCBs during renovation or demolition of the Site buildings.

## 6.7 LBP SCREENING

Painted surfaces throughout the Site building will be screened for lead in LBP using an X-ray fluorescence (XRF) meter. LBP is defined as paint with a lead concentration of 1.0 milligrams per square centimeter ($mg/cm^2$) or greater in accordance with the United States Department of Housing, Chapter 7: Lead-Based Paint Inspections, 1997 Revision (HUD Guidelines) and with the New Hampshire Statutes Chapter 130 – Lead Paint Poisoning Prevention and Control (Chapter 130). The number of screening points will be dependent on the number of different types/colors of painted surfaces encountered in/on the Site building.

## 6.8 UNIVERSAL/HAZARDOUS WASTE INVENTORY

Materials that once removed will meet the definition of universal/hazardous waste include, but are not limited to, fluorescent lighting, smoke detectors, thermostats (that contain mercury), and lead acid batteries. These types of materials at the Site will be inventoried. Inventory results will be used to properly manage universal and/or hazardous wastes during demolition of the Site building.

# 7. SAMPLING & ANALYTICAL METHODS REQUIREMENTS

The proposed sampling activities will be conducted according to **Table 1**. Field activities will be conducted in accordance with Credere's Generic QAPP and the SOPs referenced on **Table 2**.

## 7.1 GROUND PENETRATING RADAR SURVEY

VUL will perform their GPR survey by transecting the Site in a grid pattern. Anomalies will be reported to Credere in real time, and Credere will document the location of the anomalies, if any. The GPR results will be summarized in the Phase II report.

## 7.2 SOIL BORING ADVANCEMENT & SOIL SAMPLING

Six (6) soil borings (CA-SB-1 through CA-SB-6) will be advanced at the Site. Soil borings CA-SB-1 and CA-SB-4 will be advanced to the first confining layer below the water table or to bedrock to ascertain if there is the potential for chlorinated solvents to be migrating onto the Site from the upgradient former laundromat/cleaners. Soil borings CA-SB-2, CA-SB-3, CA-SB-5 and CA-SB-6 will be advanced to approximately 5 feet below the water table to assess the Site for light non-aqueous phase liquid (LNAPL) impacts. Borings will be advanced using direct push drilling methods with a Geoprobe® macrocore sampling device, or equivalent. Soil cores will be collected continuously using dedicated, disposable polyethylene liners. Macrocores will be individually logged, evidence of contamination will be noted, and soil will be field screened for total VOCs using a Thermo 580B OVM PID (or similar) calibrated with a 100 part per million by volume ($ppm_v$) isobutylene gas with a response factor of 1.0 $ppm_v$. Soil will be screened in accordance with the NHDES HWRB-12 jar headspace technique SOP.

Visible asphalt and base materials, landscaping materials, and other organic detritus, etc. will be removed prior to sampling.

Sample target depths are summarized in **Section 6.3** and on **Table 1**, which is to be used as a field guide.

In all soil samples, representative soil from a 2-foot interval will be sampled from the macrocore or from the surface using decontaminated hand tools (hand auger or trowel) and placed in a decontaminated stainless steel bowl. VOC samples collected from boring locations will be collected directly from the macrocores using a dedicated soil syringe immediately after opening to prevent loss of volatiles and degradation. Multiple volatile organic analysis (VOA) vials may be collected from a boring while jar headspace screening is conducted. The vial for analysis will be selected based on the highest jar headspace screening result. Soil for other analyses will be homogenized and placed in laboratory provided glassware. Proposed sample analysis for each respective sample as well as the required volume and preservation is provided on **Table 1**. Soil samples will be stored on ice and submitted to Absolute Resource Associates (ARA) of Portsmouth, New Hampshire, for analysis.

Excess soil from each boring or surface sample location will be returned to its place of origin within the borehole or to the surface surrounding the borehole.

## 7.3 MONITORING WELL INSTALLATION & GROUNDWATER SAMPLING

Soil boring CA-SB-1 through CA-SB-4 will be completed as groundwater monitoring wells CA-MW-1 through CA-MW-4. Each groundwater monitoring well will be constructed using PVC materials, with 0.010-inch slotted screen and solid riser. Each well will be installed with a 10 foot slotted screen with at least 5 feet of screen below the depth of the water table. The well annulus will be filled with No. 2 washed silica sand with a bentonite seal and the wells will be completed with flush mounted road boxes or stand pipes depending on the location.

Following installation, each monitoring well's top of PVC elevation will be surveyed to an onsite benchmark, if available, or an arbitrary datum if necessary to allow for the determination of relative groundwater elevations and the calculation of groundwater flow at the Site.

Each well will be developed by overpumping and agitation methods. The wells will be purged until a total of at least three well volumes have been removed and turbidity has been reduced to less than 20 NTUs.

Following development, Credere will allow at least two weeks for the monitoring wells to equilibrate with the surrounding aquifer prior to sampling. Depth to groundwater and non-aqueous phase liquid (NAPL) thickness, if present, will then be measured. Groundwater elevations will be calculated relative to the top of the well casing and elevations will be mapped to assess the groundwater flow direction.

Credere will sample each well in accordance with **Table 1** using low-flow sampling methodologies. During sampling, groundwater will be periodically monitored for temperature, pH, oxidation-reduction potential, specific conductivity, dissolved oxygen, and turbidity using a multi-parameter meter and an in-line flow through cell until parameters have stabilized over a period of three readings, spaced at least 5 minutes apart or at a spacing to allow for a complete exchange of flow through the flow through cell calculated based on the flow through cell volume and flow rate. Upon stabilization of field parameters, groundwater samples will be collected from immediately after the pump in order of decreasing volatility. Proposed sample analysis for each respective sample as well as the required volume and preservation is provided on **Table 1**. Groundwater samples will be stored on ice and submitted to ARA for analysis.

## 7.4 ASBESTOS SAMPLING

Any sampling of suspect ACM at the Site will be conducted by a New Hampshire Certified Asbestos Inspector and in accordance with NHDES Chapter Env-A 1800 – Asbestos Management and Control. Three discrete bulk samples will be collected from each type of homogenous suspect ACM (8 suspected ACMs sampled in triplicate for a total of 24 samples). Minor destructive sampling may be required. Samples will be analyzed by EMSL Analytical, Inc. (EMSL) of South Portland, Maine, using Polarized Light Microscopy (PLM) according to EPA Method 600/R-93/116.

## 7.5 PCB-CONTAINING BUILDING MATERIAL SAMPLING

The buildings will be surveyed to locate the materials that in Credere's experience are more likely to contain concentrations of PCBs exceeding the PCB bulk waste criteria. Four (4) building material samples (CA-PCB-1 through CA-PCB-4) will be collected using dedicated disposable tools and placed in laboratory provided glassware. Samples will be submitted to ARA for analysis of PCBs by EPA Method 8082 using soxhlet extraction method 3540C.

## 7.6 LBP SCREENING

Painted surfaces will be screened for the presence of lead in the form of LBP using an XRF meter. Each accessible color and type of paint throughout the Site building will be screened. Paints with screening concentrations of lead exceeding 1.0 $mg/cm^2$ will be considered LBP.

## 7.7 UNIVERSAL/HAZARDOUS WASTE INVENTORY

Materials as described in **Section 6.8** will be manually counted to inventory what will require disposal as universal or hazardous wastes prior to building renovations or demolition, and preparation of the Site for redevelopment.

# 8. REGULATORY STANDARDS

Sample results will be compared to the applicable state and/or federal standards/guidelines described below. **Appendix A** includes Analytical Sensitivity and Project Criteria Tables for the Site, which compares regulatory standards for each contaminant to the analytical limits of the laboratory method used.

## 8.1 SOIL ANALYTICAL RESULTS

Soil analytical results will be compared to the New Hampshire Code of Administrative Rules Chapter Env-Or 600 – Contaminated Site Management Table 600-2 SRSs.

## 8.2 GROUNDWATER ANALYTICAL RESULTS

Groundwater analytical results will be compared to the New Hampshire Code of Administrative Rules Chapter Env-Or 600 – Contaminated Site Management Table 600-1 Ambient Groundwater Quality Standards (AGQS) and Table 2, Method 1 Groundwater Standards as revised in February 2013.

## 8.3 ASBESTOS

Laboratory analytical results for asbestos bulk samples will be compared to the 1% limit specified in NHDES Chapter Env-A 1800 – Asbestos Management and Control.

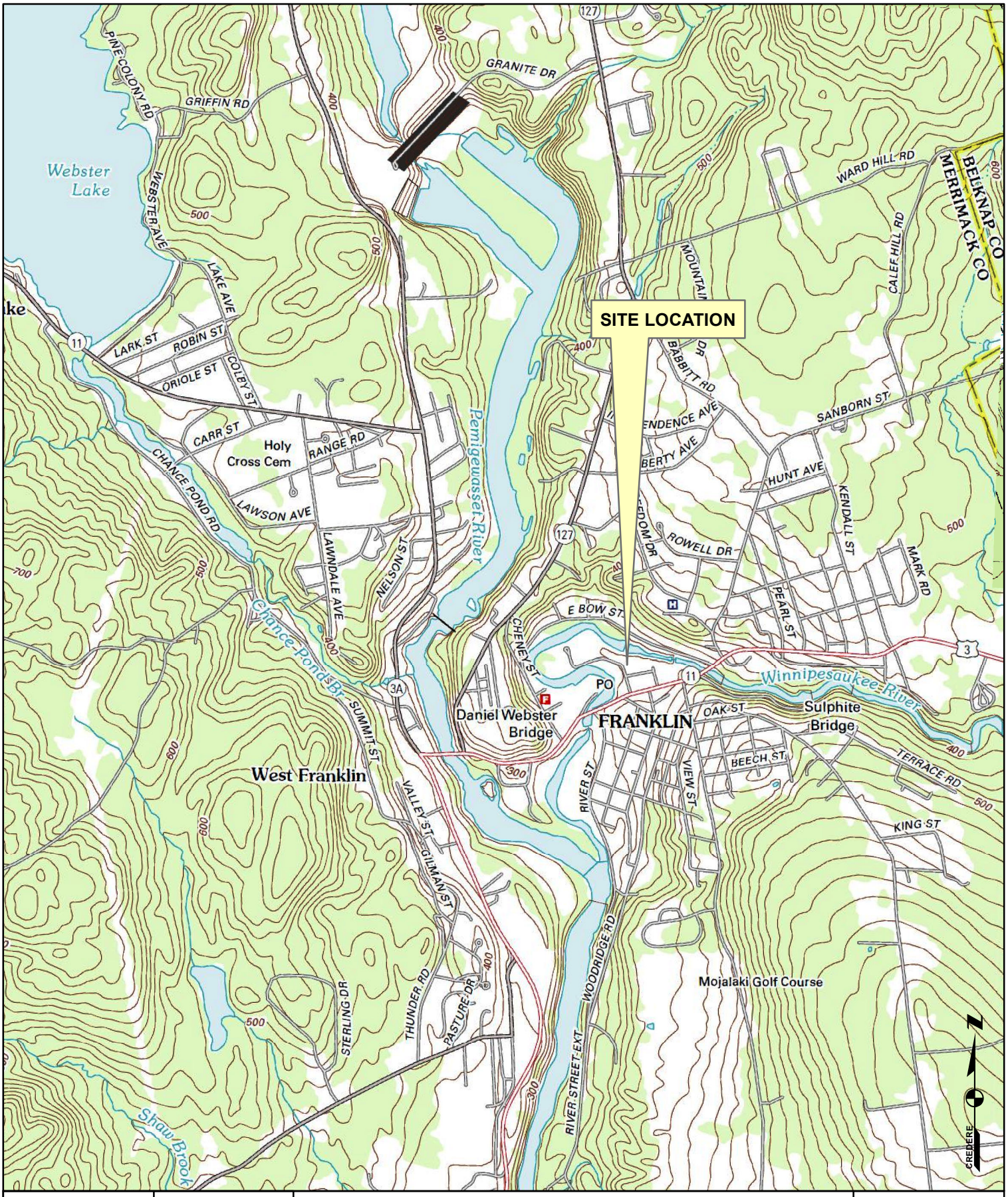
## 8.4 PCBS IN BUILDING MATERIALS

PCB-containing building material sample results will be compared to the 40 CFR 761.3 definition of PCB bulk product waste. Results will be compared to the 50 milligrams per kilogram (mg/kg) threshold criteria.

## 8.5 LBP SCREENING RESULTS

Screening results will be compared to the 1.0 $mg/cm^2$ HUD Guideline and New Hampshire Statutes Chapter 130.

# FIGURES




| | |
|---|---|
| DRAWN BY: **SWM** | DATE: **8/1/2014** |
| CHECKED BY: **ASD** | PROJECT: **14001247** |


**Credere Associates, LLC**
776 MAIN STREET
WESTBROOK, MAINE
Tel. 207.828.1272
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# FIGURE 1
# SITE LOCATION PLAN

R & D PAVING
81 MEMORIAL STREET
FRANKLIN, NEW HAMPSHIRE 03235

1,000 0 2,000
Feet
1 inch = 2,000 feet.


Data Source: USGS Quadrangles: Franklin, New Hampshire 7.5 minute series 2012

T:\Data\NH\Town\Franklin\14001247-RD Paving


NOTES:
1. EXISTING CONDITIONS FEATURES SHOWN ON THIS PLAN ARE APPROXIMATE AND ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF FRANKLIN TAX MAP 117, 2013 ORTHO IMAGES AND THE SITE RECONNAISSANCE PERFORMED ON JULY 9, 2014.

| | |
|---|---|
| DRAWN BY: **SWM** | DATE: **8/19/2014** |
| CHECKED BY: **ASD** | PROJECT: **14001247** |

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# FIGURE 2
# SAMPLE LOCATION PLAN

R & D PAVING
81 MEMORIAL STREET
FRANKLIN, NEW HAMPSHIRE 03235

- PAVING EQUIPMENT STORAGE
- AREA OF POTENTIAL CONCERN
- SITE BOUNDARY
- PARCEL BOUNDARY
- PROPOSED SOIL BORING AND MONITORING WELL
- PROPOSED SOIL BORING
- PROPOSED SURFICIAL SOIL SAMPLE
- PROPANE TANK

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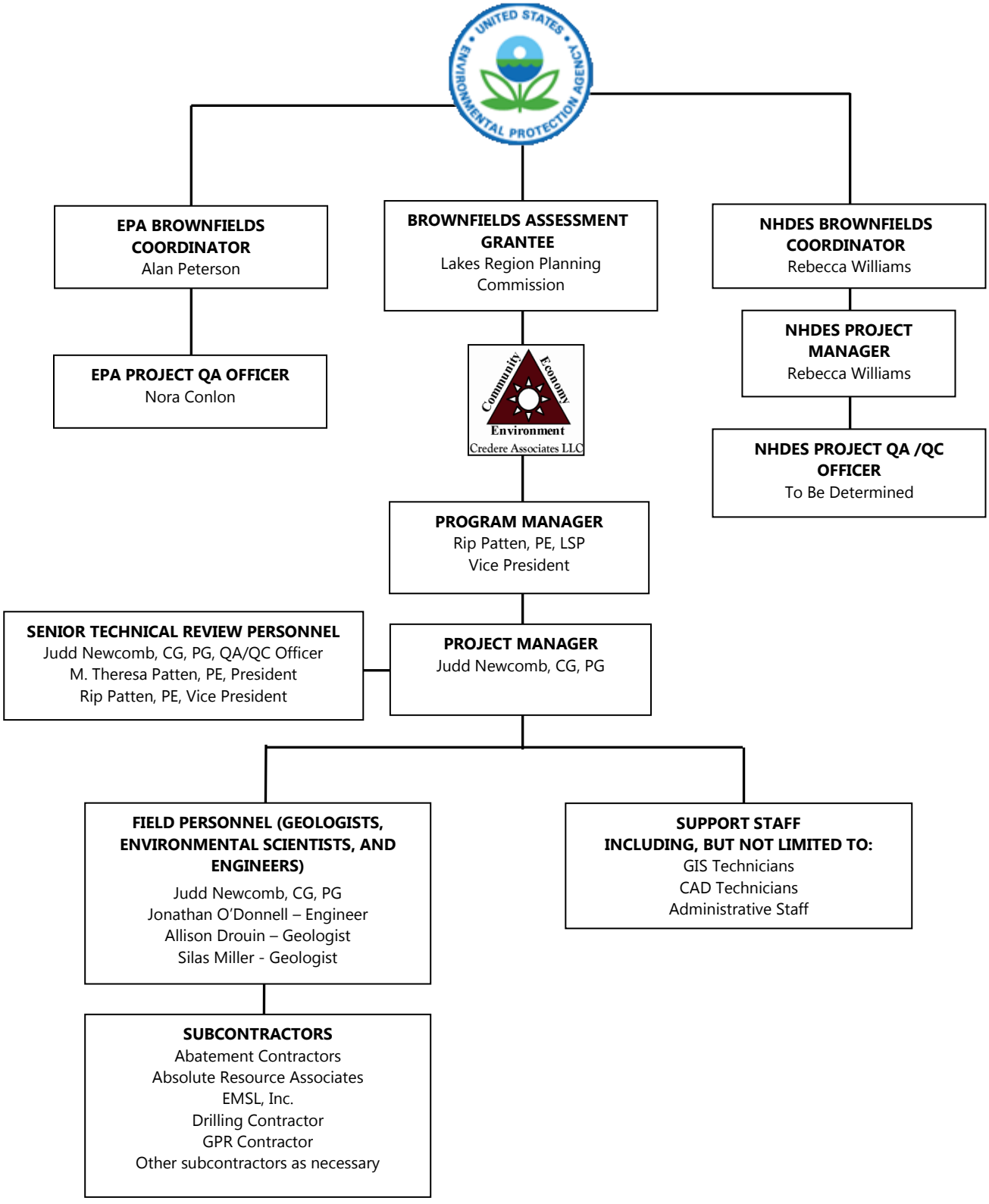
# Figure 3 – Project Organization Flow Chart



# TABLES

# Table 1: Sample Reference Table
# R & D Paving
# 81 Memorial Street, Franklin, New Hampshire

| Media to be Collected | Proposed Sample IDs | Sample Rational | Sample Depth (feet bgs) | Field Analysis/ Observations | No. of Samples for Analysis | QA/QC Samples | Analytical Method | Sample Container Information & Preservative (per location)*[1] | Laboratory To be Used |
|---|---|---|---|---|---|---|---|---|---|
| **Soil** | CA-SB-1 | -To assess impacts to the Site from an upgradient historical UST (REC #1), from historical use of the Site (REC #2), and historical use of the upgradient 31 to 33 Memorial Street (REC #3) | Area of greatest observed contamination or groundwater interface | PID Screening Visual Olfactory | 1 | 1 Field Duplicate 1 MS/MSD (metals only) | VOC (EPA Method 8260D)<br>SVOCs (EPA Method 8270D)<br>RCRA 8 Metals (EPA Method 6010C and 7471B) | 1 - 8 oz amber glass<br>1 - 40 mL VOA (methanol) | Absolute Resource Associates, Portsmouth, NH |
| | CA-SB-2[2] | -To assess impacts to the Site from an onsite historical UST (REC #1) or historical use of the Site as a garage (REC #2) | Area of greatest observed contamination or groundwater interface | | 1 | | VOC (EPA Method 8260D)<br>SVOCs (EPA Method 8270D)<br>RCRA 8 Metals (EPA Method 6010C and 7471B) | 1 - 8 oz amber glass<br>1 - 40 mL VOA (methanol) | |
| | CA-SB-3 | -To assess migration of possible petroleum contamination from historical use of the Site as a garage with an earthen floor (REC #2) | Area of greatest observed contamination or groundwater interface | | 1 | | VOC (EPA Method 8260D)<br>SVOCs (EPA Method 8270D) | 1 - 8 oz amber glass<br>1 - 40 mL VOA (methanol) | |
| | CA-SB-4 | -To assess impacts to the Site from historical use of the upgradient 31 to 33 Memorial Street (REC #3) as well as possible impacts from a former truck garage in this location. | Area of greatest observed contamination or groundwater interface | | 1 | | VOC (EPA Method 8260D)<br>SVOCs (EPA Method 8270D) | 1 - 8 oz amber glass<br>1 - 40 mL VOA (methanol) | |
| | CA-SB-5 | -To assess potential contamination beneath the current concrete slab associated with historical use of the Site as a garage with an earthen floor (REC #2) | Area of greatest observed contamination or beaneath concrete slab | | 1 | | VOC (EPA Method 8260D)<br>SVOCs (EPA Method 8270D)<br>PCBs (EPA Method 8082)<br>RCRA 8 Metals (EPA Method 6010C and 7471B) | 2 - 8 oz amber glass<br>1 - 40 mL VOA (methanol) | |
| | CA-SB-6 | -To assess potential contamination beneath the current concrete slab associated with historical use of the Site as a garage with an earthen floor (REC #2) | Area of greatest observed contamination or beaneath concrete slab | | 1 | | VOC (EPA Method 8260D)<br>SVOCs (EPA Method 8270D)<br>PCBs (EPA Method 8082)<br>RCRA 8 Metals (EPA Method 6010C and 7471B) | 2 - 8 oz amber glass<br>1 - 40 mL VOA (methanol) | |
| | CA-SS-1 | -To assess surface soil associated with historical use of the Site as a garage (REC #2) and in support of future Site use | 0-2 | | 1 | | PAHs (EPA Method 8270D)<br>RCRA 8 Metals (EPA Method 6010C and 7471B)<br>PCBs (EPA Method 8082) | 2 - 8 oz amber glass | |
| | CA-SS-2 | -To assess surface soil associated with historical use of the Site as a garage (REC #2) and in support of future Site use | 0-2 | | 1 | | PAHs (EPA Method 8270D)<br>RCRA 8 Metals (EPA Method 6010C and 7471B)<br>PCBs (EPA Method 8082) | 2 - 8 oz amber glass | |

# Table 1: Sample Reference Table
# R & D Paving
# 81 Memorial Street, Franklin, New Hampshire

| Media to be Collected | Proposed Sample IDs | Sample Rational | Sample Depth (feet bgs) | Field Analysis/ Observations | No. of Samples for Analysis | QA/QC Samples | Analytical Method | Sample Container Information & Preservative (per location)*,[1] | Laboratory To be Used |
|---|---|---|---|---|---|---|---|---|---|
| **Groundwater** | CA-MW-1 | -To assess impacts to the Site from an upgradient historical UST (REC #1) and historical use of the upgradient 31 to 33 Memorial Street (REC #3) | Screened interval | PID Screening Visusal Olfactory | 1 | 1 Field Duplicate 1 MS/MSD (metals only) | VOC (EPA Method 8260D)<br>SVOCs (EPA Method 8270D)<br>RCRA 8 Metals (EPA Method 6010C & 7470A) | 2 - 1L amber jars<br>1 - 40 mL VOAs (HCl)<br>1 - 500 ml poly (HNO3) | Absolute Resource Associates, Portsmouth, NH |
| | CA-MW-2 | -To assess impacts to the Site from an onsite historical UST (REC #1) | Screened interval | | 1 | | VOC (EPA Method 8260D)<br>SVOCs (EPA Method 8270D)<br>RCRA 8 Metals (EPA Method 6010C & 7470A) | 2 - 1L amber jars<br>1 - 40 mL VOAs (HCl)<br>1 - 500 ml poly (HNO3) | |
| | CA-MW-3 | -To assess migration of possible petroleum contamination from historical use of the Site as a garage with an earthen floor (REC #2) | Screened interval | | 1 | | VOC (EPA Method 8260D)<br>SVOCs (EPA Method 8270D)<br>RCRA 8 Metals (EPA Method 6010C & 7470A) | 2 - 1L amber jars<br>1 - 40 mL VOAs (HCl)<br>1 - 500 ml poly (HNO3) | |
| | CA-MW-4 | -To assess impacts to the Site from an upgradient historical UST (REC #1) and historical use of the upgradient 31 to 33 Memorial Street (REC #3) | Screened interval | | 1 | | VOC (EPA Method 8260D)<br>SVOCs (EPA Method 8270D)<br>RCRA 8 Metals (EPA Method 6010C & 7470A) | 2 - 1L amber jars<br>1 - 40 mL VOAs (HCl)<br>1 - 500 ml poly (HNO3) | |
| **Building Materials** | CA-PCB-1 through CA-PCB-4 | -To assess for the presence of PCB containing building materials in the Site buildings (Environmental Finding #1). Data will be used to properly manage building materials during Site renovations or demolition. | NA | Visual | 4 | 1 Field duplicate | PCBs (EPA Method 8082) | 1 - 4 oz glass | Absolute Resource Associates, Portsmouth, NH |
| | CA-PACM-1(A-C) through CA-PACM-8 (A-C) | -Three samples will be collected from each suspect asbestos-containing material (Environmental Finding #1) | NA | Visual | 8 | Triplicate Sampling | Polarized Light Microscopy EPA 600/R-93/116 | Plastic zipper bags | EMSL Analytical, Inc., South Portland, ME |

**Notes:**

1 - All samples will be chilled to 4°C (+/- 2°C) and submitted to the laboratory on ice.

2 -Location may be adjusted based on the results of the GPR survey to best assess the area of the historical UST.

* - Additional details regarding analytical method, sample preservation, sample volume, and hold times can be found in Appendix D of Credere's Generic New Hampshire QAPP.

"greatest observed contamination" shall be defined as the interval of highest PID response, visual staining, odor or sheens.

MS/MSD - Matrix Spike/Matrix Spike Duplicate
NA - not applicable
bgs - below ground surface
DO - Dissolved Oxygen
ORP - Oxidation reduction potential
SVOCs - semi-volatile organic compounds
VOC - volatile organic compounds
RCRA 8 Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag)
PCB - polychlorinated biphenyl

# Table 2: Standard Operating Procedure (SOP) Reference Table
# R & D Paving
# 81 Memorial Street, Franklin, New Hampshire

**Field SOPs**

| SOP | SOP Description | Date |
|---|---|---|
| Credere-001 | SOP for Field Measurement of Groundwater Level | March 2008 |
| Credere-002 | SOP for Geoprobe Sampling | 38991 |
| Credere-004 | SOP for Log Book Entries | October 2006 |
| Credere-007 | SOP for EM and GPR Surveys (SOP by: Northeast Geophysical Services) | October 2006 |
| Credere-009 | SOPs for Typical Asbestos Bulk and Air Sampling (SOP by: Environmental Safety & Hygiene Associates, Inc.) | NA |
| HWRB-1 | Water Level Measurements, Revision 2 | December 2011 |
| HWRB-2 | Calculation of Purge Volume, Revision 1 | January 2012 |
| HWRB-9 | Low Flow Groundwater Purging and Sampling, Revision 5 | January 2012 |
| HWRB-11 | Soil Sampling, Revision 1 | January 2012 |
| HWRB-12 | Jar headspace Technique for Field Screening Soil Samples, Revision 2 | January 2012 |
| HWRB-15 | Decontamination, Revision 3 | January 2012 |
| HWRB-17 | Calibration of Field Instruments, Revision 4 | January 2012 |
| HWRB-18 | Chain of Custody, Sample Handling & Shipping, Revision 2 | January 2012 |
| RWM-DR-025 | Protocol for Collecting Data Using an Innov-X Field Portable X-Ray Fluorescence Spectrometer for Certain metals in Solid Media (Included in Appendix B of Ferrari Realty Trust SSQAPP, dated October 3, 2014) | Febraury 29, 2009 |
| EPASOP#2048 | Monitoring Well Installation | March 18, 1996 |
| EIASOP_SOILSAMPLING2 | Standard Operating Procedure for Soil, Sediment and Solid Waste Sampling | Rev #2, February 13, 2004 |
| EPA 600/R-93/116 | Method for the Determination of Asbestos in Bulk Building Materials | July 1993 |
| EQAGUI-DO | Quality Assurance Bulletin for Calibration of Dissolved Oxygen Meters | February 2006 |
| EQASOP_FieldCalibrat | Standard Operating Procedure Calibration of Field Instruments | Rev #2, January 19, 2010 |
| EQASOP-GW 001 | Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells | Rev #3, January 19, 2010 |

**Laboratory SOPs**

| SOP | SOP Description | Date |
|---|---|---|
| EMSL: PLM SOP | Polarized Light Microscopy | November 12, 2010 |
| RL-4 | Analysis of Polychlorinated Biphenyls in Soil and Water Extracts by EPA 8082 | January 2013 |
| RL-5 | Trace Metals by ICP EPA 200.7/6010C | January 2013 |
| RL-6 | Mercury Analysis by Cold Vapor Methods 245.1, 7470A/7471B | January 2013 |
| RL-9 | Analysis of VOCs in Water and Solid Samples by EPA Method 8260B | June 2012 |
| RL-12 | Preparation and analysis of PAHs, Base/Neutrals, and Acids by EPA Method 8270D | August 2011 |
| RL-28 | Soxhlet Extraction by EPA method 3540C | August 2011 |

# APPENDIX A

## Analytical Sensitivity and Project Criteria Tables

As of the date of this SSQAPP Addendum, the current state and/or federal standards have been reviewed for accuracy.

| VOCs in Soil by EPA Method 8260B | | |
|---|---|---|
| **Analyte** | **Laboratory Practical Quantitation Limit** | **Regulatory Standard[1]** |
| 1,1,1,2-tetrachloroethane | 0.1 | 0.8 |
| 1,1,1-trichloroethane | 0.1 | 78 |
| 1,1,2,2-tetrachloroethane | 0.1 | 4 |
| 1,1,2-trichloroethane | 0.1 | 0.1 |
| 1,1-dichloroethane | 0.1 | 3 |
| 1,1-dichloroethe | 0.1 | 2 |
| 1,1-dichloropropene | 0.1 | NE |
| 1,2,3-trichlorobenzene | 0.1 | 4.9 |
| 1,2,3-trichloropropane | 0.1 | 0.2 |
| 1,2,4-trichlorobenzene | 0.1 | 19 |
| 1,2,4-trimethylbenzene | 0.1 | 130 |
| 1,2-dibromo-3-chloropropane (DBCP) | 0.1 | 0.1 |
| 1,2-dibromoethane (EDB) | 0.1 | 0.1 |
| 1,2-dichlorobenzene | 0.1 | 88 |
| 1,2-dichloroethane | 0.1 | 0.1 |
| 1,2-dichloropropane | 0.1 | 0.1 |
| 1,3,5-trichlorobenzene | 0.1 | 340 |
| 1,3,5-trimethylbenzene | 0.1 | 96 |
| 1,3-dichlorobenzene | 0.1 | 150 |
| 1,3-dichloropropane | 0.1 | 160* |
| 1,4-dichlorobenzene | 0.1 | 7 |
| 1,4-dioxane | 2 | 5 |
| 2,2-dichloropropane | 0.1 | NE |
| 2-butanone (MEK) | 0.3 | 51 |
| 2-chlorotoluene | 0.1 | 15 |
| 2-hexanone | 0.5 | 20 |
| 4-chlorotoluene | 0.1 | 2,400 |
| 4-isopropyltoluene | 0.1 | 3,400 |
| 4-methyl-2-pentanone (MIBK) | 0.4 | 29 |
| acetone | 2 | 75 |
| benzene | 0.1 | 0.3 |
| bromobenzene | 0.1 | 6.2 |
| bromochloromethane | 0.1 | 8.3 |
| bromodichloromethane | 0.1 | 0.1 |
| bromoform | 0.1 | 0.1 |
| bromomethane | 0.2 | 0.3 |
| carbon disulfide | 0.1 | 460 |
| carbon tetrachloride | 0.1 | 12 |
| chlorobenzene | 0.1 | 28 |
| chloroethane | 0.1 | NE |
| chloroform | 0.1 | 0.73 |
| chloromethane | 0.1 | 3 |
| cis-1,2-dichloroethene | 0.1 | NE |
| cis-1,3-dichloropropene | 0.1 | NE |
| dibromochloromethane | 0.1 | 1 |
| dibromomethane | 0.1 | 25* |
| dichlorodifluoromethane | 0.1 | 1,000 |
| diethyl ether | 0.1 | 3,900 |
| diisopropyl ether (DIPE) | 0.1 | 10 |
| ethyl t-butyl ether (ETBE) | 0.1 | 0.7 |

| VOCs in Soil by EPA Method 8260B | | |
|---|---|---|
| **Analyte** | **Laboratory Practical Quantitation Limit** | **Regulatory Standard[1]** |
| ethylbenzene | 0.1 | 140 |
| hexachlorobutadiene | 0.1 | 7 |
| isopropylbenzene | 0.1 | 330 |
| m&p-xylenes | 0.1 | 500** |
| methyl t-butyl ether (MTBE) | 0.1 | 0.2 |
| methylene chloride | 0.1 | 0.1 |
| naphthalene | 0.1 | 5 |
| n-butylbenzene | 0.1 | 110 |
| n-propylbenzene | 0.1 | 85 |
| o-xylene | 0.1 | 500** |
| sec-butylbenzene | 0.1 | 130 |
| styrene | 0.1 | 17 |
| t-amyl-methyl ether (TAME) | 0.1 | 3 |
| t-butanol (TBA) | 2 | 2 |
| tert-butylbenzene | 0.1 | 100 |
| tetrachloroethene (ethylene, PCE) | 0.1 | 2 |
| tetrahydrofuran (THF) | 0.5 | 200 |
| toluene | 0.1 | 100 |
| trans-1,2-dichloroethene (ethylene) | 0.1 | 9 |
| trans-1,3-dichloropropene | 0.1 | NE |
| trichloroethene (TCE) | 0.1 | 0.8 |
| trichlorofluoromethane | 0.1 | 1,000 |
| vinyl chloride | 0.1 | 1 |

Notes:

All values are in mg/kg.

PQLs from Absolute Resource Associates of Portsmouth, New Hampshire

1 - New Hampshire Department of Environmental Services (NHDES) Chapter 600 Soil Remediation Standards unless marked with an *.

* - United States Environmental Protection Agency Regions 3, 6, and 9. (accessed May 2014). Regional Screening Levels for Chemical Contaminants at Superfund Sites (Residential Soil). http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm

** NDHES mixed isomer standard.

NE = Regulatory guideline not established

| VOCs in Groundwater by EPA Method 8260B | | |
|---|---|---|
| **Analyte** | **Laboratory Practical Quantitation Limit** | **Regulatory Standard[1]** |
| 1,1,1,2-tetrachloroethane | 2 | 70 |
| 1,1,1-trichloroethane | 2 | 200 |
| 1,1,2,2-tetrachloroethane | 2 | 2 |
| 1,1,2-trichloroethane | 2 | 5 |
| 1,1-dichloroethane | 2 | 81 |
| 1,1-dichloroethene | 1 | 7 |
| 1,1-dichloropropene | 2 | NE |
| 1,2,3-trichlorobenzene | 2 | 0.7* |
| 1,2,3-trichloropropane | 2 | 40 |
| 1,2,4-trichlorobenzene | 2 | 70 |
| 1,2,4-trimethylbenzene | 2 | 330 |
| 1,2-dibromo-3-chloropropane (DBCP) | 2 | 0.2 |
| 1,2-dibromoethane (EDB) | 2 | 0.05 |
| 1,2-dichlorobenzene | 2 | 600 |
| 1,2-dichloroethane | 2 | 5 |
| 1,2-dichloropropane | 2 | 5 |
| 1,3,5-trichlorobenzene | 2 | 40 |
| 1,3,5-trimethylbenzene | 2 | 330 |
| 1,3-dichlorobenzene | 2 | 600 |
| 1,3-dichloropropane | 2 | 37* |
| 1,4-dichlorobenzene | 2 | 75 |
| 1,4-dioxane | 50 | 3 |
| 2,2-dichloropropane | 2 | NE |
| 2-butanone (MEK) | 10 | 4,000 |
| 2-chlorotoluene | 2 | 100 |
| 2-hexanone | 10 | 3.8* |
| 4-chlorotoluene | 2 | 25* |
| 4-isopropyltoluene | 2 | 260 |
| 4-methyl-2-pentanone (MIBK) | 10 | 2,000 |
| acetone | 50 | 6,000 |
| benzene | 2 | 5 |
| bromobenzene | 2 | 6,2 |
| bromochloromethane | 2 | 8.3 |
| bromodichloromethane | 0.6 | 0.6 |
| bromoform | 2 | 4 |
| bromomethane | 2 | 10 |
| carbon disulfide | 2 | 70 |
| carbon tetrachloride | 2 | 0.2 |
| chlorobenzene | 2 | 7.8 |
| chloroethane | 2 | NE |
| chloroform | 2 | 70 |
| chloromethane | 2 | 30 |
| cis-1,2-dichloroethene | 2 | 70 |
| cis-1,3-dichloropropene | 2 | NE |
| dibromochloromethane | 2 | 60 |
| dibromomethane | 2 | 0.8 |
| dichlorodifluoromethane | 2 | 1,000 |
| diethyl ether | 5 | 1,400 |

| VOCs in Groundwater by EPA Method 8260B | | |
|---|---|---|
| **Analyte** | **Laboratory Practical Quantitation Limit** | **Regulatory Standard[1]** |
| ethyl t-butyl ether (ETBE) | 2 | 40 |
| ethylbenzene | 2 | 700 |
| hexachlorobutadiene | 0.5 | 0.5 |
| diisopropyl ether (DIPE) | 2 | 120 |
| isopropylbenzene | 2 | 800 |
| m&p-xylenes | 2 | 10,000** |
| methyl t-butyl ether (MTBE) | 2 | 13 |
| methylene chloride | 5 | 5 |
| naphthalene | 5 | 20 |
| n-butylbenzene | 2 | 260 |
| n-propylbenzene | 2 | 260 |
| o-xylene | 2 | 10,000** |
| sec-butylbenzene | 2 | 260 |
| styrene | 2 | 100 |
| t-amyl-methyl ether (TAME) | 2 | 140 |
| t-butanol (TBA) | 30 | 40 |
| tert-butylbenzene | 2 | 260 |
| tetrachloroethene | 2 | 5 |
| tetrahydrofuran (THF) | 10 | 154 |
| toluene | 2 | 1,000 |
| trans-1,2-dichloroethene | 2 | 100 |
| trans-1,3-dichloropropene | 2 | NE |
| trichloroethene | 2 | 5 |
| trichlorofluoromethane | 2 | 2,000 |
| vinyl chloride | 2 | 2 |

Notes:

All values are in ug/L.

PQLs from Absolute Resource Associates of Portsmouth, New Hampshire

1 - New Hampshire Department of Environmental Services (NHDES) Chapter 600 Ambient Groundwater Quality Standards for groundwater, unless marked with an *.

* - United States Environmental Protection Agency Regions 3, 6, and 9. (accessed May 2014). Regional Screening Levels for Chemical Contaminants at Superfund Sites. http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm

** - NHDES mixed isomer NOTE

NHDES mixed isomer standard.

NE = Regulatory guideline not established.

| SVOC in Soil by EPA Method 8270D | | |
|---|---|---|
| **Analyte** | **Laboratory Practical Quantitation Limit** | **Regulatory Standard[1]** |
| 1,2,4-trichlorobenzene | 0.5 | 19 |
| 1,2-dichlorobenzene | 0.2 | 88 |
| 1,3-dichlorobenzene | 0.2 | 150 |
| 1,4-dichlorobenzene | 0.2 | 7 |
| 2,4,5-trichlorophenol | 0.2 | 24 |
| 2,4,6-trichlorophenol | 0.2 | 0.7 |
| 2,4-dichlorophenol | 0.5 | 0.7 |
| 2,4-dimethylphenol | 0.2 | 4 |
| 2,4-dinitrophenol | 5 | 0.7 |
| 2,4-dinitrotoluene | 0.2 | 0.7 |
| 2,6-dinitrotoluene | 0.2 | 0.36 |
| 2-chloronaphthalene | 0.5 | NE |
| 2-chlorophenol | 0.5 | 2 |
| 2-methylnaphthalene | 0.05 | 96 |
| 2-methylphenol | 0.2 | 0.9 |
| 2-nitroaniline | 0.2 | 61 |
| 2-nitrophenol | 0.2 | NE |
| 3,3'-dichlorobenzidine | 3 | 0.7 |
| 3-nitroaniline | 0.2 | NE |
| 4,6-dinitro-2-methylphenol | 2 | 4.9* |
| 4-bromophenyl phenyl ether | 0.2 | NE |
| 4-chloro-3-methylphenol | 0.2 | 6,100* |
| 4-chloroaniline | 0.2 | 1.3 |
| 4-chlorophenyl phenyl ether | 0.5 | NE |
| 4-methylphenol | 0.2 | 0.7 |
| 4-nitroaniline | 0.5 | 25 |
| 4-nitrophenol | 2 | NE |
| acenaphthene | 0.05 | 340 |
| acenaphthylene | 0.05 | 490 |
| aniline | 0.2 | 43 |
| anthracene | 0.05 | 1000 |
| azobenzene | 0.2 | 5,6 |
| benzidine | 3 | 0.004 |
| benzo(a)anthracene | 0.05 | 1 |
| benzo(a)pyrene | 0.05 | 0.7 |
| benzo(b)fluoranthene | 0.05 | 1 |
| benzo(g,h,i)perylene | 0.05 | 960 |
| benzo(k)fluoranthene | 0.05 | 12 |
| benzoic acid | 5 | 350 |
| benzyl alcohol | 0.2 | 620 |
| bis(2-chloroethoxy)methane | 0.2 | 18 |
| bis(2-chloroethyl)ether | 0.2 | 0.7 |
| bis(2-chloroisopropyl) ether | 0.2 | 5 |
| bis(2-ethylhexyl)phthalate | 0.5 | 72 |
| butyl benzyl phthalate | 0.5 | 280 |
| carbazole | 0.2 | NE |
| chrysene | 0.05 | 120 |
| dibenzo(a,h)anthracene | 0.05 | 0.7 |
| dibenzofuran | 0.05 | 0.72 |

## SVOC in Soil by EPA Method 8270D

| Analyte | Laboratory Practical Quantitation Limit | Regulatory Standard[1] |
|---|---|---|
| diethyl phthalate | 0.5 | 1000 |
| dimethylphthalate | 0.5 | 700 |
| di-n-butylphthalate | 0.5 | 2,600 |
| di-n-octyl phthalate | 0.5 | NE |
| fluoranthene | 0.05 | 960 |
| fluorene | 0.05 | 77 |
| hexachlorobenzene | 0.2 | 0.8 |
| hexachlorobutadiene | 0.2 | 7 |
| hexachlorocyclopentadiene | 1 | 200 |
| hexachloroethane | 0.2 | 0.7 |
| indeno(1,2,3-cd)pyrene | 0.05 | 1 |
| isophorone | 0.5 | 1 |
| naphthalene | 0.05 | 5 |
| nitrobenzene | 0.2 | 5.1 |
| N-nitrosodimethylamine | 0.2 | 0.024 |
| N-nitroso-di-N-propylamine | 0.2 | 0.076 |
| N-nitrosodiphenylamine | 0.2 | 0.19 |
| pentachlorophenol | 1 | 3 |
| phenanthrene | 0.05 | 960 |
| phenol | 0.2 | 56 |
| pyrene | 0.05 | 720 |

Notes:

All values are in mg/kg.

PQLs from Absolute Resource Associates of Portsmouth, New Hampshire

1 - New Hampshire Department of Environmental Services (NHDES) Chapter 600 Soil Remediation Standards, unless marked with an *.

NE = Regulatory guideline not established

* - United States Environmental Protection Agency Regions 3, 6, and 9. (accessed May 2014). Regional Screening Levels for Chemical Contaminants at Superfund Sites. http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm

| SVOC in Groundwater by EPA Method 8270D | | |
|---|---|---|
| **Analyte** | **Laboratory Practical Quantitation Limit** | **Regulatory Standard[1]** |
| 1,2,4-trichlorobenzene | 5 | 70 |
| 1,2-dichlorobenzene | 2 | 600 |
| 1,3-dichlorobenzene | 2 | 600 |
| 1,4-dichlorobenzene | 2 | 75 |
| 2,4,5-trichlorophenol | 2 | 700 |
| 2,4,6-trichlorophenol | 2 | 5 |
| 2,4-dichlorophenol | 5 | 21 |
| 2,4-dimethylphenol | 2 | 140 |
| 2,4-dinitrophenol | 50 | 14 |
| 2,4-dinitrotoluene | 2 | 10 |
| 2,6-dinitrotoluene | 2 | 0.048 |
| 2-chloronaphthalene | 5 | 550* |
| 2-chlorophenol | 5 | 35 |
| 2-methylnaphthalene | 0.5 | 280 |
| 2-methylphenol | 2 | 40 |
| 2-nitroaniline | 2 | 19 |
| 2-nitrophenol | 2 | NE |
| 3,3'-dichlorobenzidine | 30 | 1.3 |
| 3-nitroaniline | 2 | NE |
| 4,6-dinitro-2-methylphenol | 20 | 1.2* |
| 4-bromophenyl phenyl ether | 2 | NE |
| 4-chloro-3-methylphenol | 2 | 1,100* |
| 4-chloroaniline (p-) | 2 | 28 |
| 4-chlorophenyl phenyl ether | 5 | NE |
| 4-methylphenol | 2 | 40 |
| 4-nitroaniline | 5 | 3.8 |
| 4-nitrophenol | 10 | NE |
| acenaphthene | 0.5 | 420 |
| acenaphthylene | 0.5 | 420 |
| aniline | 2 | 12* |
| anthracene | 0.5 | 2100 |
| azobenzene | 2 | 0.12 |
| benzidine | 30 | 0.8 |
| benzo(a)anthracene | 0.5 | 0.1 |
| benzo(a)pyrene | 0.2 | 0.2 |
| benzo(b)fluoranthene | 0.5 | 0.1 |
| benzo(g,h,i)perylene | 0.5 | 210 |
| benzo(k)fluoranthene | 0.5 | 0.5 |
| benzoic acid | 50 | 28,000 |
| benzyl alcohol | 2 | 200 |
| bis(2-chloroethoxy)methane | 5 | 5.9 |
| bis(2-chloroethyl)ether | 2 | 10 |
| bis(2-chloroisopropyl) ether | 2 | 300 |
| bis(2-ethylhexyl)phthalate | 5 | 6 |
| butyl benzyl phthalate | 5 | 14* |
| carbazole | 2 | NE |
| chrysene | 0.5 | 5 |
| dibenzo(a,h)anthracene | 0.5 | 0.1 |
| dibenzofuran | 0.5 | 0.79 |
| diethyl phthalate | 5 | 1,500 |

| SVOC in Groundwater by EPA Method 8270D | | |
|---|---|---|
| **Analyte** | **Laboratory Practical Quantitation Limit** | **Regulatory Standard[1]** |
| dimethylphthalate | 5 | 50,000 |
| di-n-butylphthalate | 5 | 2,600 |
| di-n-octyl phthalate | 2 | 20 |
| fluoranthene | 0.5 | 280 |
| fluorene | 0.5 | 280 |
| hexachlorobenzene | 2 | 1 |
| hexachlorobutadiene | 2 | 0.5 |
| hexachlorocyclopentadiene | 10 | 50 |
| hexachloroethane | 2 | 1 |
| indeno(1,2,3-cd)pyrene | 0.5 | 0.1 |
| isophorone | 5 | 100 |
| naphthalene | 0.5 | 20 |
| nitrobenzene | 2 | 0.14 |
| N-nitrosodimethylamine | 2 | 0.00049* |
| N-nitroso-di-N-propylamine | 2 | 0.011 |
| N-nitrosodiphenylamine | 2 | 12 |
| pentachlorophenol | 10 | 1 |
| phenanthrene | 0.5 | 210 |
| phenol | 2 | 4000 |
| pyrene | 0.5 | 210 |

Notes:
All values are in ug/L.
PQLs from Absolute Resource Associates of Portsmouth, New Hampshire
1 - New Hampshire Department of Environmental Services (NHDES) Chapter 600 Ambient Groundwater Quality Standards for groundwater, unless marked with an *.

* United States Environmental Protection Agency Regions 3, 6, and 9. (accessed May 2014). Regional Screening Levels for Chemical Contaminants at Superfund Sites. http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm

## RCRA 8 Metals in Soil by EPA Methods 6010C

| Analyte | Laboratory Practical Quantitation Limit | Regulatory Standard[1] |
|---|---|---|
| Arsenic | 0.5 | 11 |
| Barium | 2 | 1,000 |
| Cadmium | 0.2 | 33 |
| Chromium (III) | 2 | 1,000 |
| Lead | 0.5 | 400 |
| Selenium | 2 | 180 |
| Silver | 0.4 | 89 |

Notes:
All values are in mg/kg.
PQLs from Absolute Resource Associates of Portsmouth, New Hampshire
1 - New Hampshire Department of Environmental Services (NHDES) Chapter 600 Soil Remediation Standards.

## RCRA 8 Metals in Groundwater by EPA Method 6010C

| Analyte | Laboratory Practical Quantitation Limit | Regulatory Standard[1] |
|---|---|---|
| Arsenic | 8 | 10 |
| Barium | 50 | 2,000 |
| Cadmium | 4 | 5 |
| Chromium (TOTAL) | 50 | 100 |
| Lead | 8 | 15 |
| Selenium | 50 | 50 |
| Silver | 7 | 100 |

Notes:

All values are in ug/L.

PQLs from Absolute Resource Associates of Portsmouth, New Hampshire

1 - New Hampshire Department of Environmental Services (NHDES) Chapter 600 Ambient Groundwater Quality Standards for groundwater.

## PCBs in Soil by EPA Method 8082A

| Analyte | Laboratory Practical Quantitation Limit | Regulatory Standard[1] |
|---|---|---|
| PCB-1016 | 0.2 | 1 (Total) |
| PCB-1221 | 0.2 | |
| PCB-1232 | 0.2 | |
| PCB-1242 | 0.2 | |
| PCB-1248 | 0.2 | |
| PCB-1260 | 0.2 | |

Notes:

PQLs from Absolute Resource Associates of Portsmouth, New Hampshire

1 - New Hampshire Department of Environmental Services (NHDES) Chapter 600 Soil Remediation Standards.

All concentrations in mg/kg

NE = Regulatory guideline not established

| PCBs in Building Materials by EPA Method 8082 | | |
|---|---|---|
| **Analyte** | **Laboratory Practical Quantitation Limit** | **Regulatory Standard (40 CFR 761.3)** |
| PCB-1016 | 0.2 | 50 (Total) |
| PCB-1221 | 0.2 | |
| PCB-1232 | 0.2 | |
| PCB-1242 | 0.2 | |
| PCB-1248 | 0.2 | |
| PCB-1254 | 0.2 | |
| PCB-1260 | 0.2 | |
| Notes:<br>All values are in mg/kg. | | |

| PAHs in Soil by EPA Method 8270D | | |
|---|---|---|
| **Analyte** | **Laboratory Practical Quantitation Limit** | **Regulatory Standard[1]** |
| 2-methylnaphthalene | 0.5 | 96 |
| acenaphthene | 0.5 | 340 |
| acenaphthylene | 0.5 | 490 |
| anthracene | 0.5 | 1,000 |
| benzo(a)anthracene | 0.5 | 1 |
| benzo(a)pyrene | 0.5 | 0.7 |
| benzo(b)fluoranthene | 0.5 | 1 |
| benzo(g,h,i)perylene | 0.5 | 960 |
| benzo(k)fluoranthene | 0.5 | 12 |
| chrysene | 0.5 | 120 |
| dibenzo(a,h)anthracene | 0.5 | 0.7 |
| dibenzofuran | 0.5 | 7.2 |
| fluoranthene | 0.5 | 960 |
| fluorene | 0.5 | 77 |
| indeno(1,2,3-cd)pyrene | 0.5 | 1 |
| naphthalene | 0.5 | 5 |
| phenanthrene | 0.5 | 960 |
| pyrene | 0.5 | 720 |

Notes:

All values are in mg/kg.

PQLs from Absolute Resource Associates of Portsmouth, New Hampshire

1 - New Hampshire Department of Environmental Services (NHDES) Chapter 600 Soil Remediation Standards.

* - United States Environmental Protection Agency Regions 3, 6, and 9. (accessed May 2014). Regional Screening Levels for Chemical Contaminants at Superfund Sites. http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm

NE = Regulatory guideline not established

| Hg in Soil by EPA Methods 7470A | | |
|---|---|---|
| **Analyte** | **Laboratory Practical Quantitation Limit** | **Regulatory Standard[1]** |
| Mercury | 0.02 | 6 |

Notes:
All values are in mg/kg.
PQLs from Absolute Resource Associates of Portsmouth, New Hampshire
1 - New Hampshire Department of Environmental Services (NHDES) Chapter 600 Soil Remediation Standards.

| Hg in Groundwater by EPA Methods 7471B | | |
|---|---|---|
| **Analyte** | **Laboratory Practical Quantitation Limit** | **Regulatory Standard[1]** |
| Mercury | 0.2 | 2 |

Notes:

All values are in ug/L.

PQLs from Absolute Resource Associates of Portsmouth, New Hampshire

1 - New Hampshire Department of Environmental Services (NHDES) Chapter 600 Ambient Groundwater Quality Standards for groundwater.

| Asbestos in Solids by PLM by EPA Method 600/R | | |
|---|---|---|
| **Analyte** | **Laboratory Practical Quantitation Limit** | **Regulatory Standard[1]** |
| Asbestos | 0.20% | 1% |

Notes:

1 - New Hampshire Department of Environmental Services Chapter 1800: Asbestos Management Control, October 21, 2008.
PQL from EMSL of Cinnamonsin, New Jersey

# APPENDIX B

# PHASE II PHOTO LOG

**Phase II Photo Log**
**R & D Paving**
**81 Memorial Street, Franklin, New Hampshire**

1. Location of CA-SB-1/CA-MW-1 to south of Site building facing south

2. Location of CA-SB-2/CA-MW-2 to west of site building facing north

3. Location of CA-SB-3/CA-MW-3 to north of Site building facing south

4. Location of CA-SB-4/CA-MW-4 to southeast of Site building facing east

**Phase II Photo Log**
**R & D Paving**
**81 Memorial Street, Franklin, New Hampshire**

5. Location of CA-SB-5 to west of Site building facing east

6. Location of CA-SS-2 to west of Site building facing east

7. Location of CA-SS-1 to south of Site building facing east

# APPENDIX C

# FIELD LOGS

# Soil Boring Log

Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092

# CA-SB-1 / CA-MW-1

| SITE INFORMATION | |
|---|---|
| **Project Number/Client:** | 14001247/LRPC R & D Paving |
| **Site Location:** | 81 Memorial Street, Franklin NH |
| **Date Start/Finish:** | 10/27/2014 |
| **Credere, LLC Representative:** | Allison Drouin/Silas Miller |

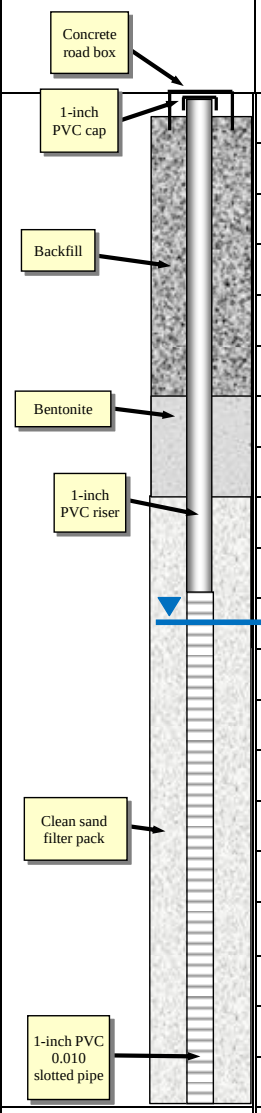
| WELL SPECIFICATIONS | |
|---|---|
| **Well Depth (feet) from TOC:** | 20 |
| **Screen Length (feet):** | 10 (10' to 20')) |
| **TOW Elevation:** (feet above mean sea level) | 302.91 |
| **Well Material** | 1" PVC riser, 0.01" slotted screen |

| CONTRACTOR | |
|---|---|
| **Drilling Contractor:** | Georsearch, Inc. |
| **Foreman:** | John Chase |
| **Drilling Method:** | GeoProbe Direct Push |

| DRILLING EQUIPMENT | |
|---|---|
| **Equipment:** | GeoProbe 7822 DT Track-mounted Rig |
| **Casing Diameter:** | 2" Macrocore |
| **Casing Material:** | Steel |

| Depth | Sample Information: Sample No. | Pen/Rec (In.) | Depth (Ft.) | Blows (/0.5') | PID (ppm) (RF=1.0) | | Strata | USCS Code | Depth |
|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | 0.0 | 0-8" Asphalt | Asphalt | NA | 0 |
| 1 | | | | | 0.0 | | | | 1 |
| 2 | S-1 | 60/41 | 0-5 | NA | 0.0 | 8-41" Brown fine to medium SAND and GRAVEL, dry. | | | 2 |
| 3 | | | | | 0.0 | | | | 3 |
| 4 | | | | | 0.0 | | Fill | SW | 4 |
| 5 | | | | | 0.1 | | | | 5 |
| 6 | | | | | 0.0 | 0-40" Brown fine to medium SAND and GRAVEL, dry. | | | 6 |
| 7 | S-2 | 60/45 | 5-10 | NA | 0.0 | | | | 7 |
| 8 | | | | | 0.0 | | | | 8 |
| 9 | | | | | 0.0 | 40-45" Brown-gray very fine to fine SAND, moist. | Sand | SP | 9 |
| 10 | | | | | 0.0 | | | | 10 |
| 11 | | | | | 0.0 | | | | 11 |
| 12 | S-3 | 60/36 | 10-15 | NA | 0.0 | 0-36" Brown SILT and very fine SAND, wet. | | SM | 12 |
| 13 | | | | | 0.0 | | | | 13 |
| 14 | | | | | 0.0 | | Silt and sand | | 14 |
| 15 | | | | | 0.0 | 0-42" Brown very fine to fine SAND, | | | 15 |
| 16 | | | | | 0.0 | | | | 16 |
| 17 | S-4 | 60/48 | 15-20 | NA | 0.0 | | | SP | 17 |
| 18 | | | | | 0.0 | | | | 18 |
| 19 | | | | | 0.0 | 42-48" Brown SILT and CLAY, wet. | Silt and clay | ML-CL | 19 |
| 20 | | | | | | **End of Boring @ 20 feet** | | | 20 |

**Equipment Installed**




**Remarks:**

CA-SB-1 (10-12/10.5) @ 1505 - VOC, SVOC, RCRA 8 Metals

▼ Observed water table

Soils described using "Modified Burmister Method"

TOW Elevation - Elevation of Top of Well PVC Slotted Pipe and Riser. Elevations were referenced from the corner stone off the northwest corner of the Site building, assumed to be 302 feet AMSL.

**Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings h ave been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.**



**Boring No:** CA-SB-1

# Soil Boring Log

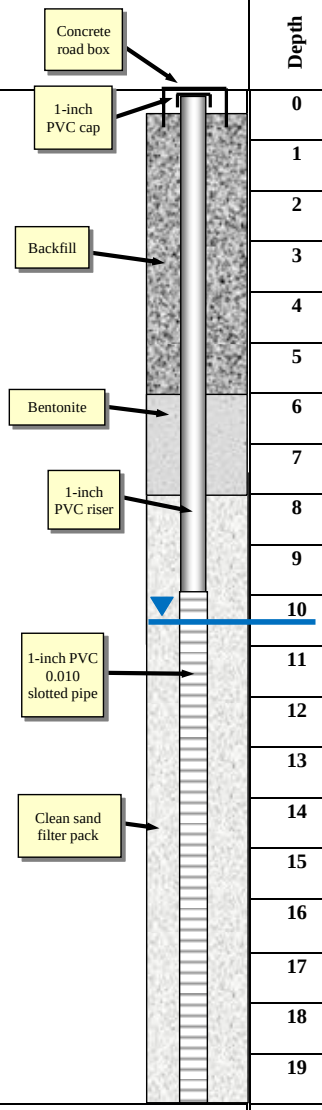
Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092

# CA-SB-2 / CA-MW-2

| SITE INFORMATION | WELL SPECIFICATIONS |
|---|---|
| **Project Number/Client:** 14001247/LRPC R & D Paving | **Well Depth (feet) from TOC:** 20 |
| **Site Location:** 81 Memorial Street, Franklin NH | **Screen Length (feet):** 10' (10' to 20') |
| **Date Start/Finish:** 10/27/2014 | **TOW Elevation:** 302.31 (feet above mean sea level) |
| **Credere, LLC Representative:** Allison Drouin/Silas Miller | **Well Material** 1" PVC riser, 0.01" slotted screen |
| **CONTRACTOR** | **DRILLING EQUIPMENT** |
| **Drilling Contractor:** Georsearch, Inc. | **Equipment:** GeoProbe 7822 DT Track-mounted Rig |
| **Foreman:** John Chase | **Casing Diameter:** 2" Macrocore |
| **Drilling Method:** GeoProbe Direct Push | **Casing Material:** Steel |

| Depth | Sample No. | Pen/Rec (In.) | Depth (Ft.) | Blows (/0.5') | PID (ppm) (RF=1.0) | | Strata | USCS Code | Depth |
|---|---|---|---|---|---|---|---|---|---|
| 0 | S-1 | 60/48 | 0-5 | NA | 0.0 | 0-1" Asphalt | Fill | NA | 0 |
| 1 | | | | | 0.1 | 1-14" Dark reddish-brown SILT and very fine SAND, dry. | | SM | 1 |
| 2 | | | | | 0.3 | 14-48" Dark-brown, black, orange-brown fine to coarse SAND and GRAVEL, dry. | | SW | 2 |
| 3 | | | | | 0.2 | | | | 3 |
| 4 | | | | | 0.0 | | | | 4 |
| 5 | S-2 | 60/50 | 5-10 | NA | 0.0 | 0-12" Light-brown fine to medium SAND, some angular Gravel, dry. | Sand | SP | 5 |
| 6 | | | | | 0.0 | 12-18" Red-brown medium to coarse SAND, trace Gravel. | | | 6 |
| 7 | | | | | 0.0 | 18-26" Brown very fine to fine SAND. | | | 7 |
| 8 | | | | | 0.0 | 26-31" Red-brown medium to coarse SAND. | | | 8 |
| 9 | | | | | 0.1 | 31-41" Brown fine SAND. | | | 9 |
| 10 | S-3 | 60/34 | 10-15 | NA | 0.0 | 41-50" Red-brown medium SAND, moist. | | | 10 |
| 11 | | | | | 0.0 | 0-3" Red-brown medium SAND, moist. | | | 11 |
| 12 | | | | | 0.0 | 3-24" Brown fine SAND, wet. | | | 12 |
| 13 | | | | | 0.0 | 24-34" Red-brown medium to coarse SAND and GRAVEL, wet. | | SW | 13 |
| 14 | | | | | 0.0 | | | | 14 |
| 15 | S-4 | 60/60 | 15-20 | NA | 0.0 | 0-60" Brown very fine to coarse SAND, some | | | 15 |
| 16 | | | | | 0.0 | | | | 16 |
| 17 | | | | | 0.0 | | | | 17 |
| 18 | | | | | 0.0 | | | | 18 |
| 19 | | | | | 0.0 | | | | 19 |
| 20 | | | | | | **End of Boring @ 20-feet** | | | 20 |

**Equipment Installed**




**Remarks:**
CA-SB-2 (12-14/13) @ 1305 - VOCs, SVOC, RCRA 8 Metals

▼ Observed water table

TOW Elevation - Elevation of Top of Well PVC Slotted Pipe and Riser. Elevations were referenced from the corner stone off the northwest corner of the Site building, assumed to be 302 feet AMSL.

**Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings h ave been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time**



**Boring No:** **CA-SB-2**

# Soil Boring Log

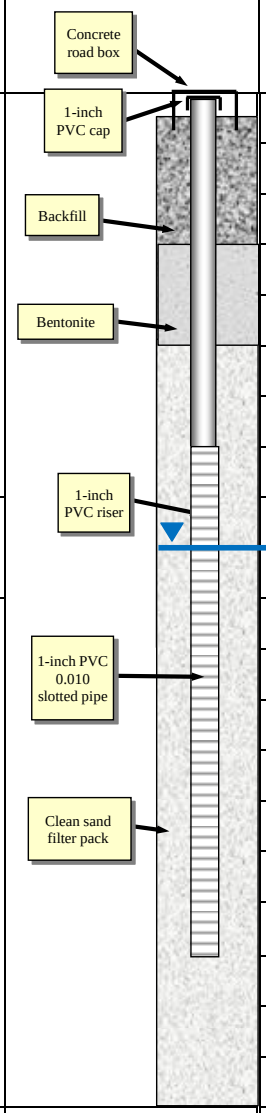
Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092

# CA-SB-3 / CA-MW-3

| SITE INFORMATION | WELL SPECIFICATIONS |
|---|---|
| **Project Number/Client:** 14001247/LRPC R & D Paving | **Well Depth (feet) from TOC:** 17 |
| **Site Location:** 81 Memorial Street, Franklin NH | **Screen Length (feet):** 10 (7' to 17') |
| **Date Start/Finish:** 10/30/2014 | **TOW Elevation:** 302.76 (feet above mean sea level) |
| **Credere, LLC Representative:** Allison Drouin/Silas Miller | **Well Material** 1" PVC riser, 0.01" slotted screen |
| **CONTRACTOR** | **DRILLING EQUIPMENT** |
| **Drilling Contractor:** Georsearch, Inc. | **Equipment:** GeoProbe 7822 DT Track-mounted Rig |
| **Foreman:** John Chase | **Casing Diameter:** 2" Macrocore |
| **Drilling Method:** GeoProbe Direct Push | **Casing Material:** Steel |

| Depth | Sample No. | Pen/Rec (In.) | Depth (Ft.) | Blows (/0.5') | PID (ppm) (RF=1.0) | | Strata | USCS Code | Depth |
|---|---|---|---|---|---|---|---|---|---|
| 0 | S-1 | 60/50 | 0-5 | NA | 0.0 | 0-2" Asphalt | Sand and gravel | SW | 0 |
| 1 | | | | | 0.0 | | | | 1 |
| 2 | | | | | 0.0 | 2-50" Layered red-brown, dark-brown, black fine to coarse SAND, some Gravel, black from 24-28" and 37-40", moist. | | | 2 |
| 3 | | | | | 0.0 | | | | 3 |
| 4 | | | | | 0.0 | | | | 4 |
| 5 | S-2 | 60/43 | 5-10 | NA | 0.0 | 0-30" Brown-gray very fine to coarse SAND and GRAVEL (pulversized), dry to moist. | | | 5 |
| 6 | | | | | 0.6 | | | | 6 |
| 7 | | | | | 0.1 | | | | 7 |
| 8 | | | | | 0.0 | 30-43" Brown SILT and very fine SAND, wet at 9 feet. | Silt and sand | SM | 8 |
| 9 | | | | | 0.0 | | | | 9 |
| 10 | S-3 | 60/36 | 10-15 | NA | 0.0 | 0-36" Brownish-gray fine SAND, orange oxidation at top of core, wet. | Sand | SP | 10 |
| 11 | | | | | 0.0 | | | | 11 |
| 12 | | | | | 0.0 | | | | 12 |
| 13 | | | | | 0.0 | | | | 13 |
| 14 | | | | | 0.0 | | | | 14 |
| 15 | S-4 | 60/60 | 15-20 | NA | 0.0 | 0-60" Brown fine SAND, depositional layering in bottom 15 inches, wet. | | | 15 |
| 16 | | | | | 0.0 | | | | 16 |
| 17 | | | | | 0.0 | | | | 17 |
| 18 | | | | | 0.0 | | | | 18 |
| 19 | | | | | 0.0 | | | | 19 |
| 20 | | | | | | **End of Boring @ 20-feet** | | | 20 |

Equipment Installed




**Remarks:**
CA-SB-3 (8-10/9) @ 0840 - VOCs, SVOC

Observed water table

TOW Elevation - Elevation of Top of Well PVC Slotted Pipe and Riser. Elevations were referenced from the corner stone off the northwest corner of the Site building, assumed to be 302 feet AMSL.

**Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings h ave been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.**

# Soil Boring Log

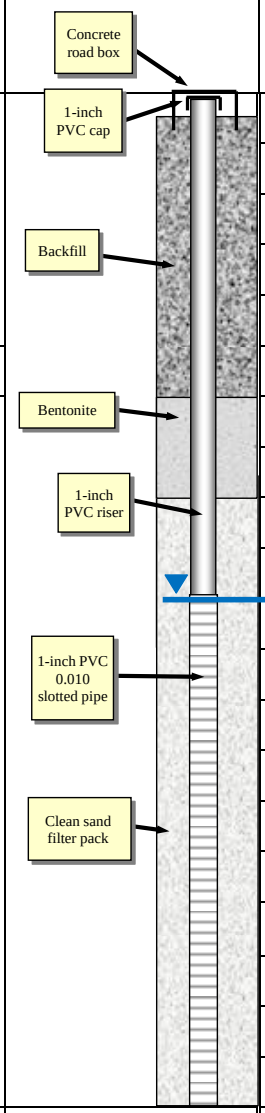
Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092

# CA-SB-4 / CA-MW-4

| SITE INFORMATION | WELL SPECIFICATIONS |
|---|---|
| **Project Number/Client:** 14001247/LRPC R & D Paving | **Well Depth (feet) from TOC:** 20 |
| **Site Location:** 81 Memorial Street, Franklin NH | **Screen Length (feet):** 10 (10' to 20') |
| **Date Start/Finish:** 10/30/2014 | **TOW Elevation:** 305.05 (feet above mean sea level) |
| **Credere, LLC Representative:** Allison Drouin/Silas Miller | **Well Material** 1" PVC riser, 0.01" slotted screen |
| **CONTRACTOR** | **DRILLING EQUIPMENT** |
| **Drilling Contractor:** Georsearch, Inc. | **Equipment:** GeoProbe 7822 DT Track-mounted Rig |
| **Foreman:** John Chase | **Casing Diameter:** 2" Macrocore |
| **Drilling Method:** GeoProbe Direct Push | **Casing Material:** Steel |

| Depth | Sample No. | Pen/Rec (In.) | Depth (Ft.) | Blows (/0.5') | PID (ppm) (RF=1.0) | | Strata | USCS Code | Depth |
|---|---|---|---|---|---|---|---|---|---|
| 0 | S-1 | 60/46 | 0-5 | NA | 0.0 | 0-2" Asphalt | Sand and gravel | SW | 0 |
| 1 | | | | | 0.0 | | | | 1 |
| 2 | | | | | 0.0 | 0-46" Brown fine to coarse SAND and GRAVEL, white pulverized rock from 38 to 44 inches, moist. | | | 2 |
| 3 | | | | | 0.0 | | | | 3 |
| 4 | | | | | 0.0 | | | | 4 |
| 5 | S-2 | 60/31 | 5-10 | NA | 0.0 | 0-12" Gray GRAVEL, little fine to medium Sand, dry. | Gravel | GP | 5 |
| 6 | | | | | 0.0 | 12-31" Gray to orange-brown very fine to fine SAND, some Silt in the bottom 3 inches, laminated, moist to wet. | Sand | SP | 6 |
| 7 | | | | | 0.0 | | | | 7 |
| 8 | | | | | 0.0 | | | | 8 |
| 9 | | | | | 0.0 | | | | 9 |
| 10 | S-3 | 60/45 | 10-15 | NA | 0.0 | 0-45" Brown-orange very fine to fine SAND, some Silt, wet. | | | 10 |
| 11 | | | | | 0.0 | | | | 11 |
| 12 | | | | | 0.0 | | | | 12 |
| 13 | | | | | 0.0 | | | | 13 |
| 14 | | | | | 0.0 | | | | 14 |
| 15 | S-4 | 60/46 | 15-20 | NA | 0.0 | 0-46" Brown very fine SAND, wet. | | | 15 |
| 16 | | | | | 0.0 | | | | 16 |
| 17 | | | | | 0.0 | | | | 17 |
| 18 | | | | | 0.0 | | | | 18 |
| 19 | | | | | 0.0 | | | | 19 |
| 20 | | | | | | **End of Boring @ 20-feet** | | | 20 |

**Equipment Installed**




**Remarks:**
CA-SB-4 (10-12/11) @ 1620 - VOCs, SVOC

Observed water table

TOW Elevation - Elevation of Top of Well PVC Slotted Pipe and Riser. Elevations were referenced from the corner stone off the northwest corner of the Site building, assumed to be 302 feet AMSL.

**Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings h ave been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.**



**Boring No:** CA-SB-4

# Soil Boring Log

Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092

## CA-SB-5

| SITE INFORMATION | |
|---|---|
| **Project Number/Client:** | 14001247/LRPC R & D Paving |
| **Site Location:** | 81 Memorial Street, Franklin NH |
| **Date Start/Finish:** | 10/27/2014 |
| **Credere, LLC Representative:** | Allison Drouin/Silas Miller |

| WELL SPECIFICATIONS | |
|---|---|
| **Well Depth (feet) from TOC:** | NA |
| **Screen Length (feet):** | NA |
| **TOW Elevation:** (feet above mean sea level) | NA |
| **Well Material** | NA |

| CONTRACTOR | |
|---|---|
| **Drilling Contractor:** | Georsearch, Inc. |
| **Foreman:** | John Chase |
| **Drilling Method:** | GeoProbe Direct Push |

| DRILLING EQUIPMENT | |
|---|---|
| **Equipment:** | GeoProbe 7822 DT Track-mounted Rig |
| **Casing Diameter:** | 2" Macrocore |
| **Casing Material:** | Steel |

| Depth | Sample Information: Sample No. | Pen/Rec (In.) | Depth (Ft.) | Blows (/0.5') | PID (ppm) (RF=1.0) | | Strata | USCS Code | Equipment Installed | Depth |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | | | | 0.0 | 0-2" Asphalt | | | | 0 |
| 1 | | | | | 0.1 | 0-17" Brown fine to medium SAND, trace Gravel, dry. | Sand | SP | | 1 |
| 2 | S-1 | 60/36 | 0-5 | NA | 0.0 | 17-31" Dark-brown SILT and very fine SAND, wet (perched). | Sand and silt | SM | | 2 |
| 3 | | | | | 0.0 | | | | | 3 |
| 4 | | | | | 0.0 | 31-36" Pulverized GRAVEL. | Gravel | GP | | 4 |
| 5 | | | | | 0.0 | 0-15" White, gray and brown fine to coarse SAND and GRAVEL. | Sand and gravel | SW | | 5 |
| 6 | | | | | 0.0 | | | | | 6 |
| 7 | S-2 | 60/39 | 5-10 | NA | 0.0 | 15-39" Reddish-brown to orange medium SAND. | Sand | SP | | 7 |
| 8 | | | | | 0.0 | | | | | 8 |
| 9 | | | | | 0.0 | | | | | 9 |
| 10 | | | | | 0.0 | 0-48" Reddish-brown to orange medium SAND, pulverized rock thoughout. | | | | 10 |
| 11 | | | | | 0.0 | | | | | 11 |
| 12 | S-3 | 60/60 | 10-15 | NA | 0.0 | | | | | 12 |
| 13 | | | | | 0.0 | | | | ▼ | 13 |
| 14 | | | | | 0.0 | 48-60" Red-brown medium to coarse SAND and GRAVEL, wet. | Sand and gravel | SW | | 14 |
| 15 | | | | | | **End of Boring @ 15-feet** | | | | 15 |
| 16 | | | | | | | | | | 16 |
| 17 | | | | | | | | | | 17 |
| 18 | | | | | | | | | | 18 |
| 19 | | | | | | | | | | 19 |
| 20 | | | | | | | | | | 20 |

**Remarks:**

CA-SB-5 (0.5-2.5/1.5) and DUP-1 @ 1600 - VOC, SVOC, PCB, RCRA 8 Metals

▼ Observed water table

Soils described using "Modified Burmister Method"

TOW Elevation - Elevation of Top of Well PVC Slotted Pipe and Riser. Elevations were referenced from the corner stone off the northwest corner of the Site building, assumed to be 302 feet AMSL.

**Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.**

# LOW FLOW SAMPLING LOG
## CREDERE ASSOCIATES

Community Economy Environment
Credere Associates LLC

PROJECT NAME: R & D Paving
DATE: 11/ 12 /2014

PROJECT NUMBER: LRPC/14001247

SAMPLE LOCATION ID: CA-MW-1

LOCATION ACTIVITY
START: 0920
END: 1040

**WELL DATA:**

WELL DEPTH (ft): 19.5 [X] MEASURED [ ] HISTORICAL
WATER DEPTH (ft): 11.69 [X] MEASURED [ ] HISTORICAL
[ ] TOP OF WELL [X] TOP OF CASING [ ] FROM GRADE [ ] _____

WATER LEVEL EQUIPMENT USED:
[ ] ELECT. COND. PROBE
[ ] FLOAT ACTIVATED PROBE
[ ] PRESSURE TRANSDUCER
[ ] _____
[ ] _____

DEPTH OF PUMP INTAKE (ft): 16'

| WELL MATERIAL: | WELL LOCKED: | PROTECTIVE CASING SECURE: | CONCRETE COLLAR INTACT: |
|---|---|---|---|
| [X] PVC | [ ] YES | [X] YES | [X] YES |
| [ ] SS | [ ] NO N/A | [ ] NO | [ ] NO |
| [ ] _____ | | | |

AMBIENT AIR VOC: _____ PPM
WELL MOUTH VOC: _____ PPM

**EQUIPMENT DATA:**

| PURGING | SAMPLING | | Equipment |
|---|---|---|---|
| [ ] | [X] | PERISTALTIC PUMP | Solinst interface probe, Lamotte 2020 |
| [ ] | [ ] | SUBMERSIBLE | turbidity meter, YSI 650 XL multi-parameter |
| [ ] | [ ] | BLADDER PUMP | meter with display, geopump peristaltic pump |
| [ ] | [ ] | HAND PUMP | AEP 0.45 micron filter |
| [ ] | [ ] | DEDICATED HDPE | |
| [ ] | [ ] | NEW HDPE | |
| [ ] | [ ] | DEDICATED LDPE | |
| [ ] | [ ] | NEW LDPE | |
| | [ ] | FILTER | |
| [ ] | [ ] | _____ | |

DECONTAMINATION FLUIDS USED:
[ ] DISTILLED WATER
[ ] DEIONIZED WATER
[ ] POTABLE WATER
[ ] TSP SOLUTION
[ ] ALCONOX SOLUTION
[ ] NONE
[ ] _____
[ ] _____

**FIELD ANALYSIS DATA:**

| TIME | TEMP (°C) | pH | SP. COND. (mS/cm) | ORP (mV) | D.O. (mg/l) | TURBID. (ntu) | Flow Rate (mL/min) | COMMENTS DTW |
|---|---|---|---|---|---|---|---|---|
| 1005 | 13.99 | 5.46 | 1.001 | 233.4 | 7.91 | 50 | 200 | 12.93 |
| 1010 | 13.90 | 5.46 | 0.990 | 234.8 | 8.08 | 42 | 200 | |
| 1015 | 13.88 | 5.45 | 0.993 | 236.1 | 8.03 | 45 | 200 | |
| 1020 | 13.94 | 5.45 | 0.991 | 237.8 | 8.03 | 8.0 | 200 | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | Purged total of 3.25 gallons |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | Do not functioning properly |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**SAMPLE DATA:**

| SAMPLE BOTTLE ID TIME | LOCATION | PRESERVATION METHOD | # | SAMPLE CONTAINER TYPE | LABORATORY ANALYSIS |
|---|---|---|---|---|---|
| 1030 | CA-MW-1 | HNO3 | 1 | 500 mL poly | Dissolved RCRA 8 Metals, Filtered |
| | | ~~HCl~~ None | 1 | 1 L Amber | SVOCs |
| | | HCl | 2 | 40 mL VOA | VOCs |
| | | | | | |

**NOTES:**

Allison Davis
SAMPLER

# LOW FLOW SAMPLING LOG
## CREDERE ASSOCIATES

Community Economy Environment
Credere Associates LLC

PROJECT NAME: R & D Paving

DATE: 11/ 12 /2014

PROJECT NUMBER: LRPC/14001247

SAMPLE LOCATION ID: CAMW-2

LOCATION ACTIVITY
START: 0745
END: 0935

***WELL DATA:***

WELL DEPTH (ft): 19.39 [X] MEASURED [ ] HISTORICAL

WATER DEPTH (ft): 12.71 [X] MEASURED [ ] HISTORICAL

[ ] TOP OF WELL [X] TOP OF CASING [ ] FROM GRADE [ ] ____

WATER LEVEL EQUIPMENT USED:
[ ] ELECT. COND. PROBE
[ ] FLOAT ACTIVATED PROBE
[ ] PRESSURE TRANSDUCER
[ ] ____
[ ] ____

DEPTH OF PUMP INTAKE (ft): 17'

| WELL MATERIAL: | WELL LOCKED: | PROTECTIVE CASING SECURE: | CONCRETE COLLAR INTACT: | |
|---|---|---|---|---|
| [X] PVC | [X] YES | [X] YES | [X] YES | AMBIENT AIR VOC: ____ PPM |
| [ ] SS | [ ] NO | [ ] NO | [ ] NO | WELL MOUTH VOC: ____ PPM |
| [ ] ____ | NA | | | |

***EQUIPMENT DATA:***

| PURGING | SAMPLING | | Equipment |
|---|---|---|---|
| [X] | [X] | PERISTALTIC PUMP | Solinst interface probe, Lamotte 2020 |
| [ ] | [ ] | SUBMERSIBLE | turbidity meter, YSI 650 XL multi-parameter |
| [ ] | [ ] | BLADDER PUMP | meter with display, geopump peristaltic pump |
| [ ] | [ ] | HAND PUMP | QED 0.45 Micron Filte |
| [ ] | [ ] | DEDICATED HDPE | |
| [ ] | [ ] | NEW HDPE | |
| [ ] | [ ] | DEDICATED LDPE | |
| [ ] | [ ] | NEW LDPE | |
| | [ ] | FILTER | |
| [ ] | [ ] | ____ | |

DECONTAMINATION FLUIDS USED:
[ ] DISTILLED WATER
[ ] DEIONIZED WATER
[ ] POTABLE WATER
[ ] TSP SOLUTION
[ ] ALCONOX SOLUTION
[ ] NONE
[ ] ____
[ ] ____

***FIELD ANALYSIS DATA:***

| TIME | TEMP (°C) | pH | SP. COND. (mS/cm) | ORP (mV) | D.O. (mg/l) | TURBID. (ntu) | Flow Rate (mL/min) | COMMENTS | DTW |
|---|---|---|---|---|---|---|---|---|---|
| ~~0750~~ | ~~15.32~~ | ~~5.3~~ | ~~0.332~~ | ~~232.1~~ | 11.4 | high | 184 | | 11.8 |
| 0900 | 14.40 | 5.28 | 0.746 | 222.2 | 7.63 | | 196 | | 11.85 |
| 0905 | 14.41 | 5.31 | 0.781 | 212.3 | 5.46 | 200 | 196 | | |
| 0910 | 14.47 | 5.35 | 0.768 | 208.0 | 5.97 | 115 | 196 | | |
| 0915 | 14.43 | 5.38 | 0.761 | 202.2 | 5.94 | 34 | 196 | | |
| 0920 | 1450 | 5.41 | 0.756 | 195.5 | 5.96 | 22 | 196 | | |
| 0925 | 14.51 | 5.42 | 0.756 | 194.4 | 6.50 | 19 | 196 | | |
| 0930 | 14.59 | 5.42 | 0.756 | 194.6 | 7.21 | 9.8 | 196 | | |
| | | | | | | | | | |
| | | | | | | | | Purge total of 6 g | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | Do probe not functioning properly | |
| | | | | | | | | | |
| | | | | | | | | | |

***SAMPLE DATA:***

| SAMPLE BOTTLE ID TIME | LOCATION | PRESERVATION METHOD | # | SAMPLE CONTAINER TYPE | LABORATORY ANALYSIS |
|---|---|---|---|---|---|
| 0935 | CA-MW-2 | HNO3 | 1 | 500 mL poly | Dissolved RCRA 8 Metals, Field Filtered |
| | ~~CA-GW-1~~ | ~~HCl~~ None | 1 | 1 L Amber | SVOCs |
| | DUP | HCl | 2 | 40 mL VOA | VOCs |
| | | | | | |

***NOTES:***

SAMPLER

# LOW FLOW SAMPLING LOG
## CREDERE ASSOCIATES

Community Economy Environment
Credere Associates LLC

PROJECT NAME: R & D Paving

DATE: 11/ 13 /2014

PROJECT NUMBER: LRPC/14001247

LOCATION ACTIVITY
START: 0720
END: 0945

SAMPLE LOCATION ID: CA-MW-3

**WELL DATA:**

WELL DEPTH (ft): 16.57 [X] MEASURED [ ] HISTORICAL

WATER DEPTH (ft): 11.97 [X] MEASURED [ ] HISTORICAL

[ ] TOP OF WELL [X] TOP OF CASING [ ] FROM GRADE [ ] _____

WATER LEVEL EQUIPMENT USED:
[ ] ELECT. COND. PROBE
[ ] FLOAT ACTIVATED PROBE
[ ] PRESSURE TRANSDUCER
[ ] _____
[ ] _____

DEPTH OF PUMP INTAKE (ft): 15'

WELL MATERIAL: [X] PVC [ ] SS [ ] _____

WELL LOCKED: [ ] YES [X] NO NA

PROTECTIVE CASING SECURE: [X] YES [ ] NO

CONCRETE COLLAR INTACT: [X] YES [ ] NO

AMBIENT AIR VOC: _____ PPM

WELL MOUTH VOC: _____ PPM

**EQUIPMENT DATA:**

| PURGING | SAMPLING | |
|---|---|---|
| [X] | [X] | PERISTALTIC PUMP |
| [ ] | [ ] | SUBMERSIBLE |
| [ ] | [ ] | BLADDER PUMP |
| [ ] | [ ] | HAND PUMP |
| [ ] | [ ] | DEDICATED HDPE |
| [ ] | [ ] | NEW HDPE |
| [ ] | [ ] | DEDICATED LDPE |
| [ ] | [ ] | NEW LDPE |
| | [ ] | FILTER |
| [ ] | [ ] | _____ |

Equipment 5556
Solinst interface probe, Lamotte 2020 turbidity meter, YSI ~~650 XL~~ multi-parameter meter with display, geopump peristaltic pump
QED 0.45 micron filter

DECONTAMINATION FLUIDS USED:
[ ] DISTILLED WATER
[ ] DEIONIZED WATER
[ ] POTABLE WATER
[ ] TSP SOLUTION
[ ] ALCONOX SOLUTION
[ ] NONE
[ ] _____
[ ] _____

**FIELD ANALYSIS DATA:**

| TIME | TEMP (°C) | pH | SP. COND (mS/cm) | ORP (mV) | D.O. (mg/l) | TURBID. (ntu) | Flow Rate (mL/min) | COMMENTS DTW |
|---|---|---|---|---|---|---|---|---|
| 0815 | 15.06 | 6.0 | 0.496 | 90.5 | 6.28 | 680 | 120 | 12.25 |
| 0820 | 15.07 | 6.0 | 0.485 | 109.5 | 5.95 | 600 | 140 | ↓ |
| 0825 | 14.69 | 5.92 | 0.482 | 119.3 | 6.12 | 580 | 144 | ↓ |
| ~~0830~~ | 15.0 | 5.9 | 0.478 | 125.6 | 6.0 | 420 | 144 | ← 12.3 |
| 0920 ~~0835~~ | 14.75 | 5.9 | 0.477 | 158.0 | 5.76 | 120 | 140 | Not stable allowing |
| 0925 ~~0840~~ | 14.74 | 5.88 | 0.476 | 163.9 | 5.68 | 110 | 140 | to purge longer. |
| 0930 ~~0845~~ | 14.72 | 5.73 | 0.477 | 169.1 | 5.70 | 120 | 140 | |
| ~~0850~~ | | | | | | | | Purged 2 hrs + 6 gallons sampling. |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**SAMPLE DATA:**

| SAMPLE BOTTLE ID TIME | LOCATION | PRESERVATION METHOD | # | SAMPLE CONTAINER TYPE | LABORATORY ANALYSIS |
|---|---|---|---|---|---|
| 0935 | CA-MW-3 | HNO3 | 1 | 500 mL poly | Dissolved RCRA 8 Metals, dissolved |
| | | ~~HCl~~ None | 1 | 1 L Amber | SVOCs |
| | | HCl | 2 | 40 mL VOA | VOCs |
| | | | | | |

**NOTES:**

SAMPLER

# LOW FLOW SAMPLING LOG
## CREDERE ASSOCIATES

Community Economy Environment
Credere Associates LLC

PROJECT NAME: R & D Paving

DATE: 11/ 12 /2014

PROJECT NUMBER: LRPC/14001247

LOCATION ACTIVITY
START: 1340
END: 1445

SAMPLE LOCATION ID: CA-MW-4

***WELL DATA:***

WELL DEPTH (ft): 19.34 / 11.88 — [X] MEASURED [ ] HISTORICAL

WATER DEPTH (ft): 11.88 — [X] MEASURED [ ] HISTORICAL

[ ] TOP OF WELL [X] TOP OF CASING [ ] FROM GRADE [ ] _____

WATER LEVEL EQUIPMENT USED:
[ ] ELECT. COND. PROBE
[ ] FLOAT ACTIVATED PROBE
[ ] PRESSURE TRANSDUCER
[ ] _____
[ ] _____

DEPTH OF PUMP INTAKE (ft): 16

WELL MATERIAL: [X] PVC [ ] SS [ ] _____

WELL LOCKED: [ ] YES [X] NO NA

PROTECTIVE CASING SECURE: [X] YES [ ] NO

CONCRETE COLLAR INTACT: [X] YES [ ] NO

AMBIENT AIR VOC: _____ PPM

WELL MOUTH VOC: _____ PPM

***EQUIPMENT DATA:***

| PURGING | SAMPLING | | Equipment |
|---|---|---|---|
| [X] | [X] | PERISTALTIC PUMP | Solinst interface probe, Lamotte 2020 |
| [ ] | [ ] | SUBMERSIBLE | turbidity meter, YSI 650 XL multi-parameter |
| [ ] | [ ] | BLADDER PUMP | meter with display, geopump peristaltic pump |
| [ ] | [ ] | HAND PUMP | QED 0.45 micron filter |
| [ ] | [ ] | DEDICATED HDPE | |
| [ ] | [ ] | NEW HDPE | |
| [ ] | [ ] | DEDICATED LDPE | |
| [ ] | [ ] | NEW LDPE | |
| | [ ] | FILTER | |
| [ ] | [ ] | _____ | |

DECONTAMINATION FLUIDS USED:
[ ] DISTILLED WATER
[ ] DEIONIZED WATER
[ ] POTABLE WATER
[ ] TSP SOLUTION
[ ] ALCONOX SOLUTION
[ ] NONE
[ ] _____
[ ] _____

***FIELD ANALYSIS DATA:***

| TIME | TEMP (°C) | pH | SP. COND (mS/cm) | ORP (mV) | D.O. (mg/l) | TURBID (ntu) | Flow Rate (mL/min) | COMMENTS |
|---|---|---|---|---|---|---|---|---|
| 1400 | 14.91 | 5.59 | 1.116 | 171.0 | 2.77 | 208 | 200 | 12.05 |
| 1405 | 14.90 | 5.54 | 1.103 | 165.1 | 2.16 | 60 | 200 | ↓ |
| 1410 | 14.88 | 5.56 | 1.085 | 161.8 | 2.18 | 40 | 200 | ↓ |
| 1415 | 14.82 | 5.55 | 1.065 | 160.4 | 2.58 | 419 | 200 | ↓ |
| 1420 | 14.84 | 5.54 | 1.065 | 160.0 | 2.67 | 12 | 200 | 12.09 |
| 1425 | 14.84 | 5.55 | 1.069 | 160.2 | 2.7 | 9 | 200 | ↓ |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | Purged total of 2.5 gallons |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | DO has not been functioning correctly |
| | | | | | | | | |

***SAMPLE DATA:***

| SAMPLE BOTTLE ID TIME | LOCATION | PRESERVATION METHOD | SAMPLE CONTAINER # | TYPE | LABORATORY ANALYSIS |
|---|---|---|---|---|---|
| 1430 | CA-MW-4 | HNO3 | 1 | 500 mL poly | Dissolved RCRA 8 Metals, dissolved |
| | | ~~HCl~~ None | 1 | 1 L Amber | SVOCs |
| | | HCl | 2 | 40 mL VOA | VOCs |
| | | | | | |

***NOTES:***

Allison Winn
SAMPLER

# APPENDIX D

# LABORATORY ANALYTICAL REPORTS

# Laboratory Report

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Allison Drouin
CREDERE Associates
776 Main Street
Westbrook, ME 04092

PO Number: None
Job ID: 31419
Date Received: 10/31/14

Project: R+D 14001247

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 11/17/2014
Total number of pages: 53

**Absolute Resource Associates Certifications**

| | | | |
|---|---|---|---|
| New Hampshire | 1732 | Massachusetts | M-NH902 |
| Maine | NH903 | | |

**Project ID:** R+D 14001247
**Lab ID:** 31419

# Sample Association Table

| Field ID | Matrix | Date-Time Sampled | Lab# | Analysis |
|---|---|---|---|---|
| Trip Blank | Solid | 10/27/2014 0:00 | 31419-001 | |
| | | | | VOCs in solid by 8260 Petro & Haz Waste |
| DUP-1 | Solid | 10/30/2014 0:00 | 31419-002 | |
| | | | | PCBs in soil by 8082 |
| | | | | Acid & Base/Neutral Extractables in solid by 8270 |
| | | | | Soil Digestion for ICP Analysis |
| | | | | Silver in solids by 6010 |
| | | | | Arsenic in solids by 6010 |
| | | | | Barium in solids by 6010 |
| | | | | Cadmium in solids by 6010 |
| | | | | Chromium in solids by 6010 |
| | | | | Mercury in solids by 7471 |
| | | | | Lead in solids by 6010 |
| | | | | Selenium in solids by 6010 |
| | | | | Percent Dry Matter for Sample Calc by SM2540B,G |
| | | | | VOCs in solid by 8260 Petro & Haz Waste |
| CA-SS-2(0-2) | Solid | 10/27/2014 12:00 | 31419-003 | |
| | | | | PCBs in soil by 8082 |
| | | | | PAHs in solid by 8270 |
| | | | | Soil Digestion for ICP Analysis |
| | | | | Silver in solids by 6010 |
| | | | | Arsenic in solids by 6010 |
| | | | | Barium in solids by 6010 |
| | | | | Cadmium in solids by 6010 |
| | | | | Chromium in solids by 6010 |
| | | | | Mercury in solids by 7471 |
| | | | | Lead in solids by 6010 |
| | | | | Selenium in solids by 6010 |
| | | | | Percent Dry Matter for Sample Calc by SM2540B,G |
| CA-SS-1(0-2) | Solid | 10/27/2014 12:40 | 31419-004 | |
| | | | | PCBs in soil by 8082 |
| | | | | PAHs in solid by 8270 |
| | | | | Soil Digestion for ICP Analysis |
| | | | | Silver in solids by 6010 |
| | | | | Arsenic in solids by 6010 |
| | | | | Barium in solids by 6010 |
| | | | | Cadmium in solids by 6010 |
| | | | | Chromium in solids by 6010 |
| | | | | Mercury in solids by 7471 |
| | | | | Lead in solids by 6010 |
| | | | | Selenium in solids by 6010 |
| | | | | Percent Dry Matter for Sample Calc by SM2540B,G |
| CA-SB-2(12-14/13) | Solid | 10/27/2014 13:05 | 31419-005 | |
| | | | | Acid & Base/Neutral Extractables in solid by 8270 |
| | | | | Soil Digestion for ICP Analysis |
| | | | | Silver in solids by 6010 |
| | | | | Arsenic in solids by 6010 |
| | | | | Barium in solids by 6010 |
| | | | | Cadmium in solids by 6010 |
| | | | | Chromium in solids by 6010 |
| | | | | Mercury in solids by 7471 |
| | | | | Lead in solids by 6010 |

**Project ID:** R+D 14001247
**Lab ID:** 31419

# Sample Association Table

| Field ID | Matrix | Date-Time Sampled | Lab# | Analysis |
|---|---|---|---|---|
| CA-SB-2(12-14/13) | Solid | 10/27/2014 13:05 | 31419-005 | |
| | | | | Selenium in solids by 6010 |
| | | | | Percent Dry Matter for Sample Calc by SM2540B,G |
| | | | | VOCs in solid by 8260 Petro & Haz Waste |
| CA-SB-1(10-12/10.5) | Solid | 10/27/2014 15:05 | 31419-006 | |
| | | | | Acid & Base/Neutral Extractables in solid by 8270 |
| | | | | Soil Digestion for ICP Analysis |
| | | | | Silver in solids by 6010 |
| | | | | Arsenic in solids by 6010 |
| | | | | Barium in solids by 6010 |
| | | | | Cadmium in solids by 6010 |
| | | | | Chromium in solids by 6010 |
| | | | | Mercury in solids by 7471 |
| | | | | Lead in solids by 6010 |
| | | | | Selenium in solids by 6010 |
| | | | | Percent Dry Matter for Sample Calc by SM2540B,G |
| | | | | VOCs in solid by 8260 Petro & Haz Waste |
| CA-SB-4(10-12/11) | Solid | 10/27/2014 16:20 | 31419-007 | |
| | | | | Acid & Base/Neutral Extractables in solid by 8270 |
| | | | | Percent Dry Matter for Sample Calc by SM2540B,G |
| | | | | VOCs in solid by 8260 Petro & Haz Waste |
| CA-SB-3(8-10/9) | Solid | 10/30/2014 8:40 | 31419-008 | |
| | | | | Acid & Base/Neutral Extractables in solid by 8270 |
| | | | | Percent Dry Matter for Sample Calc by SM2540B,G |
| | | | | VOCs in solid by 8260 Petro & Haz Waste |
| CA-SB-5(0.5-2.5/1.5) | Solid | 10/30/2014 16:00 | 31419-009 | |
| | | | | PCBs in soil by 8082 |
| | | | | Acid & Base/Neutral Extractables in solid by 8270 |
| | | | | Soil Digestion for ICP Analysis |
| | | | | Silver in solids by 6010 |
| | | | | Arsenic in solids by 6010 |
| | | | | Barium in solids by 6010 |
| | | | | Cadmium in solids by 6010 |
| | | | | Chromium in solids by 6010 |
| | | | | Mercury in solids by 7471 |
| | | | | Lead in solids by 6010 |
| | | | | Selenium in solids by 6010 |
| | | | | Percent Dry Matter for Sample Calc by SM2540B,G |
| | | | | VOCs in solid by 8260 Petro & Haz Waste |

Absolute Resource associates

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-001
**Sample ID:** Trip Blank
**Matrix:** Solid
**Sampled:** 10/27/14 0:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| dichlorodifluoromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| chloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| vinyl chloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| bromomethane | < 0.2 | 0.2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| chloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| trichlorofluoromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| diethyl ether | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| acetone | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,1-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| methylene chloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| carbon disulfide | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| methyl t-butyl ether (MTBE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| trans-1,2-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| isopropyl ether (DIPE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| ethyl t-butyl ether (ETBE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,1-dichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| t-butanol (TBA) | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 2-butanone (MEK) | < 0.3 | 0.3 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 2,2-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| cis-1,2-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| chloroform | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| bromochloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| tetrahydrofuran (THF) | < 0.5 | 0.5 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,1,1-trichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,1-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| t-amyl-methyl ether (TAME) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| carbon tetrachloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,2-dichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| benzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| trichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,2-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| bromodichloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,4-dioxane | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| dibromomethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 4-methyl-2-pentanone (MIBK) | < 0.4 | 0.4 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| cis-1,3-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| toluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| trans-1,3-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 2-hexanone | < 0.5 | 0.5 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,1,2-trichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,3-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| tetrachloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| dibromochloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-001
**Sample ID:** Trip Blank
**Matrix:** Solid
**Sampled:** 10/27/14 0:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-dibromoethane (EDB) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| chlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,1,1,2-tetrachloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| ethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| m&p-xylenes | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| o-xylene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| styrene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| bromoform | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| isopropylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,1,2,2-tetrachloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,2,3-trichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| n-propylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| bromobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,3,5-trimethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 2-chlorotoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 4-chlorotoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| tert-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,2,4-trimethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| sec-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,3-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 4-isopropyltoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,4-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,2-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| n-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,2-dibromo-3-chloropropane (DBCP) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,2,4-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,3,5-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| hexachlorobutadiene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| naphthalene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 1,2,3-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| dibromofluoromethane SUR | **96** | 78-114 | % | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| toluene-D8 SUR | **102** | 88-110 | % | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| 4-bromofluorobenzene SUR | **100** | 86-115 | % | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |
| a,a,a-trifluorotoluene SUR | **100** | 70-130 | % | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 18:38 | SW5035A8260C |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-002
**Sample ID:** DUP-1
**Matrix:** Solid Percent Dry: 83% Results expressed on a dry weight basis.
**Sampled:** 10/30/14 0:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| dichlorodifluoromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| chloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| vinyl chloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| bromomethane | < 0.2 | 0.2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| chloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| trichlorofluoromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| diethyl ether | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| acetone | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,1-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| methylene chloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| carbon disulfide | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| methyl t-butyl ether (MTBE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| trans-1,2-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| isopropyl ether (DIPE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| ethyl t-butyl ether (ETBE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,1-dichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| t-butanol (TBA) | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 2-butanone (MEK) | < 0.3 | 0.3 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 2,2-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| cis-1,2-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| chloroform | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| bromochloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| tetrahydrofuran (THF) | < 0.5 | 0.5 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,1,1-trichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,1-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| t-amyl-methyl ether (TAME) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| carbon tetrachloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,2-dichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| benzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| trichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,2-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| bromodichloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,4-dioxane | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| dibromomethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 4-methyl-2-pentanone (MIBK) | < 0.4 | 0.4 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| cis-1,3-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| toluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| trans-1,3-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 2-hexanone | < 0.5 | 0.5 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,1,2-trichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,3-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| tetrachloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| dibromochloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-002
**Sample ID:** DUP-1
**Matrix:** Solid Percent Dry: 83% Results expressed on a dry weight basis.
**Sampled:** 10/30/14 0:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-dibromoethane (EDB) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| chlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,1,1,2-tetrachloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| ethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| m&p-xylenes | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| o-xylene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| styrene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| bromoform | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| isopropylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,1,2,2-tetrachloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,2,3-trichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| n-propylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| bromobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,3,5-trimethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 2-chlorotoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 4-chlorotoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| tert-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,2,4-trimethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| sec-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,3-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 4-isopropyltoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,4-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,2-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| n-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,2-dibromo-3-chloropropane (DBCP) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,2,4-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,3,5-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| hexachlorobutadiene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| naphthalene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 1,2,3-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| dibromofluoromethane SUR | **95** | 78-114 | % | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| toluene-D8 SUR | **101** | 88-110 | % | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| 4-bromofluorobenzene SUR | **101** | 86-115 | % | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |
| a,a,a-trifluorotoluene SUR | **102** | 70-130 | % | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 8:49 | SW5035A8260C |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-005
**Sample ID:** CA-SB-2(12-14/13)
**Matrix:** Solid Percent Dry: 81.1% Results expressed on a dry weight basis.
**Sampled:** 10/27/14 13:05

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| dichlorodifluoromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| chloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| vinyl chloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| bromomethane | < 0.2 | 0.2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| chloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| trichlorofluoromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| diethyl ether | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| acetone | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,1-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| methylene chloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| carbon disulfide | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| methyl t-butyl ether (MTBE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| trans-1,2-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| isopropyl ether (DIPE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| ethyl t-butyl ether (ETBE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,1-dichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| t-butanol (TBA) | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 2-butanone (MEK) | < 0.3 | 0.3 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 2,2-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| cis-1,2-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| chloroform | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| bromochloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| tetrahydrofuran (THF) | < 0.5 | 0.5 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,1,1-trichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,1-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| t-amyl-methyl ether (TAME) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| carbon tetrachloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,2-dichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| benzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| trichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,2-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| bromodichloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,4-dioxane | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| dibromomethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 4-methyl-2-pentanone (MIBK) | < 0.4 | 0.4 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| cis-1,3-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| toluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| trans-1,3-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 2-hexanone | < 0.5 | 0.5 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,1,2-trichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,3-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| tetrachloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| dibromochloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-005
**Sample ID:** CA-SB-2(12-14/13)
**Matrix:** Solid Percent Dry: 81.1% Results expressed on a dry weight basis.
**Sampled:** 10/27/14 13:05

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-dibromoethane (EDB) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| chlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,1,1,2-tetrachloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| ethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| m&p-xylenes | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| o-xylene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| styrene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| bromoform | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| isopropylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,1,2,2-tetrachloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,2,3-trichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| n-propylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| bromobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,3,5-trimethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 2-chlorotoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 4-chlorotoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| tert-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,2,4-trimethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| sec-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,3-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 4-isopropyltoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,4-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,2-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| n-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,2-dibromo-3-chloropropane (DBCP) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,2,4-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,3,5-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| hexachlorobutadiene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| naphthalene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 1,2,3-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| dibromofluoromethane SUR | **98** | 78-114 | % | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| toluene-D8 SUR | **101** | 88-110 | % | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| 4-bromofluorobenzene SUR | **99** | 86-115 | % | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |
| a,a,a-trifluorotoluene SUR | **101** | 70-130 | % | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 19:38 | SW5035A8260C |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-006
**Sample ID:** CA-SB-1(10-12/10.5)
**Matrix:** Solid Percent Dry: 76.4% Results expressed on a dry weight basis.
**Sampled:** 10/27/14 15:05

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| dichlorodifluoromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| chloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| vinyl chloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| bromomethane | < 0.3 | 0.3 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| chloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| trichlorofluoromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| diethyl ether | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| acetone | < 3 | 3 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,1-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| methylene chloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| carbon disulfide | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| methyl t-butyl ether (MTBE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| trans-1,2-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| isopropyl ether (DIPE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| ethyl t-butyl ether (ETBE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,1-dichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| t-butanol (TBA) | < 3 | 3 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 2-butanone (MEK) | < 0.3 | 0.3 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 2,2-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| cis-1,2-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| chloroform | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| bromochloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| tetrahydrofuran (THF) | < 0.6 | 0.6 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,1,1-trichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,1-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| t-amyl-methyl ether (TAME) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| carbon tetrachloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,2-dichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| benzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| trichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,2-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| bromodichloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,4-dioxane | < 3 | 3 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| dibromomethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 4-methyl-2-pentanone (MIBK) | < 0.5 | 0.5 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| cis-1,3-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| toluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| trans-1,3-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 2-hexanone | < 0.6 | 0.6 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,1,2-trichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,3-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| tetrachloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| dibromochloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-006
**Sample ID:** CA-SB-1(10-12/10.5)
**Matrix:** Solid Percent Dry: 76.4% Results expressed on a dry weight basis.
**Sampled:** 10/27/14 15:05

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-dibromoethane (EDB) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| chlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,1,1,2-tetrachloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| ethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| m&p-xylenes | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| o-xylene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| styrene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| bromoform | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| isopropylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,1,2,2-tetrachloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,2,3-trichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| n-propylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| bromobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,3,5-trimethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 2-chlorotoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 4-chlorotoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| tert-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,2,4-trimethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| sec-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,3-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 4-isopropyltoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,4-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,2-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| n-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,2-dibromo-3-chloropropane (DBCP) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,2,4-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,3,5-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| hexachlorobutadiene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| naphthalene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 1,2,3-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| dibromofluoromethane SUR | **97** | 78-114 | % | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| toluene-D8 SUR | **100** | 88-110 | % | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| 4-bromofluorobenzene SUR | **100** | 86-115 | % | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |
| a,a,a-trifluorotoluene SUR | **102** | 70-130 | % | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:08 | SW5035A8260C |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-007
**Sample ID:** CA-SB-4(10-12/11)
**Matrix:** Solid Percent Dry: 81.1% Results expressed on a dry weight basis.
**Sampled:** 10/27/14 16:20

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| dichlorodifluoromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| chloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| vinyl chloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| bromomethane | < 0.2 | 0.2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| chloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| trichlorofluoromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| diethyl ether | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| acetone | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,1-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| methylene chloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| carbon disulfide | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| methyl t-butyl ether (MTBE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| trans-1,2-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| isopropyl ether (DIPE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| ethyl t-butyl ether (ETBE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,1-dichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| t-butanol (TBA) | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 2-butanone (MEK) | < 0.3 | 0.3 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 2,2-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| cis-1,2-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| chloroform | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| bromochloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| tetrahydrofuran (THF) | < 0.5 | 0.5 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,1,1-trichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,1-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| t-amyl-methyl ether (TAME) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| carbon tetrachloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,2-dichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| benzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| trichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,2-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| bromodichloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,4-dioxane | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| dibromomethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 4-methyl-2-pentanone (MIBK) | < 0.4 | 0.4 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| cis-1,3-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| toluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| trans-1,3-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 2-hexanone | < 0.5 | 0.5 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,1,2-trichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,3-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| tetrachloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| dibromochloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-007
**Sample ID:** CA-SB-4(10-12/11)
**Matrix:** Solid Percent Dry: 81.1% Results expressed on a dry weight basis.
**Sampled:** 10/27/14 16:20

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-dibromoethane (EDB) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| chlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,1,1,2-tetrachloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| ethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| m&p-xylenes | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| o-xylene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| styrene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| bromoform | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| isopropylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,1,2,2-tetrachloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,2,3-trichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| n-propylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| bromobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,3,5-trimethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 2-chlorotoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 4-chlorotoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| tert-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,2,4-trimethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| sec-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,3-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 4-isopropyltoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,4-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,2-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| n-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,2-dibromo-3-chloropropane (DBCP) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,2,4-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,3,5-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| hexachlorobutadiene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| naphthalene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 1,2,3-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| dibromofluoromethane SUR | **95** | 78-114 | % | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| toluene-D8 SUR | **100** | 88-110 | % | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| 4-bromofluorobenzene SUR | **97** | 86-115 | % | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |
| a,a,a-trifluorotoluene SUR | **101** | 70-130 | % | 1 | LMM | 11/4/14 | 7338 | 11/7/14 | 20:38 | SW5035A8260C |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-008
**Sample ID:** CA-SB-3(8-10/9)
**Matrix:** Solid Percent Dry: 78.9% Results expressed on a dry weight basis.
**Sampled:** 10/30/14 8:40

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| dichlorodifluoromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| chloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| vinyl chloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| bromomethane | < 0.2 | 0.2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| chloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| trichlorofluoromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| diethyl ether | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| acetone | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,1-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| methylene chloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| carbon disulfide | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| methyl t-butyl ether (MTBE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| trans-1,2-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| isopropyl ether (DIPE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| ethyl t-butyl ether (ETBE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,1-dichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| t-butanol (TBA) | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 2-butanone (MEK) | < 0.3 | 0.3 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 2,2-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| cis-1,2-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| chloroform | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| bromochloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| tetrahydrofuran (THF) | < 0.5 | 0.5 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,1,1-trichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,1-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| t-amyl-methyl ether (TAME) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| carbon tetrachloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,2-dichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| benzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| trichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,2-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| bromodichloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,4-dioxane | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| dibromomethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 4-methyl-2-pentanone (MIBK) | < 0.4 | 0.4 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| cis-1,3-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| toluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| trans-1,3-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 2-hexanone | < 0.5 | 0.5 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,1,2-trichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,3-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| tetrachloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| dibromochloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-008
**Sample ID:** CA-SB-3(8-10/9)
**Matrix:** Solid Percent Dry: 78.9% Results expressed on a dry weight basis.
**Sampled:** 10/30/14 8:40

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-dibromoethane (EDB) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| chlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,1,1,2-tetrachloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| ethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| m&p-xylenes | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| o-xylene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| styrene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| bromoform | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| isopropylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,1,2,2-tetrachloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,2,3-trichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| n-propylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| bromobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,3,5-trimethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 2-chlorotoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 4-chlorotoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| tert-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,2,4-trimethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| sec-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,3-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 4-isopropyltoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,4-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,2-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| n-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,2-dibromo-3-chloropropane (DBCP) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,2,4-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,3,5-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| hexachlorobutadiene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| naphthalene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 1,2,3-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| dibromofluoromethane SUR | **97** | 78-114 | % | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| toluene-D8 SUR | **100** | 88-110 | % | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| 4-bromofluorobenzene SUR | **99** | 86-115 | % | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |
| a,a,a-trifluorotoluene SUR | **96** | 70-130 | % | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 7:21 | SW5035A8260C |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-009
**Sample ID:** CA-SB-5(0.5-2.5/1.5)
**Matrix:** Solid Percent Dry: 83% Results expressed on a dry weight basis.
**Sampled:** 10/30/14 16:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| dichlorodifluoromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| chloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| vinyl chloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| bromomethane | < 0.2 | 0.2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| chloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| trichlorofluoromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| diethyl ether | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| acetone | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,1-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| methylene chloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| carbon disulfide | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| methyl t-butyl ether (MTBE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| trans-1,2-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| isopropyl ether (DIPE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| ethyl t-butyl ether (ETBE) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,1-dichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| t-butanol (TBA) | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 2-butanone (MEK) | < 0.3 | 0.3 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 2,2-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| cis-1,2-dichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| chloroform | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| bromochloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| tetrahydrofuran (THF) | < 0.5 | 0.5 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,1,1-trichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,1-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| t-amyl-methyl ether (TAME) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| carbon tetrachloride | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,2-dichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| benzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| trichloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,2-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| bromodichloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,4-dioxane | < 2 | 2 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| dibromomethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 4-methyl-2-pentanone (MIBK) | < 0.4 | 0.4 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| cis-1,3-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| toluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| trans-1,3-dichloropropene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 2-hexanone | < 0.5 | 0.5 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,1,2-trichloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,3-dichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| tetrachloroethene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| dibromochloromethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-009
**Sample ID:** CA-SB-5(0.5-2.5/1.5)
**Matrix:** Solid Percent Dry: 83% Results expressed on a dry weight basis.
**Sampled:** 10/30/14 16:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-dibromoethane (EDB) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| chlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,1,1,2-tetrachloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| ethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| m&p-xylenes | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| o-xylene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| styrene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| bromoform | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| isopropylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,1,2,2-tetrachloroethane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,2,3-trichloropropane | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| n-propylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| bromobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,3,5-trimethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 2-chlorotoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 4-chlorotoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| tert-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,2,4-trimethylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| sec-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,3-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 4-isopropyltoluene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,4-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,2-dichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| n-butylbenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,2-dibromo-3-chloropropane (DBCP) | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,2,4-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,3,5-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| hexachlorobutadiene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| naphthalene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 1,2,3-trichlorobenzene | < 0.1 | 0.1 | ug/g | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| dibromofluoromethane SUR | **96** | 78-114 | % | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| toluene-D8 SUR | **102** | 88-110 | % | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| 4-bromofluorobenzene SUR | **100** | 86-115 | % | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |
| a,a,a-trifluorotoluene SUR | **102** | 70-130 | % | 1 | LMM | 11/4/14 | 7338 | 11/9/14 | 9:19 | SW5035A8260C |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-002
**Sample ID:** DUP-1
**Matrix:** Solid Percent Dry: 83% Results expressed on a dry weight basis.
**Sampled:** 10/30/14 0:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| N-nitrosodimethylamine | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| aniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| phenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 2-chlorophenol | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| bis(2-chloroethyl)ether | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 1,3-dichlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 1,4-dichlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 1,2-dichlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| benzyl alcohol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 2-methylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| bis(2-chloroisopropyl) ether | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| hexachloroethane | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| N-nitroso-di-N-propylamine | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 4-methylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| nitrobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| isophorone | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 2-nitrophenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 2,4-dimethylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| bis(2-chloroethoxy)methane | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 2,4-dichlorophenol | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 1,2,4-trichlorobenzene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| naphthalene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| benzoic acid | < 6 | 6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 4-chloroaniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| hexachlorobutadiene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 4-chloro-3-methylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 2-methylnaphthalene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| hexachlorocyclopentadiene | < 1 | 1 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 2,4,6-trichlorophenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 2,4,5-trichlorophenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 2-chloronaphthalene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 2-nitroaniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| acenaphthylene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| dimethylphthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 2,6-dinitrotoluene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 2,4-dinitrotoluene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| acenaphthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 3-nitroaniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 2,4-dinitrophenol | < 6 | 6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| dibenzofuran | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 4-nitrophenol | < 2 | 2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| fluorene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| diethyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-002
**Sample ID:** DUP-1
**Matrix:** Solid Percent Dry: 83% Results expressed on a dry weight basis.
**Sampled:** 10/30/14 0:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 4-chlorophenyl phenyl ether | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 4-nitroaniline | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 4,6-dinitro-2-methylphenol | < 2 | 2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| azobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| N-nitrosodiphenylamine | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 4-bromophenyl phenyl ether | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| hexachlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| pentachlorophenol | < 1 | 1 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| phenanthrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| anthracene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| carbazole | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| di-n-butylphthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| fluoranthene | **0.07** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| benzidine | < 4 | 4 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| pyrene | **0.07** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| butyl benzyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| benzo(a)anthracene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| chrysene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 3,3'-dichlorobenzidine | < 4 | 4 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| bis(2-ethylhexyl)phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| di-n-octyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| benzo(b)fluoranthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| benzo(k)fluoranthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| benzo(a)pyrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| indeno(1,2,3-cd)pyrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| dibenzo(a,h)anthracene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| benzo(g,h,i)perylene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| 2-fluorophenol SUR | **73** | 21-100 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| phenol-D5 SUR | **74** | 10-102 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 2,4,6-tribromophenol SUR | **81** | 10-123 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| nitrobenzene-D5 SUR | **60** | 35-114 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| 2-fluorobiphenyl SUR | **59** | 43-116 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |
| p-terphenyl-D14 SUR | **81** | 33-141 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:40 | SW3546/8270D |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-003
**Sample ID:** CA-SS-2(0-2)
**Matrix:** Solid Percent Dry: 91.7% Results expressed on a dry weight basis.
**Sampled:** 10/27/14 12:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| naphthalene | **3.4** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| 2-methylnaphthalene | **5.2** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| acenaphthylene | **4.9** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| acenaphthene | **2.1** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| dibenzofuran | **3.2** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| fluorene | **10** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| phenanthrene | **53** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| anthracene | **8.1** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| fluoranthene | **39** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| pyrene | **33** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| benzo(a)anthracene | **16** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| chrysene | **15** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| benzo(b)fluoranthene | **9.9** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| benzo(k)fluoranthene | **13** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| benzo(a)pyrene | **13** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| indeno(1,2,3-cd)pyrene | **3.8** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| dibenzo(a,h)anthracene | **2.0** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| benzo(g,h,i)perylene | **3.6** | 0.5 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| 2-fluorobiphenyl SUR | **85** | 43-116 | % | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |
| o-terphenyl SUR | **97** | 33-141 | % | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:00 | SW3550C8270D |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-004
**Sample ID:** CA-SS-1(0-2)
**Matrix:** Solid Percent Dry: 87.5% Results expressed on a dry weight basis.
**Sampled:** 10/27/14 12:40

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| naphthalene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| 2-methylnaphthalene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| acenaphthylene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| acenaphthene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| dibenzofuran | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| fluorene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| phenanthrene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| anthracene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| fluoranthene | **1.6** | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| pyrene | **1.5** | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| benzo(a)anthracene | **1.0** | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| chrysene | **1.0** | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| benzo(b)fluoranthene | **0.9** | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| benzo(k)fluoranthene | **1.0** | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| benzo(a)pyrene | **0.9** | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| indeno(1,2,3-cd)pyrene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| dibenzo(a,h)anthracene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| benzo(g,h,i)perylene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| 2-fluorobiphenyl SUR | **70** | 43-116 | % | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |
| o-terphenyl SUR | **80** | 33-141 | % | 1 | AJD | 11/6/14 | 7359 | 11/7/14 | 14:37 | SW3550C8270D |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-005
**Sample ID:** CA-SB-2(12-14/13)
**Matrix:** Solid Percent Dry: 81.1% Results expressed on a dry weight basis.
**Sampled:** 10/27/14 13:05

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| N-nitrosodimethylamine | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| aniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| phenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 2-chlorophenol | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| bis(2-chloroethyl)ether | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 1,3-dichlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 1,4-dichlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 1,2-dichlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| benzyl alcohol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 2-methylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| bis(2-chloroisopropyl) ether | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| hexachloroethane | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| N-nitroso-di-N-propylamine | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 4-methylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| nitrobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| isophorone | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 2-nitrophenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 2,4-dimethylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| bis(2-chloroethoxy)methane | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 2,4-dichlorophenol | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 1,2,4-trichlorobenzene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| naphthalene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| benzoic acid | < 6 | 6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 4-chloroaniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| hexachlorobutadiene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 4-chloro-3-methylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 2-methylnaphthalene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| hexachlorocyclopentadiene | < 1 | 1 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 2,4,6-trichlorophenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 2,4,5-trichlorophenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 2-chloronaphthalene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 2-nitroaniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| acenaphthylene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| dimethylphthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 2,6-dinitrotoluene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 2,4-dinitrotoluene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| acenaphthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 3-nitroaniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 2,4-dinitrophenol | < 6 | 6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| dibenzofuran | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 4-nitrophenol | < 2 | 2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| fluorene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| diethyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-005
**Sample ID:** CA-SB-2(12-14/13)
**Matrix:** Solid Percent Dry: 81.1% Results expressed on a dry weight basis.
**Sampled:** 10/27/14 13:05

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 4-chlorophenyl phenyl ether | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 4-nitroaniline | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 4,6-dinitro-2-methylphenol | < 2 | 2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| azobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| N-nitrosodiphenylamine | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 4-bromophenyl phenyl ether | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| hexachlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| pentachlorophenol | < 1 | 1 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| phenanthrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| anthracene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| carbazole | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| di-n-butylphthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| fluoranthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| benzidine | < 3 | 3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| pyrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| butyl benzyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| benzo(a)anthracene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| chrysene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 3,3'-dichlorobenzidine | < 3 | 3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| bis(2-ethylhexyl)phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| di-n-octyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| benzo(b)fluoranthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| benzo(k)fluoranthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| benzo(a)pyrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| indeno(1,2,3-cd)pyrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| dibenzo(a,h)anthracene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| benzo(g,h,i)perylene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| 2-fluorophenol SUR | **64** | 21-100 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| phenol-D5 SUR | **64** | 10-102 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 2,4,6-tribromophenol SUR | **69** | 10-123 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| nitrobenzene-D5 SUR | **53** | 35-114 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| 2-fluorobiphenyl SUR | **52** | 43-116 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |
| p-terphenyl-D14 SUR | **76** | 33-141 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 20:03 | SW3546/8270D |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-006
**Sample ID:** CA-SB-1(10-12/10.5)
**Matrix:** Solid Percent Dry: 76.4% Results expressed on a dry weight basis.
**Sampled:** 10/27/14 15:05

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| N-nitrosodimethylamine | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| aniline | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| phenol | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 2-chlorophenol | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| bis(2-chloroethyl)ether | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 1,3-dichlorobenzene | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 1,4-dichlorobenzene | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 1,2-dichlorobenzene | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| benzyl alcohol | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 2-methylphenol | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| bis(2-chloroisopropyl) ether | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| hexachloroethane | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| N-nitroso-di-N-propylamine | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 4-methylphenol | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| nitrobenzene | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| isophorone | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 2-nitrophenol | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 2,4-dimethylphenol | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| bis(2-chloroethoxy)methane | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 2,4-dichlorophenol | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 1,2,4-trichlorobenzene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| naphthalene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| benzoic acid | < 6 | 6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 4-chloroaniline | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| hexachlorobutadiene | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 4-chloro-3-methylphenol | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 2-methylnaphthalene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| hexachlorocyclopentadiene | < 1 | 1 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 2,4,6-trichlorophenol | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 2,4,5-trichlorophenol | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 2-chloronaphthalene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 2-nitroaniline | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| acenaphthylene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| dimethylphthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 2,6-dinitrotoluene | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 2,4-dinitrotoluene | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| acenaphthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 3-nitroaniline | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 2,4-dinitrophenol | < 6 | 6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| dibenzofuran | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 4-nitrophenol | < 3 | 3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| fluorene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| diethyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-006
**Sample ID:** CA-SB-1(10-12/10.5)
**Matrix:** Solid Percent Dry: 76.4% Results expressed on a dry weight basis.
**Sampled:** 10/27/14 15:05

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 4-chlorophenyl phenyl ether | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 4-nitroaniline | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 4,6-dinitro-2-methylphenol | < 3 | 3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| azobenzene | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| N-nitrosodiphenylamine | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 4-bromophenyl phenyl ether | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| hexachlorobenzene | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| pentachlorophenol | < 1 | 1 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| phenanthrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| anthracene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| carbazole | < 0.3 | 0.3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| di-n-butylphthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| fluoranthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| benzidine | < 4 | 4 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| pyrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| butyl benzyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| benzo(a)anthracene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| chrysene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 3,3'-dichlorobenzidine | < 4 | 4 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| bis(2-ethylhexyl)phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| di-n-octyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| benzo(b)fluoranthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| benzo(k)fluoranthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| benzo(a)pyrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| indeno(1,2,3-cd)pyrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| dibenzo(a,h)anthracene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| benzo(g,h,i)perylene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| 2-fluorophenol SUR | **68** | 21-100 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| phenol-D5 SUR | **67** | 10-102 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 2,4,6-tribromophenol SUR | **69** | 10-123 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| nitrobenzene-D5 SUR | **56** | 35-114 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| 2-fluorobiphenyl SUR | **54** | 43-116 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |
| p-terphenyl-D14 SUR | **72** | 33-141 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:13 | SW3546/8270D |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-007
**Sample ID:** CA-SB-4(10-12/11)
**Matrix:** Solid Percent Dry: 81.1% Results expressed on a dry weight basis.
**Sampled:** 10/27/14 16:20

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| N-nitrosodimethylamine | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| aniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| phenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 2-chlorophenol | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| bis(2-chloroethyl)ether | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 1,3-dichlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 1,4-dichlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 1,2-dichlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| benzyl alcohol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 2-methylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| bis(2-chloroisopropyl) ether | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| hexachloroethane | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| N-nitroso-di-N-propylamine | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 4-methylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| nitrobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| isophorone | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 2-nitrophenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 2,4-dimethylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| bis(2-chloroethoxy)methane | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 2,4-dichlorophenol | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 1,2,4-trichlorobenzene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| naphthalene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| benzoic acid | < 6 | 6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 4-chloroaniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| hexachlorobutadiene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 4-chloro-3-methylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 2-methylnaphthalene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| hexachlorocyclopentadiene | < 1 | 1 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 2,4,6-trichlorophenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 2,4,5-trichlorophenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 2-chloronaphthalene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 2-nitroaniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| acenaphthylene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| dimethylphthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 2,6-dinitrotoluene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 2,4-dinitrotoluene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| acenaphthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 3-nitroaniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 2,4-dinitrophenol | < 6 | 6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| dibenzofuran | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 4-nitrophenol | < 2 | 2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| fluorene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| diethyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-007
**Sample ID:** CA-SB-4(10-12/11)
**Matrix:** Solid Percent Dry: 81.1% Results expressed on a dry weight basis.
**Sampled:** 10/27/14 16:20

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 4-chlorophenyl phenyl ether | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 4-nitroaniline | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 4,6-dinitro-2-methylphenol | < 2 | 2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| azobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| N-nitrosodiphenylamine | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 4-bromophenyl phenyl ether | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| hexachlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| pentachlorophenol | < 1 | 1 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| phenanthrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| anthracene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| carbazole | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| di-n-butylphthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| fluoranthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| benzidine | < 4 | 4 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| pyrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| butyl benzyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| benzo(a)anthracene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| chrysene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 3,3'-dichlorobenzidine | < 4 | 4 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| bis(2-ethylhexyl)phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| di-n-octyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| benzo(b)fluoranthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| benzo(k)fluoranthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| benzo(a)pyrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| indeno(1,2,3-cd)pyrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| dibenzo(a,h)anthracene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| benzo(g,h,i)perylene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| 2-fluorophenol SUR | **64** | 21-100 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| phenol-D5 SUR | **64** | 10-102 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 2,4,6-tribromophenol SUR | **65** | 10-123 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| nitrobenzene-D5 SUR | **53** | 35-114 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| 2-fluorobiphenyl SUR | **52** | 43-116 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |
| p-terphenyl-D14 SUR | **70** | 33-141 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 18:50 | SW3546/8270D |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-008
**Sample ID:** CA-SB-3(8-10/9)
**Matrix:** Solid Percent Dry: 78.9% Results expressed on a dry weight basis.
**Sampled:** 10/30/14 8:40

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| N-nitrosodimethylamine | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| aniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| phenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 2-chlorophenol | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| bis(2-chloroethyl)ether | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 1,3-dichlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 1,4-dichlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 1,2-dichlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| benzyl alcohol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 2-methylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| bis(2-chloroisopropyl) ether | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| hexachloroethane | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| N-nitroso-di-N-propylamine | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 4-methylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| nitrobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| isophorone | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 2-nitrophenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 2,4-dimethylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| bis(2-chloroethoxy)methane | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 2,4-dichlorophenol | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 1,2,4-trichlorobenzene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| naphthalene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| benzoic acid | < 6 | 6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 4-chloroaniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| hexachlorobutadiene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 4-chloro-3-methylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 2-methylnaphthalene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| hexachlorocyclopentadiene | < 1 | 1 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 2,4,6-trichlorophenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 2,4,5-trichlorophenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 2-chloronaphthalene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 2-nitroaniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| acenaphthylene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| dimethylphthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 2,6-dinitrotoluene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 2,4-dinitrotoluene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| acenaphthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 3-nitroaniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 2,4-dinitrophenol | < 6 | 6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| dibenzofuran | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 4-nitrophenol | < 2 | 2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| fluorene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| diethyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-008
**Sample ID:** CA-SB-3(8-10/9)
**Matrix:** Solid Percent Dry: 78.9% Results expressed on a dry weight basis.
**Sampled:** 10/30/14 8:40

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 4-chlorophenyl phenyl ether | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 4-nitroaniline | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 4,6-dinitro-2-methylphenol | < 2 | 2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| azobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| N-nitrosodiphenylamine | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 4-bromophenyl phenyl ether | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| hexachlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| pentachlorophenol | < 1 | 1 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| phenanthrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| anthracene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| carbazole | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| di-n-butylphthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| fluoranthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| benzidine | < 4 | 4 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| pyrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| butyl benzyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| benzo(a)anthracene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| chrysene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 3,3'-dichlorobenzidine | < 4 | 4 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| bis(2-ethylhexyl)phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| di-n-octyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| benzo(b)fluoranthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| benzo(k)fluoranthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| benzo(a)pyrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| indeno(1,2,3-cd)pyrene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| dibenzo(a,h)anthracene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| benzo(g,h,i)perylene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| 2-fluorophenol SUR | **46** | 21-100 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| phenol-D5 SUR | **48** | 10-102 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 2,4,6-tribromophenol SUR | **61** | 10-123 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| nitrobenzene-D5 SUR | **40** | 35-114 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| 2-fluorobiphenyl SUR | **40** * | 43-116 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |
| p-terphenyl-D14 SUR | **68** | 33-141 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 19:27 | SW3546/8270D |

**** The surrogate showed recovery outside the acceptance limits.***

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-009
**Sample ID:** CA-SB-5(0.5-2.5/1.5)
**Matrix:** Solid Percent Dry: 83% Results expressed on a dry weight basis.
**Sampled:** 10/30/14 16:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| N-nitrosodimethylamine | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| aniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| phenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 2-chlorophenol | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| bis(2-chloroethyl)ether | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 1,3-dichlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 1,4-dichlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 1,2-dichlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| benzyl alcohol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 2-methylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| bis(2-chloroisopropyl) ether | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| hexachloroethane | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| N-nitroso-di-N-propylamine | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 4-methylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| nitrobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| isophorone | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 2-nitrophenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 2,4-dimethylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| bis(2-chloroethoxy)methane | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 2,4-dichlorophenol | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 1,2,4-trichlorobenzene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| naphthalene | **0.06** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| benzoic acid | < 6 | 6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 4-chloroaniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| hexachlorobutadiene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 4-chloro-3-methylphenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 2-methylnaphthalene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| hexachlorocyclopentadiene | < 1 | 1 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 2,4,6-trichlorophenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 2,4,5-trichlorophenol | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 2-chloronaphthalene | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 2-nitroaniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| acenaphthylene | **0.10** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| dimethylphthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 2,6-dinitrotoluene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 2,4-dinitrotoluene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| acenaphthene | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 3-nitroaniline | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 2,4-dinitrophenol | < 6 | 6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| dibenzofuran | < 0.06 | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 4-nitrophenol | < 2 | 2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| fluorene | **0.06** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| diethyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |

**Project ID:** R+D 14001247
**Job ID:** 31419
**Sample#:** 31419-009
**Sample ID:** CA-SB-5(0.5-2.5/1.5)
**Matrix:** Solid Percent Dry: 83% Results expressed on a dry weight basis.
**Sampled:** 10/30/14 16:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 4-chlorophenyl phenyl ether | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 4-nitroaniline | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 4,6-dinitro-2-methylphenol | < 2 | 2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| azobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| N-nitrosodiphenylamine | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 4-bromophenyl phenyl ether | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| hexachlorobenzene | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| pentachlorophenol | < 1 | 1 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| phenanthrene | **0.87** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| anthracene | **0.27** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| carbazole | < 0.2 | 0.2 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| di-n-butylphthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| fluoranthene | **3.1** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| benzidine | < 3 | 3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| pyrene | **2.6** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| butyl benzyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| benzo(a)anthracene | **1.9** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| chrysene | **1.5** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 3,3'-dichlorobenzidine | < 3 | 3 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| bis(2-ethylhexyl)phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| di-n-octyl phthalate | < 0.6 | 0.6 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| benzo(b)fluoranthene | **1.3** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| benzo(k)fluoranthene | **1.2** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| benzo(a)pyrene | **1.5** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| indeno(1,2,3-cd)pyrene | **0.66** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| dibenzo(a,h)anthracene | **0.33** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| benzo(g,h,i)perylene | **0.61** | 0.06 | ug/g | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| 2-fluorophenol SUR | **69** | 21-100 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| phenol-D5 SUR | **71** | 10-102 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 2,4,6-tribromophenol SUR | **79** | 10-123 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| nitrobenzene-D5 SUR | **58** | 35-114 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| 2-fluorobiphenyl SUR | **58** | 43-116 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |
| p-terphenyl-D14 SUR | **71** | 33-141 | % | 1 | AJD | 11/5/14 | 7345 | 11/5/14 | 21:17 | SW3546/8270D |

**Project ID:** R+D 14001247
**Job ID:** 31419

**Sample#:** 31419-002
**Sample ID:** DUP-1
**Matrix:** Solid Percent Dry: 83% Results expressed on a dry weight basis.
**Sampled:** 10/30/14 0:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:28 | SW3546/8082A |
| PCB-1221 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:28 | SW3546/8082A |
| PCB-1232 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:28 | SW3546/8082A |
| PCB-1242 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:28 | SW3546/8082A |
| PCB-1248 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:28 | SW3546/8082A |
| PCB-1254 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:28 | SW3546/8082A |
| PCB-1260 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:28 | SW3546/8082A |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| tetrachloro-m-xylene SUR | **92** | 30-150 | % | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:28 | SW3546/8082A |
| decachlorobiphenyl SUR | **103** | 30-150 | % | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:28 | SW3546/8082A |

**Sample#:** 31419-003
**Sample ID:** CA-SS-2(0-2)
**Matrix:** Solid Percent Dry: 91.7% Results expressed on a dry weight basis.
**Sampled:** 10/27/14 12:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:58 | SW3546/8082A |
| PCB-1221 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:58 | SW3546/8082A |
| PCB-1232 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:58 | SW3546/8082A |
| PCB-1242 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:58 | SW3546/8082A |
| PCB-1248 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:58 | SW3546/8082A |
| PCB-1254 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:58 | SW3546/8082A |
| PCB-1260 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:58 | SW3546/8082A |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| tetrachloro-m-xylene SUR | **87** | 30-150 | % | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:58 | SW3546/8082A |
| decachlorobiphenyl SUR | **84** | 30-150 | % | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 10:58 | SW3546/8082A |

**Project ID:** R+D 14001247

**Job ID:** 31419

**Sample#:** 31419-004

**Sample ID:** CA-SS-1(0-2)

**Matrix:** Solid Percent Dry: 87.5% Results expressed on a dry weight basis.

**Sampled:** 10/27/14 12:40

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 14:32 | SW3546/8082A |
| PCB-1221 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 14:32 | SW3546/8082A |
| PCB-1232 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 14:32 | SW3546/8082A |
| PCB-1242 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 14:32 | SW3546/8082A |
| PCB-1248 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 14:32 | SW3546/8082A |
| PCB-1254 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 14:32 | SW3546/8082A |
| PCB-1260 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 14:32 | SW3546/8082A |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| tetrachloro-m-xylene SUR | **98** | 30-150 | % | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 14:32 | SW3546/8082A |
| decachlorobiphenyl SUR | **120** | 30-150 | % | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 14:32 | SW3546/8082A |

**Sample#:** 31419-009

**Sample ID:** CA-SB-5(0.5-2.5/1.5)

**Matrix:** Solid Percent Dry: 83% Results expressed on a dry weight basis.

**Sampled:** 10/30/14 16:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 15:02 | SW3546/8082A |
| PCB-1221 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 15:02 | SW3546/8082A |
| PCB-1232 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 15:02 | SW3546/8082A |
| PCB-1242 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 15:02 | SW3546/8082A |
| PCB-1248 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 15:02 | SW3546/8082A |
| PCB-1254 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 15:02 | SW3546/8082A |
| PCB-1260 | < 0.2 | 0.2 | ug/g | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 15:02 | SW3546/8082A |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| tetrachloro-m-xylene SUR | **91** | 30-150 | % | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 15:02 | SW3546/8082A |
| decachlorobiphenyl SUR | **111** | 30-150 | % | 1 | JZ | 11/4/14 | 7342 | 11/8/14 | 15:02 | SW3546/8082A |

**Project ID:** R+D 14001247

**Job ID:** 31419

**Sample#:** 31419-002

**Sample ID:** DUP-1

**Matrix:** Solid Percent Dry: 83% Results expressed on a dry weight basis.

**Sampled:** 10/30/14 0:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **3.5** | 0.6 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:40 | SW3051A6010C |
| Barium | **43** | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:40 | SW3051A6010C |
| Cadmium | < 0.2 | 0.2 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:40 | SW3051A6010C |
| Chromium | **13** | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:40 | SW3051A6010C |
| Lead | **27** | 0.6 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:40 | SW3051A6010C |
| Mercury | **0.44** | 0.22 | ug/g | 1 | AC | 11/4/14 | 7339 | 11/4/14 | 15:32 | SW7471B |
| Selenium | < 3 | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:40 | SW3051A6010C |
| Silver | < 0.4 | 0.4 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:40 | SW3051A6010C |

**Sample#:** 31419-003

**Sample ID:** CA-SS-2(0-2)

**Matrix:** Solid Percent Dry: 91.7% Results expressed on a dry weight basis.

**Sampled:** 10/27/14 12:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **5.2** | 0.6 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 20:08 | SW3051A6010C |
| Barium | **68** | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 20:08 | SW3051A6010C |
| Cadmium | < 0.2 | 0.2 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 20:08 | SW3051A6010C |
| Chromium | **8** | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 20:08 | SW3051A6010C |
| Lead | **130** | 0.6 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 20:08 | SW3051A6010C |
| Mercury | **0.19** | 0.19 | ug/g | 1 | AC | 11/4/14 | 7339 | 11/4/14 | 15:46 | SW7471B |
| Selenium | < 3 | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 20:08 | SW3051A6010C |
| Silver | < 0.4 | 0.4 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 20:08 | SW3051A6010C |

**Sample#:** 31419-004

**Sample ID:** CA-SS-1(0-2)

**Matrix:** Solid Percent Dry: 87.5% Results expressed on a dry weight basis.

**Sampled:** 10/27/14 12:40

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **6.6** | 0.6 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:47 | SW3051A6010C |
| Barium | **49** | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:47 | SW3051A6010C |
| Cadmium | < 0.2 | 0.2 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:47 | SW3051A6010C |
| Chromium | **12** | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:47 | SW3051A6010C |
| Lead | **89** | 0.6 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:47 | SW3051A6010C |
| Mercury | < 0.19 | 0.19 | ug/g | 1 | AC | 11/4/14 | 7339 | 11/4/14 | 15:39 | SW7471B |
| Selenium | < 3 | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:47 | SW3051A6010C |
| Silver | < 0.4 | 0.4 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:47 | SW3051A6010C |

**Project ID:** R+D 14001247

**Job ID:** 31419

**Sample#:** 31419-005

**Sample ID:** CA-SB-2(12-14/13)

**Matrix:** Solid Percent Dry: 81.1% Results expressed on a dry weight basis.

**Sampled:** 10/27/14 13:05

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **4.5** | 0.6 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:55 | SW3051A6010C |
| Barium | **28** | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:55 | SW3051A6010C |
| Cadmium | < 0.2 | 0.2 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:55 | SW3051A6010C |
| Chromium | **9** | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:55 | SW3051A6010C |
| Lead | **3.6** | 0.6 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:55 | SW3051A6010C |
| Mercury | < 0.19 | 0.19 | ug/g | 1 | AC | 11/4/14 | 7339 | 11/4/14 | 15:41 | SW7471B |
| Selenium | < 3 | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:55 | SW3051A6010C |
| Silver | < 0.4 | 0.4 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 18:55 | SW3051A6010C |

**Sample#:** 31419-006

**Sample ID:** CA-SB-1(10-12/10.5)

**Matrix:** Solid Percent Dry: 76.4% Results expressed on a dry weight basis.

**Sampled:** 10/27/14 15:05

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **2.4** | 0.6 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 19:02 | SW3051A6010C |
| Barium | **41** | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 19:02 | SW3051A6010C |
| Cadmium | < 0.3 | 0.3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 19:02 | SW3051A6010C |
| Chromium | **11** | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 19:02 | SW3051A6010C |
| Lead | **5.0** | 0.6 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 19:02 | SW3051A6010C |
| Mercury | < 0.22 | 0.22 | ug/g | 1 | AC | 11/4/14 | 7339 | 11/4/14 | 15:43 | SW7471B |
| Selenium | < 3 | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 19:02 | SW3051A6010C |
| Silver | < 0.4 | 0.4 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 19:02 | SW3051A6010C |

**Sample#:** 31419-009

**Sample ID:** CA-SB-5(0.5-2.5/1.5)

**Matrix:** Solid Percent Dry: 83% Results expressed on a dry weight basis.

**Sampled:** 10/30/14 16:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | **2.6** | 0.6 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 19:10 | SW3051A6010C |
| Barium | **41** | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 19:10 | SW3051A6010C |
| Cadmium | < 0.2 | 0.2 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 19:10 | SW3051A6010C |
| Chromium | **13** | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 19:10 | SW3051A6010C |
| Lead | **19** | 0.6 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 19:10 | SW3051A6010C |
| Mercury | **0.28** | 0.19 | ug/g | 1 | AC | 11/4/14 | 7339 | 11/4/14 | 15:44 | SW7471B |
| Selenium | < 3 | 3 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 19:10 | SW3051A6010C |
| Silver | < 0.4 | 0.4 | ug/g | 1 | AB | 11/3/14 | 7335 | 11/3/14 | 19:10 | SW3051A6010C |

# Quality Control Report


124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

**Case Narrative**
**Lab # 31419**

## Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 2 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.
The reported results are calculated on a "dry weight" basis.

## Calibration

No exceptions noted.

## Method Blank

No exceptions noted.

## Surrogate Recoveries

SVOC: The surrogate, 2-fluorobiphenyl, for sample 31419-008 showed recovery outside the acceptance limits. The other surrogate compounds were acceptable. Matrix interference suspected.

## Laboratory Control Sample Results

VOC: The MLCS7338 did not meet the acceptance criteria for bromomethane. This compound is known to be problematic in the method. Since <10% of the compounds were outside of the acceptance criteria, reanalysis is not required.

## Matrix Spike/Matrix Spike Duplicate/Duplicate Results

No exceptions noted.

## Other

Reporting Limits: Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

# - QC Report -

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SW5035A8260C | MB7338 | dichlorodifluoromethane | | < | 0.1 | ug/g | | | | | |
| | | chloromethane | | < | 0.1 | ug/g | | | | | |
| | | vinyl chloride | | < | 0.1 | ug/g | | | | | |
| | | bromomethane | | < | 0.2 | ug/g | | | | | |
| | | chloroethane | | < | 0.1 | ug/g | | | | | |
| | | trichlorofluoromethane | | < | 0.1 | ug/g | | | | | |
| | | diethyl ether | | < | 0.5 | ug/g | | | | | |
| | | acetone | | < | 2.5 | ug/g | | | | | |
| | | 1,1-dichloroethene | | < | 0.1 | ug/g | | | | | |
| | | methylene chloride | | < | 0.2 | ug/g | | | | | |
| | | carbon disulfide | | < | 0.1 | ug/g | | | | | |
| | | methyl t-butyl ether (MTBE) | | < | 0.1 | ug/g | | | | | |
| | | trans-1,2-dichloroethene | | < | 0.1 | ug/g | | | | | |
| | | isopropyl ether (DIPE) | | < | 0.1 | ug/g | | | | | |
| | | ethyl t-butyl ether (ETBE) | | < | 0.1 | ug/g | | | | | |
| | | 1,1-dichloroethane | | < | 0.1 | ug/g | | | | | |
| | | t-butanol (TBA) | | < | 2.5 | ug/g | | | | | |
| | | 2-butanone (MEK) | | < | 0.5 | ug/g | | | | | |
| | | 2,2-dichloropropane | | < | 0.1 | ug/g | | | | | |
| | | cis-1,2-dichloroethene | | < | 0.1 | ug/g | | | | | |
| | | chloroform | | < | 0.1 | ug/g | | | | | |
| | | bromochloromethane | | < | 0.1 | ug/g | | | | | |
| | | tetrahydrofuran (THF) | | < | 0.5 | ug/g | | | | | |
| | | 1,1,1-trichloroethane | | < | 0.1 | ug/g | | | | | |
| | | 1,1-dichloropropene | | < | 0.1 | ug/g | | | | | |
| | | t-amyl-methyl ether (TAME) | | < | 0.1 | ug/g | | | | | |
| | | carbon tetrachloride | | < | 0.1 | ug/g | | | | | |
| | | 1,2-dichloroethane | | < | 0.1 | ug/g | | | | | |
| | | benzene | | < | 0.1 | ug/g | | | | | |
| | | trichloroethene | | < | 0.1 | ug/g | | | | | |
| | | 1,2-dichloropropane | | < | 0.1 | ug/g | | | | | |
| | | bromodichloromethane | | < | 0.1 | ug/g | | | | | |
| | | 1,4-dioxane | | < | 2.5 | ug/g | | | | | |
| | | dibromomethane | | < | 0.1 | ug/g | | | | | |
| | | 4-methyl-2-pentanone (MIBK) | | < | 0.5 | ug/g | | | | | |
| | | cis-1,3-dichloropropene | | < | 0.1 | ug/g | | | | | |
| | | toluene | | < | 0.1 | ug/g | | | | | |
| | | trans-1,3-dichloropropene | | < | 0.1 | ug/g | | | | | |
| | | 2-hexanone | | < | 0.5 | ug/g | | | | | |
| | | 1,1,2-trichloroethane | | < | 0.1 | ug/g | | | | | |
| | | 1,3-dichloropropane | | < | 0.1 | ug/g | | | | | |
| | | tetrachloroethene | | < | 0.1 | ug/g | | | | | |
| | | dibromochloromethane | | < | 0.1 | ug/g | | | | | |
| | | 1,2-dibromoethane (EDB) | | < | 0.1 | ug/g | | | | | |
| | | chlorobenzene | | < | 0.1 | ug/g | | | | | |
| | | 1,1,1,2-tetrachloroethane | | < | 0.1 | ug/g | | | | | |
| | | ethylbenzene | | < | 0.1 | ug/g | | | | | |
| | | m&p-xylenes | | < | 0.1 | ug/g | | | | | |
| | | o-xylene | | < | 0.1 | ug/g | | | | | |
| | | styrene | | < | 0.1 | ug/g | | | | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW5035A8260C | MB7338 | bromoform | | < | 0.1 | ug/g | | | | | | |
| | | isopropylbenzene | | < | 0.1 | ug/g | | | | | | |
| | | 1,1,2,2-tetrachloroethane | | < | 0.1 | ug/g | | | | | | |
| | | 1,2,3-trichloropropane | | < | 0.1 | ug/g | | | | | | |
| | | n-propylbenzene | | < | 0.1 | ug/g | | | | | | |
| | | bromobenzene | | < | 0.1 | ug/g | | | | | | |
| | | 1,3,5-trimethylbenzene | | < | 0.1 | ug/g | | | | | | |
| | | 2-chlorotoluene | | < | 0.1 | ug/g | | | | | | |
| | | 4-chlorotoluene | | < | 0.1 | ug/g | | | | | | |
| | | tert-butylbenzene | | < | 0.1 | ug/g | | | | | | |
| | | 1,2,4-trimethylbenzene | | < | 0.1 | ug/g | | | | | | |
| | | sec-butylbenzene | | < | 0.1 | ug/g | | | | | | |
| | | 1,3-dichlorobenzene | | < | 0.1 | ug/g | | | | | | |
| | | 4-isopropyltoluene | | < | 0.1 | ug/g | | | | | | |
| | | 1,4-dichlorobenzene | | < | 0.1 | ug/g | | | | | | |
| | | 1,2-dichlorobenzene | | < | 0.1 | ug/g | | | | | | |
| | | n-butylbenzene | | < | 0.1 | ug/g | | | | | | |
| | | 1,2-dibromo-3-chloropropane (DBCP) | | < | 0.1 | ug/g | | | | | | |
| | | 1,2,4-trichlorobenzene | | < | 0.1 | ug/g | | | | | | |
| | | 1,3,5-trichlorobenzene | | < | 0.1 | ug/g | | | | | | |
| | | hexachlorobutadiene | | < | 0.1 | ug/g | | | | | | |
| | | naphthalene | | < | 0.2 | ug/g | | | | | | |
| | | 1,2,3-trichlorobenzene | | < | 0.1 | ug/g | | | | | | |
| | | dibromofluoromethane SUR | | | 96 | % | | | 78 | 114 | | |
| | | toluene-D8 SUR | | | 101 | % | | | 88 | 110 | | |
| | | 4-bromofluorobenzene SUR | | | 99 | % | | | 86 | 115 | | |
| | | a,a,a-trifluorotoluene SUR | | | 95 | % | | | 70 | 130 | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW5035A8260C | MLCS7338 | dichlorodifluoromethane | | | 1.0 | ug/g | 1 | 96 | | 70 | 130 | | |
| | | chloromethane | | | 1.1 | ug/g | 1 | 106 | | 70 | 130 | | |
| | | vinyl chloride | | | 1.0 | ug/g | 1 | 97 | | 70 | 130 | | |
| | | bromomethane | | | 0.7 | ug/g | 1 | 68 | * | 70 | 130 | | |
| | | chloroethane | | | 1.1 | ug/g | 1 | 110 | | 70 | 130 | | |
| | | trichlorofluoromethane | | | 1.0 | ug/g | 1 | 102 | | 70 | 130 | | |
| | | diethyl ether | | | 1.2 | ug/g | 1 | 123 | | 70 | 130 | | |
| | | acetone | | < | 2.5 | ug/g | 1 | 108 | | | | | |
| | | 1,1-dichloroethene | | | 1.0 | ug/g | 1 | 101 | | 70 | 130 | | |
| | | methylene chloride | | | 1.1 | ug/g | 1 | 109 | | 70 | 130 | | |
| | | carbon disulfide | | | 1.0 | ug/g | 1 | 101 | | 70 | 130 | | |
| | | methyl t-butyl ether (MTBE) | | | 1.1 | ug/g | 1 | 109 | | 70 | 130 | | |
| | | trans-1,2-dichloroethene | | | 1.1 | ug/g | 1 | 106 | | 70 | 130 | | |
| | | isopropyl ether (DIPE) | | | 1.1 | ug/g | 1 | 106 | | 70 | 130 | | |
| | | ethyl t-butyl ether (ETBE) | | | 1.1 | ug/g | 1 | 107 | | 70 | 130 | | |
| | | 1,1-dichloroethane | | | 1.0 | ug/g | 1 | 103 | | 70 | 130 | | |
| | | t-butanol (TBA) | | | 5.5 | ug/g | 5 | 109 | | 70 | 130 | | |
| | | 2-butanone (MEK) | | | 1.1 | ug/g | 1 | 108 | | 70 | 130 | | |
| | | 2,2-dichloropropane | | | 1.0 | ug/g | 1 | 96 | | 70 | 130 | | |
| | | cis-1,2-dichloroethene | | | 1.1 | ug/g | 1 | 105 | | 70 | 130 | | |
| | | chloroform | | | 1.0 | ug/g | 1 | 105 | | 70 | 130 | | |
| | | bromochloromethane | | | 1.0 | ug/g | 1 | 99 | | 70 | 130 | | |
| | | tetrahydrofuran (THF) | | | 1.2 | ug/g | 1 | 116 | | 70 | 130 | | |
| | | 1,1,1-trichloroethane | | | 1.0 | ug/g | 1 | 100 | | 70 | 130 | | |
| | | 1,1-dichloropropene | | | 1.0 | ug/g | 1 | 104 | | 70 | 130 | | |
| | | t-amyl-methyl ether (TAME) | | | 1.0 | ug/g | 1 | 103 | | 70 | 130 | | |
| | | carbon tetrachloride | | | 0.9 | ug/g | 1 | 93 | | 70 | 130 | | |
| | | 1,2-dichloroethane | | | 1.1 | ug/g | 1 | 114 | | 70 | 130 | | |
| | | benzene | | | 1.0 | ug/g | 1 | 103 | | 70 | 130 | | |
| | | trichloroethene | | | 1.1 | ug/g | 1 | 108 | | 70 | 130 | | |
| | | 1,2-dichloropropane | | | 1.1 | ug/g | 1 | 105 | | 70 | 130 | | |
| | | bromodichloromethane | | | 1.1 | ug/g | 1 | 107 | | 70 | 130 | | |
| | | 1,4-dioxane | | < | 2.5 | ug/g | 2 | 122 | | 70 | 130 | | |
| | | dibromomethane | | | 1.0 | ug/g | 1 | 105 | | 70 | 130 | | |
| | | 4-methyl-2-pentanone (MIBK) | | | 1.0 | ug/g | 1 | 104 | | 70 | 130 | | |
| | | cis-1,3-dichloropropene | | | 1.0 | ug/g | 1 | 98 | | 70 | 130 | | |
| | | toluene | | | 1.0 | ug/g | 1 | 104 | | 70 | 130 | | |
| | | trans-1,3-dichloropropene | | | 1.0 | ug/g | 1 | 97 | | 70 | 130 | | |
| | | 2-hexanone | | | 1.0 | ug/g | 1 | 104 | | 70 | 130 | | |
| | | 1,1,2-trichloroethane | | | 1.1 | ug/g | 1 | 107 | | 70 | 130 | | |
| | | 1,3-dichloropropane | | | 1.1 | ug/g | 1 | 106 | | 70 | 130 | | |
| | | tetrachloroethene | | | 0.9 | ug/g | 1 | 95 | | 70 | 130 | | |
| | | dibromochloromethane | | | 1.0 | ug/g | 1 | 95 | | 70 | 130 | | |
| | | 1,2-dibromoethane (EDB) | | | 1.1 | ug/g | 1 | 111 | | 70 | 130 | | |
| | | chlorobenzene | | | 1.1 | ug/g | 1 | 107 | | 70 | 130 | | |
| | | 1,1,1,2-tetrachloroethane | | | 0.9 | ug/g | 1 | 92 | | 70 | 130 | | |
| | | ethylbenzene | | | 1.0 | ug/g | 1 | 98 | | 70 | 130 | | |
| | | m&p-xylenes | | | 1.9 | ug/g | 2 | 97 | | 70 | 130 | | |
| | | o-xylene | | | 1.0 | ug/g | 1 | 101 | | 70 | 130 | | |
| | | styrene | | | 1.0 | ug/g | 1 | 98 | | 70 | 130 | | |
| | | bromoform | | | 0.9 | ug/g | 1 | 93 | | 70 | 130 | | |

| Method | QC ID | Parameter | Associated Sample | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SW5035A8260C | MLCS7338 | isopropylbenzene | | 1.0 | ug/g | 1 | 100 | 70 | 130 | | |
| | | 1,1,2,2-tetrachloroethane | | 1.1 | ug/g | 1 | 107 | 70 | 130 | | |
| | | 1,2,3-trichloropropane | | 1.1 | ug/g | 1 | 111 | 70 | 130 | | |
| | | n-propylbenzene | | 1.1 | ug/g | 1 | 110 | 70 | 130 | | |
| | | bromobenzene | | 1.1 | ug/g | 1 | 110 | 70 | 130 | | |
| | | 1,3,5-trimethylbenzene | | 1.1 | ug/g | 1 | 111 | 70 | 130 | | |
| | | 2-chlorotoluene | | 1.1 | ug/g | 1 | 112 | 70 | 130 | | |
| | | 4-chlorotoluene | | 1.0 | ug/g | 1 | 103 | 70 | 130 | | |
| | | tert-butylbenzene | | 1.1 | ug/g | 1 | 114 | 70 | 130 | | |
| | | 1,2,4-trimethylbenzene | | 1.1 | ug/g | 1 | 111 | 70 | 130 | | |
| | | sec-butylbenzene | | 1.1 | ug/g | 1 | 111 | 70 | 130 | | |
| | | 1,3-dichlorobenzene | | 1.1 | ug/g | 1 | 109 | 70 | 130 | | |
| | | 4-isopropyltoluene | | 1.1 | ug/g | 1 | 110 | 70 | 130 | | |
| | | 1,4-dichlorobenzene | | 1.1 | ug/g | 1 | 111 | 70 | 130 | | |
| | | 1,2-dichlorobenzene | | 1.1 | ug/g | 1 | 109 | 70 | 130 | | |
| | | n-butylbenzene | | 1.1 | ug/g | 1 | 113 | 70 | 130 | | |
| | | 1,2-dibromo-3-chloropropane (DBCP) | | 1.0 | ug/g | 1 | 97 | 70 | 130 | | |
| | | 1,2,4-trichlorobenzene | | 1.1 | ug/g | 1 | 115 | 70 | 130 | | |
| | | 1,3,5-trichlorobenzene | | 1.1 | ug/g | 1 | 108 | 70 | 130 | | |
| | | hexachlorobutadiene | | 1.0 | ug/g | 1 | 100 | 70 | 130 | | |
| | | naphthalene | | 1.2 | ug/g | 1 | 118 | 70 | 130 | | |
| | | 1,2,3-trichlorobenzene | | 1.2 | ug/g | 1 | 115 | 70 | 130 | | |
| | | dibromofluoromethane SUR | | 100 | % | | | 78 | 114 | | |
| | | toluene-D8 SUR | | 100 | % | | | 88 | 110 | | |
| | | 4-bromofluorobenzene SUR | | 99 | % | | | 86 | 115 | | |
| | | a,a,a-trifluorotoluene SUR | | 101 | % | | | 70 | 130 | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW5035A8260C | MLCSD7338 | dichlorodifluoromethane | | | 1.0 | ug/g | 1 | 96 | 70 | 130 | 1 | 30 |
| | | chloromethane | | | 1.1 | ug/g | 1 | 106 | 70 | 130 | 0 | 30 |
| | | vinyl chloride | | | 1.0 | ug/g | 1 | 97 | 70 | 130 | 1 | 30 |
| | | bromomethane | | | 0.8 | ug/g | 1 | 81 | 70 | 130 | 18 | 30 |
| | | chloroethane | | | 1.0 | ug/g | 1 | 104 | 70 | 130 | 5 | 30 |
| | | trichlorofluoromethane | | | 1.0 | ug/g | 1 | 101 | 70 | 130 | 1 | 30 |
| | | diethyl ether | | | 1.1 | ug/g | 1 | 114 | 70 | 130 | 7 | 30 |
| | | acetone | | < | 2.5 | ug/g | 1 | 118 | | | 8 | 30 |
| | | 1,1-dichloroethene | | | 1.0 | ug/g | 1 | 98 | 70 | 130 | 2 | 30 |
| | | methylene chloride | | | 1.1 | ug/g | 1 | 106 | 70 | 130 | 3 | 30 |
| | | carbon disulfide | | | 1.0 | ug/g | 1 | 101 | 70 | 130 | 0 | 30 |
| | | methyl t-butyl ether (MTBE) | | | 1.1 | ug/g | 1 | 106 | 70 | 130 | 2 | 30 |
| | | trans-1,2-dichloroethene | | | 1.0 | ug/g | 1 | 104 | 70 | 130 | 2 | 30 |
| | | isopropyl ether (DIPE) | | | 1.1 | ug/g | 1 | 106 | 70 | 130 | 1 | 30 |
| | | ethyl t-butyl ether (ETBE) | | | 1.0 | ug/g | 1 | 104 | 70 | 130 | 2 | 30 |
| | | 1,1-dichloroethane | | | 1.0 | ug/g | 1 | 98 | 70 | 130 | 4 | 30 |
| | | t-butanol (TBA) | | | 5.8 | ug/g | 5 | 116 | 70 | 130 | 6 | 30 |
| | | 2-butanone (MEK) | | | 1.1 | ug/g | 1 | 110 | 70 | 130 | 2 | 30 |
| | | 2,2-dichloropropane | | | 0.9 | ug/g | 1 | 93 | 70 | 130 | 3 | 30 |
| | | cis-1,2-dichloroethene | | | 1.0 | ug/g | 1 | 102 | 70 | 130 | 4 | 30 |
| | | chloroform | | | 1.0 | ug/g | 1 | 102 | 70 | 130 | 3 | 30 |
| | | bromochloromethane | | | 1.0 | ug/g | 1 | 97 | 70 | 130 | 3 | 30 |
| | | tetrahydrofuran (THF) | | | 1.1 | ug/g | 1 | 110 | 70 | 130 | 6 | 30 |
| | | 1,1,1-trichloroethane | | | 1.0 | ug/g | 1 | 97 | 70 | 130 | 3 | 30 |
| | | 1,1-dichloropropene | | | 1.0 | ug/g | 1 | 101 | 70 | 130 | 3 | 30 |
| | | t-amyl-methyl ether (TAME) | | | 1.0 | ug/g | 1 | 100 | 70 | 130 | 2 | 30 |
| | | carbon tetrachloride | | | 0.9 | ug/g | 1 | 91 | 70 | 130 | 2 | 30 |
| | | 1,2-dichloroethane | | | 1.1 | ug/g | 1 | 109 | 70 | 130 | 4 | 30 |
| | | benzene | | | 1.0 | ug/g | 1 | 100 | 70 | 130 | 3 | 30 |
| | | trichloroethene | | | 1.1 | ug/g | 1 | 106 | 70 | 130 | 2 | 30 |
| | | 1,2-dichloropropane | | | 1.0 | ug/g | 1 | 101 | 70 | 130 | 4 | 30 |
| | | bromodichloromethane | | | 1.0 | ug/g | 1 | 103 | 70 | 130 | 4 | 30 |
| | | 1,4-dioxane | | < | 2.5 | ug/g | 2 | 107 | 70 | 130 | 13 | 30 |
| | | dibromomethane | | | 1.0 | ug/g | 1 | 102 | 70 | 130 | 3 | 30 |
| | | 4-methyl-2-pentanone (MIBK) | | | 1.0 | ug/g | 1 | 104 | 70 | 130 | 0 | 30 |
| | | cis-1,3-dichloropropene | | | 0.9 | ug/g | 1 | 94 | 70 | 130 | 4 | 30 |
| | | toluene | | | 1.0 | ug/g | 1 | 100 | 70 | 130 | 4 | 30 |
| | | trans-1,3-dichloropropene | | | 0.9 | ug/g | 1 | 93 | 70 | 130 | 4 | 30 |
| | | 2-hexanone | | | 1.1 | ug/g | 1 | 106 | 70 | 130 | 2 | 30 |
| | | 1,1,2-trichloroethane | | | 1.0 | ug/g | 1 | 102 | 70 | 130 | 5 | 30 |
| | | 1,3-dichloropropane | | | 1.1 | ug/g | 1 | 108 | 70 | 130 | 1 | 30 |
| | | tetrachloroethene | | | 1.0 | ug/g | 1 | 98 | 70 | 130 | 3 | 30 |
| | | dibromochloromethane | | | 0.9 | ug/g | 1 | 95 | 70 | 130 | 0 | 30 |
| | | 1,2-dibromoethane (EDB) | | | 1.1 | ug/g | 1 | 111 | 70 | 130 | 0 | 30 |
| | | chlorobenzene | | | 1.1 | ug/g | 1 | 108 | 70 | 130 | 1 | 30 |
| | | 1,1,1,2-tetrachloroethane | | | 0.9 | ug/g | 1 | 92 | 70 | 130 | 0 | 30 |
| | | ethylbenzene | | | 1.0 | ug/g | 1 | 99 | 70 | 130 | 2 | 30 |
| | | m&p-xylenes | | | 2.0 | ug/g | 2 | 98 | 70 | 130 | 2 | 30 |
| | | o-xylene | | | 1.0 | ug/g | 1 | 102 | 70 | 130 | 0 | 30 |
| | | styrene | | | 1.0 | ug/g | 1 | 98 | 70 | 130 | 1 | 30 |
| | | bromoform | | | 0.9 | ug/g | 1 | 92 | 70 | 130 | 1 | 30 |

| Method | QC ID | Parameter | Associated Sample | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SW5035A8260C | MLCSD7338 | isopropylbenzene | | 1.0 | ug/g | 1 | 101 | 70 | 130 | 2 | 30 |
| | | 1,1,2,2-tetrachloroethane | | 1.1 | ug/g | 1 | 108 | 70 | 130 | 0 | 30 |
| | | 1,2,3-trichloropropane | | 1.1 | ug/g | 1 | 111 | 70 | 130 | 0 | 30 |
| | | n-propylbenzene | | 1.1 | ug/g | 1 | 111 | 70 | 130 | 1 | 30 |
| | | bromobenzene | | 1.1 | ug/g | 1 | 106 | 70 | 130 | 4 | 30 |
| | | 1,3,5-trimethylbenzene | | 1.1 | ug/g | 1 | 112 | 70 | 130 | 1 | 30 |
| | | 2-chlorotoluene | | 1.1 | ug/g | 1 | 112 | 70 | 130 | 0 | 30 |
| | | 4-chlorotoluene | | 1.0 | ug/g | 1 | 101 | 70 | 130 | 2 | 30 |
| | | tert-butylbenzene | | 1.1 | ug/g | 1 | 115 | 70 | 130 | 0 | 30 |
| | | 1,2,4-trimethylbenzene | | 1.1 | ug/g | 1 | 111 | 70 | 130 | 1 | 30 |
| | | sec-butylbenzene | | 1.1 | ug/g | 1 | 112 | 70 | 130 | 1 | 30 |
| | | 1,3-dichlorobenzene | | 1.1 | ug/g | 1 | 109 | 70 | 130 | 1 | 30 |
| | | 4-isopropyltoluene | | 1.1 | ug/g | 1 | 110 | 70 | 130 | 0 | 30 |
| | | 1,4-dichlorobenzene | | 1.1 | ug/g | 1 | 110 | 70 | 130 | 1 | 30 |
| | | 1,2-dichlorobenzene | | 1.1 | ug/g | 1 | 110 | 70 | 130 | 1 | 30 |
| | | n-butylbenzene | | 1.1 | ug/g | 1 | 113 | 70 | 130 | 0 | 30 |
| | | 1,2-dibromo-3-chloropropane (DBCP) | | 1.0 | ug/g | 1 | 97 | 70 | 130 | 0 | 30 |
| | | 1,2,4-trichlorobenzene | | 1.2 | ug/g | 1 | 115 | 70 | 130 | 0 | 30 |
| | | 1,3,5-trichlorobenzene | | 1.1 | ug/g | 1 | 107 | 70 | 130 | 1 | 30 |
| | | hexachlorobutadiene | | 1.0 | ug/g | 1 | 104 | 70 | 130 | 4 | 30 |
| | | naphthalene | | 1.2 | ug/g | 1 | 119 | 70 | 130 | 1 | 30 |
| | | 1,2,3-trichlorobenzene | | 1.2 | ug/g | 1 | 116 | 70 | 130 | 1 | 30 |
| | | dibromofluoromethane SUR | | 98 | % | | | 78 | 114 | | |
| | | toluene-D8 SUR | | 100 | % | | | 88 | 110 | | |
| | | 4-bromofluorobenzene SUR | | 102 | % | | | 86 | 115 | | |
| | | a,a,a-trifluorotoluene SUR | | 99 | % | | | 70 | 130 | | |

# - QC Report -

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW3546/8082A | BLK7342 | PCB-1016 | | < | 0.1 | ug/g | | | | | | |
| | | PCB-1221 | | < | 0.1 | ug/g | | | | | | |
| | | PCB-1232 | | < | 0.1 | ug/g | | | | | | |
| | | PCB-1242 | | < | 0.1 | ug/g | | | | | | |
| | | PCB-1248 | | < | 0.1 | ug/g | | | | | | |
| | | PCB-1254 | | < | 0.1 | ug/g | | | | | | |
| | | PCB-1260 | | < | 0.1 | ug/g | | | | | | |
| | | tetrachloro-m-xylene SUR | | | 87 | % | | | 30 | 150 | | |
| | | decachlorobiphenyl SUR | | | 104 | % | | | 30 | 150 | | |
| SW3546/8082A | LCS7342 | PCB-1016 | | | 2.7 | ug/g | 2 | 133 | 40 | 140 | | |
| | | PCB-1221 | | < | 0.1 | ug/g | | | | | | |
| | | PCB-1232 | | < | 0.1 | ug/g | | | | | | |
| | | PCB-1242 | | < | 0.1 | ug/g | | | | | | |
| | | PCB-1248 | | < | 0.1 | ug/g | | | | | | |
| | | PCB-1254 | | < | 0.1 | ug/g | | | | | | |
| | | PCB-1260 | | | 2.2 | ug/g | 2 | 110 | 40 | 140 | | |
| | | tetrachloro-m-xylene SUR | | | 99 | % | | | 30 | 150 | | |
| | | decachlorobiphenyl SUR | | | 112 | % | | | 30 | 150 | | |
| SW3546/8082A | LCSD7342 | PCB-1016 | | | 2.8 | ug/g | 2 | 138 | 40 | 140 | 4 | 30 |
| | | PCB-1221 | | < | 0.1 | ug/g | | | | | | |
| | | PCB-1232 | | < | 0.1 | ug/g | | | | | | |
| | | PCB-1242 | | < | 0.1 | ug/g | | | | | | |
| | | PCB-1248 | | < | 0.1 | ug/g | | | | | | |
| | | PCB-1254 | | < | 0.1 | ug/g | | | | | | |
| | | PCB-1260 | | | 2.3 | ug/g | 2 | 117 | 40 | 140 | 6 | 30 |
| | | tetrachloro-m-xylene SUR | | | 98 | % | | | 30 | 150 | | |
| | | decachlorobiphenyl SUR | | | 109 | % | | | 30 | 150 | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SW3546/8270D | BLK7345 | N-nitrosodimethylamine | | < | 0.2 | ug/g | | | | | |
| | | aniline | | < | 0.2 | ug/g | | | | | |
| | | phenol | | < | 0.2 | ug/g | | | | | |
| | | 2-chlorophenol | | < | 0.5 | ug/g | | | | | |
| | | bis(2-chloroethyl)ether | | < | 0.2 | ug/g | | | | | |
| | | 1,3-dichlorobenzene | | < | 0.2 | ug/g | | | | | |
| | | 1,4-dichlorobenzene | | < | 0.2 | ug/g | | | | | |
| | | 1,2-dichlorobenzene | | < | 0.2 | ug/g | | | | | |
| | | benzyl alcohol | | < | 0.2 | ug/g | | | | | |
| | | 2-methylphenol | | < | 0.2 | ug/g | | | | | |
| | | bis(2-chloroisopropyl) ether | | < | 0.2 | ug/g | | | | | |
| | | hexachloroethane | | < | 0.2 | ug/g | | | | | |
| | | N-nitroso-di-N-propylamine | | < | 0.2 | ug/g | | | | | |
| | | 4-methylphenol | | < | 0.2 | ug/g | | | | | |
| | | nitrobenzene | | < | 0.2 | ug/g | | | | | |
| | | isophorone | | < | 0.5 | ug/g | | | | | |
| | | 2-nitrophenol | | < | 0.2 | ug/g | | | | | |
| | | 2,4-dimethylphenol | | < | 0.2 | ug/g | | | | | |
| | | bis(2-chloroethoxy)methane | | < | 0.5 | ug/g | | | | | |
| | | 2,4-dichlorophenol | | < | 0.5 | ug/g | | | | | |
| | | 1,2,4-trichlorobenzene | | < | 0.5 | ug/g | | | | | |
| | | naphthalene | | < | 0.05 | ug/g | | | | | |
| | | benzoic acid | | < | 5.0 | ug/g | | | | | |
| | | 4-chloroaniline | | < | 0.2 | ug/g | | | | | |
| | | hexachlorobutadiene | | < | 0.2 | ug/g | | | | | |
| | | 4-chloro-3-methylphenol | | < | 0.2 | ug/g | | | | | |
| | | 2-methylnaphthalene | | < | 0.05 | ug/g | | | | | |
| | | hexachlorocyclopentadiene | | < | 1.0 | ug/g | | | | | |
| | | 2,4,6-trichlorophenol | | < | 0.2 | ug/g | | | | | |
| | | 2,4,5-trichlorophenol | | < | 0.2 | ug/g | | | | | |
| | | 2-chloronaphthalene | | < | 0.5 | ug/g | | | | | |
| | | 2-nitroaniline | | < | 0.2 | ug/g | | | | | |
| | | acenaphthylene | | < | 0.05 | ug/g | | | | | |
| | | dimethylphthalate | | < | 0.5 | ug/g | | | | | |
| | | 2,6-dinitrotoluene | | < | 0.2 | ug/g | | | | | |
| | | 2,4-dinitrotoluene | | < | 0.2 | ug/g | | | | | |
| | | acenaphthene | | < | 0.05 | ug/g | | | | | |
| | | 3-nitroaniline | | < | 0.2 | ug/g | | | | | |
| | | 2,4-dinitrophenol | | < | 5.0 | ug/g | | | | | |
| | | dibenzofuran | | < | 0.05 | ug/g | | | | | |
| | | 4-nitrophenol | | < | 1.0 | ug/g | | | | | |
| | | fluorene | | < | 0.05 | ug/g | | | | | |
| | | diethyl phthalate | | < | 0.5 | ug/g | | | | | |
| | | 4-chlorophenyl phenyl ether | | < | 0.5 | ug/g | | | | | |
| | | 4-nitroaniline | | < | 0.5 | ug/g | | | | | |
| | | 4,6-dinitro-2-methylphenol | | < | 2.0 | ug/g | | | | | |
| | | azobenzene | | < | 0.2 | ug/g | | | | | |
| | | N-nitrosodiphenylamine | | < | 0.2 | ug/g | | | | | |
| | | 4-bromophenyl phenyl ether | | < | 0.2 | ug/g | | | | | |
| | | hexachlorobenzene | | < | 0.2 | ug/g | | | | | |
| | | pentachlorophenol | | < | 1.0 | ug/g | | | | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW3546/8270D | BLK7345 | phenanthrene | | < | 0.05 | ug/g | | | | | | |
| | | anthracene | | < | 0.05 | ug/g | | | | | | |
| | | carbazole | | < | 0.2 | ug/g | | | | | | |
| | | di-n-butylphthalate | | < | 0.5 | ug/g | | | | | | |
| | | fluoranthene | | < | 0.05 | ug/g | | | | | | |
| | | benzidine | | < | 3.0 | ug/g | | | | | | |
| | | pyrene | | < | 0.05 | ug/g | | | | | | |
| | | butyl benzyl phthalate | | < | 0.5 | ug/g | | | | | | |
| | | benzo(a)anthracene | | < | 0.05 | ug/g | | | | | | |
| | | chrysene | | < | 0.05 | ug/g | | | | | | |
| | | 3,3'-dichlorobenzidine | | < | 3.0 | ug/g | | | | | | |
| | | bis(2-ethylhexyl)phthalate | | < | 0.5 | ug/g | | | | | | |
| | | di-n-octyl phthalate | | < | 0.2 | ug/g | | | | | | |
| | | benzo(b)fluoranthene | | < | 0.05 | ug/g | | | | | | |
| | | benzo(k)fluoranthene | | < | 0.05 | ug/g | | | | | | |
| | | benzo(a)pyrene | | < | 0.02 | ug/g | | | | | | |
| | | indeno(1,2,3-cd)pyrene | | < | 0.05 | ug/g | | | | | | |
| | | dibenzo(a,h)anthracene | | < | 0.05 | ug/g | | | | | | |
| | | benzo(g,h,i)perylene | | < | 0.05 | ug/g | | | | | | |
| | | 2-fluorophenol SUR | | | 65 | % | | | 21 | 100 | | |
| | | phenol-D5 SUR | | | 64 | % | | | 10 | 102 | | |
| | | 2,4,6-tribromophenol SUR | | | 68 | % | | | 10 | 123 | | |
| | | nitrobenzene-D5 SUR | | | 55 | % | | | 35 | 114 | | |
| | | 2-fluorobiphenyl SUR | | | 52 | % | | | 43 | 116 | | |
| | | p-terphenyl-D14 SUR | | | 81 | % | | | 33 | 141 | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW3546/8270D | LCS7345 | N-nitrosodimethylamine | | | 1.9 | ug/g | 4 | 49 | 40 | 140 | | |
| | | aniline | | | 1.9 | ug/g | 4 | 48 | 40 | 140 | | |
| | | phenol | | | 2.5 | ug/g | 4 | 61 | 30 | 130 | | |
| | | 2-chlorophenol | | | 2.2 | ug/g | 4 | 55 | 30 | 130 | | |
| | | bis(2-chloroethyl)ether | | | 2.3 | ug/g | 4 | 58 | 40 | 140 | | |
| | | 1,3-dichlorobenzene | | | 2.0 | ug/g | 4 | 50 | 40 | 140 | | |
| | | 1,4-dichlorobenzene | | | 2.1 | ug/g | 4 | 51 | 40 | 140 | | |
| | | 1,2-dichlorobenzene | | | 2.1 | ug/g | 4 | 52 | 40 | 140 | | |
| | | benzyl alcohol | | | 2.3 | ug/g | 4 | 58 | 30 | 130 | | |
| | | 2-methylphenol | | | 2.4 | ug/g | 4 | 60 | 30 | 130 | | |
| | | bis(2-chloroisopropyl) ether | | | 2.1 | ug/g | 4 | 53 | 40 | 140 | | |
| | | hexachloroethane | | | 2.1 | ug/g | 4 | 52 | 40 | 140 | | |
| | | N-nitroso-di-N-propylamine | | | 2.1 | ug/g | 4 | 52 | 40 | 140 | | |
| | | 4-methylphenol | | | 2.4 | ug/g | 4 | 60 | 30 | 130 | | |
| | | nitrobenzene | | | 2.2 | ug/g | 4 | 55 | 40 | 140 | | |
| | | isophorone | | | 2.5 | ug/g | 4 | 62 | 40 | 140 | | |
| | | 2-nitrophenol | | | 2.2 | ug/g | 4 | 54 | 30 | 130 | | |
| | | 2,4-dimethylphenol | | | 2.4 | ug/g | 4 | 60 | 30 | 130 | | |
| | | bis(2-chloroethoxy)methane | | | 2.3 | ug/g | 4 | 58 | 40 | 140 | | |
| | | 2,4-dichlorophenol | | | 2.5 | ug/g | 4 | 62 | 30 | 130 | | |
| | | 1,2,4-trichlorobenzene | | | 2.2 | ug/g | 4 | 55 | 40 | 140 | | |
| | | naphthalene | | | 2.1 | ug/g | 4 | 52 | 40 | 140 | | |
| | | benzoic acid | | < | 5.0 | ug/g | | | | | | |
| | | 4-chloroaniline | | | 2.5 | ug/g | 4 | 61 | 40 | 140 | | |
| | | hexachlorobutadiene | | | 2.2 | ug/g | 4 | 56 | 40 | 140 | | |
| | | 4-chloro-3-methylphenol | | | 2.7 | ug/g | 4 | 67 | 30 | 130 | | |
| | | 2-methylnaphthalene | | | 2.14 | ug/g | 4 | 54 | 40 | 140 | | |
| | | hexachlorocyclopentadiene | | | 1.9 | ug/g | 4 | 48 | 40 | 140 | | |
| | | 2,4,6-trichlorophenol | | | 2.7 | ug/g | 4 | 67 | 30 | 130 | | |
| | | 2,4,5-trichlorophenol | | | 2.6 | ug/g | 4 | 66 | 30 | 130 | | |
| | | 2-chloronaphthalene | | | 2.2 | ug/g | 4 | 55 | 40 | 140 | | |
| | | 2-nitroaniline | | | 2.4 | ug/g | 4 | 61 | 40 | 140 | | |
| | | acenaphthylene | | | 2.2 | ug/g | 4 | 56 | 40 | 140 | | |
| | | dimethylphthalate | | | 2.6 | ug/g | 4 | 66 | 40 | 140 | | |
| | | 2,6-dinitrotoluene | | | 2.6 | ug/g | 4 | 66 | 40 | 140 | | |
| | | 2,4-dinitrotoluene | | | 2.8 | ug/g | 4 | 70 | 40 | 140 | | |
| | | acenaphthene | | | 2.3 | ug/g | 4 | 56 | 40 | 140 | | |
| | | 3-nitroaniline | | | 2.7 | ug/g | 4 | 67 | 40 | 140 | | |
| | | 2,4-dinitrophenol | | < | 5.0 | ug/g | | | | | | |
| | | dibenzofuran | | | 2.5 | ug/g | 4 | 63 | 40 | 140 | | |
| | | 4-nitrophenol | | | 2.1 | ug/g | 4 | 54 | 30 | 130 | | |
| | | fluorene | | | 2.5 | ug/g | 4 | 62 | 40 | 140 | | |
| | | diethyl phthalate | | | 2.6 | ug/g | 4 | 66 | 40 | 140 | | |
| | | 4-chlorophenyl phenyl ether | | | 2.6 | ug/g | 4 | 65 | 40 | 140 | | |
| | | 4-nitroaniline | | | 2.7 | ug/g | 4 | 67 | 40 | 140 | | |
| | | 4,6-dinitro-2-methylphenol | | | 2.4 | ug/g | | | | | | |
| | | azobenzene | | | 2.5 | ug/g | 4 | 63 | 40 | 140 | | |
| | | N-nitrosodiphenylamine | | | 3.0 | ug/g | 4 | 75 | 40 | 140 | | |
| | | 4-bromophenyl phenyl ether | | | 2.6 | ug/g | 4 | 66 | 40 | 140 | | |
| | | hexachlorobenzene | | | 2.9 | ug/g | 4 | 73 | 40 | 140 | | |
| | | pentachlorophenol | | | 2.4 | ug/g | 4 | 59 | 30 | 130 | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW3546/8270D | LCS7345 | phenanthrene | | | 2.7 | ug/g | 4 | 67 | 40 | 140 | | |
| | | anthracene | | | 2.6 | ug/g | 4 | 65 | 40 | 140 | | |
| | | carbazole | | | 2.7 | ug/g | 4 | 68 | 40 | 140 | | |
| | | di-n-butylphthalate | | | 2.7 | ug/g | 4 | 67 | 40 | 140 | | |
| | | fluoranthene | | | 2.7 | ug/g | 4 | 68 | 40 | 140 | | |
| | | benzidine | | < | 3.0 | ug/g | | | | | | |
| | | pyrene | | | 2.9 | ug/g | 4 | 73 | 40 | 140 | | |
| | | butyl benzyl phthalate | | | 3.3 | ug/g | 4 | 81 | 40 | 140 | | |
| | | benzo(a)anthracene | | | 3.0 | ug/g | 4 | 74 | 40 | 140 | | |
| | | chrysene | | | 2.9 | ug/g | 4 | 74 | 40 | 140 | | |
| | | 3,3'-dichlorobenzidine | | < | 3.0 | ug/g | | | | | | |
| | | bis(2-ethylhexyl)phthalate | | | 2.8 | ug/g | 4 | 70 | 40 | 140 | | |
| | | di-n-octyl phthalate | | | 2.7 | ug/g | 4 | 68 | 40 | 140 | | |
| | | benzo(b)fluoranthene | | | 2.8 | ug/g | 4 | 70 | 40 | 140 | | |
| | | benzo(k)fluoranthene | | | 2.9 | ug/g | 4 | 73 | 40 | 140 | | |
| | | benzo(a)pyrene | | | 2.9 | ug/g | 4 | 72 | 40 | 140 | | |
| | | indeno(1,2,3-cd)pyrene | | | 3.1 | ug/g | 4 | 77 | 40 | 140 | | |
| | | dibenzo(a,h)anthracene | | | 3.1 | ug/g | 4 | 77 | 40 | 140 | | |
| | | benzo(g,h,i)perylene | | | 3.1 | ug/g | 4 | 78 | 40 | 140 | | |
| | | 2-fluorophenol SUR | | | 67 | % | | | 21 | 100 | | |
| | | phenol-D5 SUR | | | 68 | % | | | 10 | 102 | | |
| | | 2,4,6-tribromophenol SUR | | | 79 | % | | | 10 | 123 | | |
| | | nitrobenzene-D5 SUR | | | 58 | % | | | 35 | 114 | | |
| | | 2-fluorobiphenyl SUR | | | 59 | % | | | 43 | 116 | | |
| | | p-terphenyl-D14 SUR | | | 84 | % | | | 33 | 141 | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW3546/8270D | LCSD7345 | N-nitrosodimethylamine | | | 2.1 | ug/g | 4 | 53 | 40 | 140 | 8 | 30 |
| | | aniline | | | 2.3 | ug/g | 4 | 58 | 40 | 140 | 18 | 30 |
| | | phenol | | | 2.7 | ug/g | 4 | 68 | 30 | 130 | 10 | 30 |
| | | 2-chlorophenol | | | 2.4 | ug/g | 4 | 61 | 30 | 130 | 11 | 30 |
| | | bis(2-chloroethyl)ether | | | 2.3 | ug/g | 4 | 59 | 40 | 140 | 1 | 30 |
| | | 1,3-dichlorobenzene | | | 2.2 | ug/g | 4 | 54 | 40 | 140 | 8 | 30 |
| | | 1,4-dichlorobenzene | | | 2.2 | ug/g | 4 | 55 | 40 | 140 | 7 | 30 |
| | | 1,2-dichlorobenzene | | | 2.2 | ug/g | 4 | 56 | 40 | 140 | 7 | 30 |
| | | benzyl alcohol | | | 2.6 | ug/g | 4 | 64 | 30 | 130 | 10 | 30 |
| | | 2-methylphenol | | | 2.6 | ug/g | 4 | 66 | 30 | 130 | 10 | 30 |
| | | bis(2-chloroisopropyl) ether | | | 2.3 | ug/g | 4 | 58 | 40 | 140 | 9 | 30 |
| | | hexachloroethane | | | 2.2 | ug/g | 4 | 56 | 40 | 140 | 7 | 30 |
| | | N-nitroso-di-N-propylamine | | | 2.3 | ug/g | 4 | 57 | 40 | 140 | 8 | 30 |
| | | 4-methylphenol | | | 2.6 | ug/g | 4 | 66 | 30 | 130 | 10 | 30 |
| | | nitrobenzene | | | 2.4 | ug/g | 4 | 60 | 40 | 140 | 9 | 30 |
| | | isophorone | | | 2.7 | ug/g | 4 | 67 | 40 | 140 | 8 | 30 |
| | | 2-nitrophenol | | | 2.4 | ug/g | 4 | 59 | 30 | 130 | 9 | 30 |
| | | 2,4-dimethylphenol | | | 2.6 | ug/g | 4 | 65 | 30 | 130 | 9 | 30 |
| | | bis(2-chloroethoxy)methane | | | 2.5 | ug/g | 4 | 63 | 40 | 140 | 8 | 30 |
| | | 2,4-dichlorophenol | | | 2.7 | ug/g | 4 | 67 | 30 | 130 | 8 | 30 |
| | | 1,2,4-trichlorobenzene | | | 2.4 | ug/g | 4 | 60 | 40 | 140 | 9 | 30 |
| | | naphthalene | | | 2.3 | ug/g | 4 | 57 | 40 | 140 | 10 | 30 |
| | | benzoic acid | | < | 5.0 | ug/g | | | | | | 30 |
| | | 4-chloroaniline | | | 2.8 | ug/g | 4 | 71 | 40 | 140 | 14 | 30 |
| | | hexachlorobutadiene | | | 2.4 | ug/g | 4 | 61 | 40 | 140 | 8 | 30 |
| | | 4-chloro-3-methylphenol | | | 2.8 | ug/g | 4 | 71 | 30 | 130 | 6 | 30 |
| | | 2-methylnaphthalene | | | 2.34 | ug/g | 4 | 59 | 40 | 140 | 9 | 30 |
| | | hexachlorocyclopentadiene | | | 2.1 | ug/g | 4 | 53 | 40 | 140 | 10 | 30 |
| | | 2,4,6-trichlorophenol | | | 2.9 | ug/g | 4 | 73 | 30 | 130 | 8 | 30 |
| | | 2,4,5-trichlorophenol | | | 2.9 | ug/g | 4 | 71 | 30 | 130 | 8 | 30 |
| | | 2-chloronaphthalene | | | 2.4 | ug/g | 4 | 60 | 40 | 140 | 8 | 30 |
| | | 2-nitroaniline | | | 2.6 | ug/g | 4 | 65 | 40 | 140 | 7 | 30 |
| | | acenaphthylene | | | 2.4 | ug/g | 4 | 61 | 40 | 140 | 8 | 30 |
| | | dimethylphthalate | | | 2.8 | ug/g | 4 | 70 | 40 | 140 | 7 | 30 |
| | | 2,6-dinitrotoluene | | | 2.8 | ug/g | 4 | 70 | 40 | 140 | 6 | 30 |
| | | 2,4-dinitrotoluene | | | 2.9 | ug/g | 4 | 73 | 40 | 140 | 5 | 30 |
| | | acenaphthene | | | 2.4 | ug/g | 4 | 61 | 40 | 140 | 7 | 30 |
| | | 3-nitroaniline | | | 2.9 | ug/g | 4 | 72 | 40 | 140 | 7 | 30 |
| | | 2,4-dinitrophenol | | < | 5.0 | ug/g | | | | | | 30 |
| | | dibenzofuran | | | 2.7 | ug/g | 4 | 68 | 40 | 140 | 7 | 30 |
| | | 4-nitrophenol | | | 2.4 | ug/g | 4 | 61 | 30 | 130 | 12 | 30 |
| | | fluorene | | | 2.7 | ug/g | 4 | 67 | 40 | 140 | 7 | 30 |
| | | diethyl phthalate | | | 2.8 | ug/g | 4 | 70 | 40 | 140 | 6 | 30 |
| | | 4-chlorophenyl phenyl ether | | | 2.8 | ug/g | 4 | 69 | 40 | 140 | 6 | 30 |
| | | 4-nitroaniline | | | 3.0 | ug/g | 4 | 75 | 40 | 140 | 11 | 30 |
| | | 4,6-dinitro-2-methylphenol | | | 2.5 | ug/g | | | | | | 30 |
| | | azobenzene | | | 2.6 | ug/g | 4 | 64 | 40 | 140 | 2 | 30 |
| | | N-nitrosodiphenylamine | | | 3.1 | ug/g | 4 | 78 | 40 | 140 | 3 | 30 |
| | | 4-bromophenyl phenyl ether | | | 2.7 | ug/g | 4 | 68 | 40 | 140 | 3 | 30 |
| | | hexachlorobenzene | | | 3.0 | ug/g | 4 | 75 | 40 | 140 | 3 | 30 |
| | | pentachlorophenol | | | 2.4 | ug/g | 4 | 61 | 30 | 130 | 3 | 30 |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW3546/8270D | LCSD7345 | phenanthrene | | | 2.8 | ug/g | 4 | 69 | 40 | 140 | 3 | 30 |
| | | anthracene | | | 2.7 | ug/g | 4 | 68 | 40 | 140 | 4 | 30 |
| | | carbazole | | | 2.8 | ug/g | 4 | 69 | 40 | 140 | 2 | 30 |
| | | di-n-butylphthalate | | | 2.8 | ug/g | 4 | 69 | 40 | 140 | 3 | 30 |
| | | fluoranthene | | | 2.8 | ug/g | 4 | 70 | 40 | 140 | 3 | 30 |
| | | benzidine | | < | 3.0 | ug/g | | | | | | 30 |
| | | pyrene | | | 3.0 | ug/g | 4 | 75 | 40 | 140 | 2 | 30 |
| | | butyl benzyl phthalate | | | 3.4 | ug/g | 4 | 84 | 40 | 140 | 4 | 30 |
| | | benzo(a)anthracene | | | 3.1 | ug/g | 4 | 76 | 40 | 140 | 3 | 30 |
| | | chrysene | | | 3.0 | ug/g | 4 | 75 | 40 | 140 | 2 | 30 |
| | | 3,3'-dichlorobenzidine | | < | 3.0 | ug/g | | | | | | 30 |
| | | bis(2-ethylhexyl)phthalate | | | 2.9 | ug/g | 4 | 72 | 40 | 140 | 4 | 30 |
| | | di-n-octyl phthalate | | | 2.8 | ug/g | 4 | 71 | 40 | 140 | 3 | 30 |
| | | benzo(b)fluoranthene | | | 2.9 | ug/g | 4 | 72 | 40 | 140 | 3 | 30 |
| | | benzo(k)fluoranthene | | | 3.0 | ug/g | 4 | 74 | 40 | 140 | 2 | 30 |
| | | benzo(a)pyrene | | | 3.0 | ug/g | 4 | 74 | 40 | 140 | 3 | 30 |
| | | indeno(1,2,3-cd)pyrene | | | 3.2 | ug/g | 4 | 79 | 40 | 140 | 3 | 30 |
| | | dibenzo(a,h)anthracene | | | 3.2 | ug/g | 4 | 79 | 40 | 140 | 2 | 30 |
| | | benzo(g,h,i)perylene | | | 3.2 | ug/g | 4 | 80 | 40 | 140 | 3 | 30 |
| | | 2-fluorophenol SUR | | | 75 | % | | | 21 | 100 | | |
| | | phenol-D5 SUR | | | 76 | % | | | 10 | 102 | | |
| | | 2,4,6-tribromophenol SUR | | | 82 | % | | | 10 | 123 | | |
| | | nitrobenzene-D5 SUR | | | 65 | % | | | 35 | 114 | | |
| | | 2-fluorobiphenyl SUR | | | 67 | % | | | 43 | 116 | | |
| | | p-terphenyl-D14 SUR | | | 86 | % | | | 33 | 141 | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW3550C8270D | BLK7359 | naphthalene | | < | 0.50 | ug/g | | | | | | |
| | | 2-methylnaphthalene | | < | 0.50 | ug/g | | | | | | |
| | | acenaphthylene | | < | 0.50 | ug/g | | | | | | |
| | | acenaphthene | | < | 0.50 | ug/g | | | | | | |
| | | dibenzofuran | | < | 0.50 | ug/g | | | | | | |
| | | fluorene | | < | 0.50 | ug/g | | | | | | |
| | | phenanthrene | | < | 0.50 | ug/g | | | | | | |
| | | anthracene | | < | 0.50 | ug/g | | | | | | |
| | | fluoranthene | | < | 0.50 | ug/g | | | | | | |
| | | pyrene | | < | 0.50 | ug/g | | | | | | |
| | | benzo(a)anthracene | | < | 0.50 | ug/g | | | | | | |
| | | chrysene | | < | 0.50 | ug/g | | | | | | |
| | | benzo(b)fluoranthene | | < | 0.50 | ug/g | | | | | | |
| | | benzo(k)fluoranthene | | < | 0.50 | ug/g | | | | | | |
| | | benzo(a)pyrene | | < | 0.50 | ug/g | | | | | | |
| | | indeno(1,2,3-cd)pyrene | | < | 0.50 | ug/g | | | | | | |
| | | dibenzo(a,h)anthracene | | < | 0.50 | ug/g | | | | | | |
| | | benzo(g,h,i)perylene | | < | 0.50 | ug/g | | | | | | |
| | | 2-fluorobiphenyl SUR | | | 66 | % | | | 43 | 116 | | |
| | | o-terphenyl SUR | | | 77 | % | | | 33 | 141 | | |
| SW3550C8270D | LCS7359 | naphthalene | | | 2.8 | ug/g | 4 | 69 | 40 | 140 | | |
| | | 2-methylnaphthalene | | | 2.5 | ug/g | 4 | 63 | 40 | 140 | | |
| | | acenaphthylene | | | 2.6 | ug/g | 4 | 64 | 40 | 140 | | |
| | | acenaphthene | | | 2.5 | ug/g | 4 | 62 | 40 | 140 | | |
| | | dibenzofuran | | < | 0.50 | ug/g | | | | | | |
| | | fluorene | | | 2.5 | ug/g | 4 | 63 | 40 | 140 | | |
| | | phenanthrene | | | 2.7 | ug/g | 4 | 66 | 40 | 140 | | |
| | | anthracene | | | 2.6 | ug/g | 4 | 65 | 40 | 140 | | |
| | | fluoranthene | | | 2.5 | ug/g | 4 | 63 | 40 | 140 | | |
| | | pyrene | | | 2.8 | ug/g | 4 | 70 | 40 | 140 | | |
| | | benzo(a)anthracene | | | 3.0 | ug/g | 4 | 75 | 40 | 140 | | |
| | | chrysene | | | 2.8 | ug/g | 4 | 70 | 40 | 140 | | |
| | | benzo(b)fluoranthene | | | 2.7 | ug/g | 4 | 67 | 40 | 140 | | |
| | | benzo(k)fluoranthene | | | 2.8 | ug/g | 4 | 71 | 40 | 140 | | |
| | | benzo(a)pyrene | | | 2.7 | ug/g | 4 | 68 | 40 | 140 | | |
| | | indeno(1,2,3-cd)pyrene | | | 2.8 | ug/g | 4 | 69 | 40 | 140 | | |
| | | dibenzo(a,h)anthracene | | | 2.6 | ug/g | 4 | 65 | 40 | 140 | | |
| | | benzo(g,h,i)perylene | | | 2.9 | ug/g | 4 | 72 | 40 | 140 | | |
| | | 2-fluorobiphenyl SUR | | | 70 | % | | | 43 | 116 | | |
| | | o-terphenyl SUR | | | 83 | % | | | 33 | 141 | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW3051A6010C | BLK7335 | Silver | | < | 0.25 | ug/g | | | | | | |
| | | Arsenic | | < | 0.50 | ug/g | | | | | | |
| | | Barium | | < | 2.5 | ug/g | | | | | | |
| | | Cadmium | | < | 0.20 | ug/g | | | | | | |
| | | Chromium | | < | 2.5 | ug/g | | | | | | |
| | | Lead | | < | 0.50 | ug/g | | | | | | |
| | | Selenium | | < | 2.5 | ug/g | | | | | | |
| SW3051A6010C | CRM7335 | Silver | | | 46 | ug/g | 38 | | 25.1 | 51.9 | | |
| | | Arsenic | | | 420 | ug/g | 400 | | 292 | 508 | | |
| | | Barium | | | 24 | ug/g | 25 | | 0 | 51.3 | | |
| | | Cadmium | | | 16 | ug/g | 15 | | 8.71 | 22 | | |
| | | Chromium | | | 14 | ug/g | 14 | | 2.45 | 24.7 | | |
| | | Lead | | | 5900 | ug/g | 5100 | | 3750 | 6470 | | |
| | | Selenium | | | 7.3 | ug/g | 6.6 | | 0 | 18.4 | | |
| SW3051A6010C | CRMD7335 | Silver | | | 49 | ug/g | 38 | | 25.1 | 51.9 | 5 | 35 |
| | | Arsenic | | | 430 | ug/g | 400 | | 292 | 508 | 1 | 35 |
| | | Barium | | | 24 | ug/g | 25 | | 0 | 51.3 | 1 | 35 |
| | | Cadmium | | | 16 | ug/g | 15 | | 8.71 | 22 | 2 | 35 |
| | | Chromium | | | 15 | ug/g | 14 | | 2.45 | 24.7 | 9 | 35 |
| | | Lead | | | 5800 | ug/g | 5100 | | 3750 | 6470 | 1 | 35 |
| | | Selenium | | | 7.6 | ug/g | 6.6 | | 0 | 18.4 | 3 | 35 |
| SW3051A6010C | MS7335 | Silver | 31419-003 | | 11 | ug/g | 13 | 94 | 75 | 125 | | |
| | | Arsenic | 31419-003 | | 32 | ug/g | 27 | 95 | 75 | 125 | | |
| | | Barium | 31419-003 | | 94 | ug/g | 27 | 93 | 75 | 125 | | |
| | | Cadmium | 31419-003 | | 26 | ug/g | 27 | 93 | 75 | 125 | | |
| | | Chromium | 31419-003 | | 37 | ug/g | 27 | 102 | 75 | 125 | | |
| | | Lead | 31419-003 | | 160 | ug/g | 27.8 | 77 | 75 | 125 | | |
| | | Selenium | 31419-003 | | 25 | ug/g | 27 | 87 | 75 | 125 | | |
| SW3051A6010C | MSD7335 | Silver | 31419-003 | | 12 | ug/g | 13 | 100 | 75 | 125 | 7 | |
| | | Arsenic | 31419-003 | | 33 | ug/g | 27 | 101 | 75 | 125 | 5 | |
| | | Barium | 31419-003 | | 96 | ug/g | 27 | 101 | 75 | 125 | 2 | |
| | | Cadmium | 31419-003 | | 27 | ug/g | 27 | 98 | 75 | 125 | 5 | |
| | | Chromium | 31419-003 | | 38 | ug/g | 27 | 108 | 75 | 125 | 4 | |
| | | Lead | 31419-003 | | 160 | ug/g | 27.8 | 77 | 75 | 125 | 0 | |
| | | Selenium | 31419-003 | | 26 | ug/g | 27 | 90 | 75 | 125 | 4 | |
| SW7471B | BLK7339 | Mercury | | < | 0.02 | ug/g | | | | | | |
| SW7471B | CRM7339 | Mercury | | | 1.3 | ug/g | 1.1 | | 0.49 | 1.76 | | |
| SW7471B | CRMD7339 | Mercury | | | 1.3 | ug/g | 1.1 | | 0.49 | 1.76 | 1 | 35 |
| SW7471B | MS7339 | Mercury | 31419-002 | | 0.90 | ug/g | 0.482 | 97 | 75 | 125 | | |
| SW7471B | MS7339 | Mercury | 31419-003 | | 0.58 | ug/g | 0.415 | 93 | 75 | 125 | | |
| SW7471B | MSD7339 | Mercury | 31419-003 | | 0.60 | ug/g | 0.415 | 98 | 75 | 125 | 3 | |

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

# CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

31419

Company Name: Credere Associate, LLC
Company Address: 776 Main St Westbrook ME
Report To: Allison Drouin
Phone #: 207-749-1141
Invoice to Email: TPatten@credenellc.ca
☐ Hard Copy Invoice Required

Project Name: R+D
Project #: 14001247
Project Location: (NH) MA ME VT NY Other
Protocol: RCRA SDWA NPDES MCP (NHDES) OTHER
Reporting Limits: (QAPP) GW-1 S-1 EPA DW Other
Quote # ☐ NH Reimbursement Pricing
PO #

## ANALYSIS REQUEST

| Lab Sample ID (Lab Use Only) | Field ID | # CONTAINERS | Matrix: WATER | SOLID | OTHER | Preservation Method: HCl | $HNO_3$ | $H_2SO_4$ | NaOH | MeOH | Sampling: DATE | TIME | SAMPLER | ☒ VOC 8260 | ☐ VOC 624 | ☐ VPH MADEP | ☐ VOC 524.2 | ☐ TPH ☐ DRO 8015 | ☒ 8270PAH | ☐ 8082 PCB | ☐ O&G 1664 | ☐ pH | ☐ TSS | ☒ RCRA Metals | ☐ Total Metals-list: | ☐ Dissolved Metals-list: | ☐ Nitrate ☐ Nitrite | ☐ Corrosivity | ☐ TCLP Metals | Subcontract: | ☐ Nitrate ☐ Nitrite ☐ Chloride ☐ Sulfate ☐ Bromide ☐ Fluoride ☐ Corrosivity ☐ Reactive CN ☐ Reactive S- ☐ Ignitibility/FP ☐ TCLP Metals ☐ TCLP VOC ☐ TCLP SVOC ☐ TCLP Pesticide ☐ Grain Size ☐ Herbicides ☐ Formaldehyde | DAHs only | Grab (G) or Composite (C) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31419-01 | Trip Blank | | | | | | | | | X | | | AD | X | X | | | | | | | | | | | | | | | | | | |
| -02 | DUP-1 | 2 | | | | | | | | | 10/30/14 | | | X | | | | | X | X | | | | X | | | | | | | | | | |
| -03 | CA-SS-2(0-2) | 3 | | X | X | | | | | | 10/27/14 | 1200 | | | | | | | | X | | | | X | (MS/MSD) | | | | | | | X | | |
| -04 | CA-SS-1(0-2) | | | X | | | | | | | | 1240 | | | | | | | | X | | | | X | | | | | | | | X | | |
| -05 | CA-SB-2(12-14/13) | | | X | | | | | | X | | 1305 | | X | | | | | X | | | | | X | | | | | | | | | | |
| -06 | CA-SB-4(10-12/10.5) | | | X | | | | | | X | | 1505 | | X | | | | | X | | | | | X | | | | | | | | | | |
| -07 | CA-SB-4(10-12/11) | | | X | | | | | | X | | 1620 | | X | | | | | X | | | | | | | | | | | | | | | |
| -08 | CA-SB-3(8-10/9) | | | X | | | | | | X | 10/30/14 | 0840 | | X | | | | | X | | | | | | | | | | | | | | | |
| -09 | CA-SB-5(0.5-2.5/1.5) | | | X | | | | | | X | | 1600 | | X | | | | | X | X | | | | X | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

DAHs only

**TAT REQUESTED**
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (5 Business Days) ☒
*Date Needed

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS MS/MSD volume for CA-SS-2(0-2) for RCRA-8.
~~VAI Sub to Spectrum~~

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) adrouin@credenellc.com
☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☑ YES ☐ NO
TEMPERATURE 2 °C

## CUSTODY RECORD

QSD-01 Revision 08/05/14

| Relinquished by Sampler: | Date | Time | Received by: | Date | Time |
|---|---|---|---|---|---|
| Allison Drouin | 10/31/14 | 1120 | [signature] | 10/31/14 | 1120 |
| Relinquished by: [signature] | 10/31/14 | 1308 | Received by: | Date | Time |
| Relinquished by: | Date | Time | Received by Laboratory: Alice McHenry | 10-31-14 | 13:39 |

# Laboratory Report

Absolute Resource associates
124 Heritage Avenue Portsmouth NH 03801

Allison Drouin
CREDERE Associates
776 Main Street
Westbrook, ME 04092

PO Number: None
Job ID: 31611
Date Received: 11/14/14

Project: R+D Paving 14001247

Attached please find results for the analysis of the samples received on the date referenced above.

Unless otherwise noted in the attached report, the analyses performed met the requirements of Absolute Resource Associates' Quality Assurance Plan. The Standard Operating Procedures are based upon USEPA SW-846, USEPA Methods for Chemical Analysis of Water and Wastewater, Standard Methods for the Examination of Water and Wastewater and other recognized methodologies. The results contained in this report pertain only to the samples as indicated on the chain of custody.

Absolute Resource Associates maintains certification with the agencies listed below.

We appreciate the opportunity to provide laboratory services. If you have any questions regarding the enclosed report, please contact the laboratory and we will be glad to assist you.

Sincerely,
Absolute Resource Associates

(for)

Sue Sylvester
Principal, General Manager

Date of Approval: 12/1/2014
Total number of pages: 44

**Absolute Resource Associates Certifications**

| | | | |
|---|---|---|---|
| New Hampshire | 1732 | Massachusetts | M-NH902 |
| Maine | NH903 | | |

**Project ID:** R+D Paving 14001247

**Lab ID:** 31611

# Sample Association Table

| Field ID | Matrix | Date-Time Sampled | Lab# | Analysis |
|---|---|---|---|---|
| CA-MW-2 | Water | 11/12/2014 9:35 | 31611-001 | |
| | | | | Acid & Base/Neutral Extractables in water by 8270 |
| | | | | Dissolved Metals Prep for ICP Analysis |
| | | | | Silver in water by 6010 |
| | | | | Arsenic in water by 6010 |
| | | | | Barium in water by 6010 |
| | | | | Cadmium in water by 6010 |
| | | | | Chromium in water by 6010 |
| | | | | Mercury in water by 7470 |
| | | | | Lead in water by 6010 |
| | | | | Selenium in water by 6010 |
| | | | | VOCs in water by 8260 Petro & Haz Waste |
| CA-MW-1 | Water | 11/12/2014 10:30 | 31611-002 | |
| | | | | Acid & Base/Neutral Extractables in water by 8270 |
| | | | | Dissolved Metals Prep for ICP Analysis |
| | | | | Silver in water by 6010 |
| | | | | Arsenic in water by 6010 |
| | | | | Barium in water by 6010 |
| | | | | Cadmium in water by 6010 |
| | | | | Chromium in water by 6010 |
| | | | | Mercury in water by 7470 |
| | | | | Lead in water by 6010 |
| | | | | Selenium in water by 6010 |
| | | | | VOCs in water by 8260 Petro & Haz Waste |
| DUP-GW-1 | Water | 11/12/2014 0:00 | 31611-003 | |
| | | | | Acid & Base/Neutral Extractables in water by 8270 |
| | | | | Dissolved Metals Prep for ICP Analysis |
| | | | | Silver in water by 6010 |
| | | | | Arsenic in water by 6010 |
| | | | | Barium in water by 6010 |
| | | | | Cadmium in water by 6010 |
| | | | | Chromium in water by 6010 |
| | | | | Mercury in water by 7470 |
| | | | | Lead in water by 6010 |
| | | | | Selenium in water by 6010 |
| | | | | VOCs in water by 8260 Petro & Haz Waste |
| CA-MW-4 | Water | 11/12/2014 14:30 | 31611-004 | |
| | | | | Acid & Base/Neutral Extractables in water by 8270 |
| | | | | Dissolved Metals Prep for ICP Analysis |
| | | | | Silver in water by 6010 |
| | | | | Arsenic in water by 6010 |
| | | | | Barium in water by 6010 |
| | | | | Cadmium in water by 6010 |
| | | | | Chromium in water by 6010 |
| | | | | Mercury in water by 7470 |
| | | | | Lead in water by 6010 |
| | | | | Selenium in water by 6010 |
| | | | | VOCs in water by 8260 Petro & Haz Waste |
| CA-MW-3 | Water | 11/12/2014 9:35 | 31611-005 | |
| | | | | Acid & Base/Neutral Extractables in water by 8270 |
| | | | | Dissolved Metals Prep for ICP Analysis |
| | | | | Silver in water by 6010 |

Absolute Resource associates

**Project ID:** R+D Paving 14001247

**Lab ID:** 31611

# Sample Association Table

| Field ID | Matrix | Date-Time Sampled | Lab# | Analysis |
|---|---|---|---|---|
| CA-MW-3 | Water | 11/12/2014 9:35 | 31611-005 | |
| | | | | Arsenic in water by 6010 |
| | | | | Barium in water by 6010 |
| | | | | Cadmium in water by 6010 |
| | | | | Chromium in water by 6010 |
| | | | | Mercury in water by 7470 |
| | | | | Lead in water by 6010 |
| | | | | Selenium in water by 6010 |
| | | | | VOCs in water by 8260 Petro & Haz Waste |
| Trip Blank | Water | 11/12/2014 0:00 | 31611-006 | |
| | | | | VOCs in water by 8260 Petro & Haz Waste |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-001
**Sample ID:** CA-MW-2
**Matrix:** Water
**Sampled:** 11/12/14 9:35

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| dichlorodifluoromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| chloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| vinyl chloride | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| bromomethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| chloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| trichlorofluoromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| diethyl ether | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| acetone | < 50 | 50 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,1-dichloroethene | < 1 | 1 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| methylene chloride | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| carbon disulfide | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| methyl t-butyl ether (MTBE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| trans-1,2-dichloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| isopropyl ether (DIPE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| ethyl t-butyl ether (ETBE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,1-dichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| t-butanol (TBA) | < 30 | 30 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 2-butanone (MEK) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 2,2-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| cis-1,2-dichloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| chloroform | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| bromochloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| tetrahydrofuran (THF) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,1,1-trichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,1-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| t-amyl-methyl ether (TAME) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| carbon tetrachloride | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,2-dichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| benzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| trichloroethene | **3** | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,2-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| bromodichloromethane | < 0.6 | 0.6 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,4-dioxane | < 50 | 50 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| dibromomethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 4-methyl-2-pentanone (MIBK) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| cis-1,3-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| toluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| trans-1,3-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 2-hexanone | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,1,2-trichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,3-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| tetrachloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| dibromochloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-001
**Sample ID:** CA-MW-2
**Matrix:** Water
**Sampled:** 11/12/14 9:35

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-dibromoethane (EDB) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| chlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,1,1,2-tetrachloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| ethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| m&p-xylenes | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| o-xylene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| styrene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| bromoform | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| isopropylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,1,2,2-tetrachloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,2,3-trichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| n-propylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| bromobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,3,5-trimethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 2-chlorotoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 4-chlorotoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| tert-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,2,4-trimethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| sec-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,3-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 4-isopropyltoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,4-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,2-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| n-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,2-dibromo-3-chloropropane (DBCP) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,2,4-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,3,5-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| hexachlorobutadiene | < 0.5 | 0.5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| naphthalene | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 1,2,3-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| dibromofluoromethane SUR | **109** | 78-114 | % | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| toluene-D8 SUR | **99** | 88-110 | % | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |
| 4-bromofluorobenzene SUR | **101** | 86-115 | % | 1 | LMM | | 1403131 | 11/19/14 | 18:56 | SW5030C8260C |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-002
**Sample ID:** CA-MW-1
**Matrix:** Water
**Sampled:** 11/12/14 10:30

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| dichlorodifluoromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| chloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| vinyl chloride | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| bromomethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| chloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| trichlorofluoromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| diethyl ether | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| acetone | < 50 | 50 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,1-dichloroethene | < 1 | 1 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| methylene chloride | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| carbon disulfide | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| methyl t-butyl ether (MTBE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| trans-1,2-dichloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| isopropyl ether (DIPE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| ethyl t-butyl ether (ETBE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,1-dichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| t-butanol (TBA) | < 30 | 30 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 2-butanone (MEK) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 2,2-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| cis-1,2-dichloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| chloroform | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| bromochloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| tetrahydrofuran (THF) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,1,1-trichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,1-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| t-amyl-methyl ether (TAME) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| carbon tetrachloride | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,2-dichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| benzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| trichloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,2-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| bromodichloromethane | < 0.6 | 0.6 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,4-dioxane | < 50 | 50 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| dibromomethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 4-methyl-2-pentanone (MIBK) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| cis-1,3-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| toluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| trans-1,3-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 2-hexanone | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,1,2-trichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,3-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| tetrachloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| dibromochloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-002
**Sample ID:** CA-MW-1
**Matrix:** Water
**Sampled:** 11/12/14 10:30

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-dibromoethane (EDB) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| chlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,1,1,2-tetrachloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| ethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| m&p-xylenes | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| o-xylene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| styrene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| bromoform | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| isopropylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,1,2,2-tetrachloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,2,3-trichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| n-propylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| bromobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,3,5-trimethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 2-chlorotoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 4-chlorotoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| tert-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,2,4-trimethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| sec-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,3-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 4-isopropyltoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,4-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,2-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| n-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,2-dibromo-3-chloropropane (DBCP) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,2,4-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,3,5-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| hexachlorobutadiene | < 0.5 | 0.5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| naphthalene | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 1,2,3-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| dibromofluoromethane SUR | **105** | 78-114 | % | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| toluene-D8 SUR | **96** | 88-110 | % | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |
| 4-bromofluorobenzene SUR | **95** | 86-115 | % | 1 | LMM | | 1403131 | 11/19/14 | 19:28 | SW5030C8260C |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-003
**Sample ID:** DUP-GW-1
**Matrix:** Water
**Sampled:** 11/12/14 0:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| dichlorodifluoromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| chloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| vinyl chloride | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| bromomethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| chloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| trichlorofluoromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| diethyl ether | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| acetone | < 50 | 50 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,1-dichloroethene | < 1 | 1 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| methylene chloride | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| carbon disulfide | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| methyl t-butyl ether (MTBE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| trans-1,2-dichloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| isopropyl ether (DIPE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| ethyl t-butyl ether (ETBE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,1-dichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| t-butanol (TBA) | < 30 | 30 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 2-butanone (MEK) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 2,2-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| cis-1,2-dichloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| chloroform | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| bromochloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| tetrahydrofuran (THF) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,1,1-trichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,1-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| t-amyl-methyl ether (TAME) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| carbon tetrachloride | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,2-dichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| benzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| trichloroethene | **3** | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,2-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| bromodichloromethane | < 0.6 | 0.6 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,4-dioxane | < 50 | 50 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| dibromomethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 4-methyl-2-pentanone (MIBK) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| cis-1,3-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| toluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| trans-1,3-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 2-hexanone | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,1,2-trichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,3-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| tetrachloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| dibromochloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-003
**Sample ID:** DUP-GW-1
**Matrix:** Water
**Sampled:** 11/12/14 0:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-dibromoethane (EDB) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| chlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,1,1,2-tetrachloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| ethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| m&p-xylenes | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| o-xylene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| styrene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| bromoform | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| isopropylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,1,2,2-tetrachloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,2,3-trichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| n-propylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| bromobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,3,5-trimethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 2-chlorotoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 4-chlorotoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| tert-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,2,4-trimethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| sec-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,3-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 4-isopropyltoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,4-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,2-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| n-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,2-dibromo-3-chloropropane (DBCP) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,2,4-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,3,5-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| hexachlorobutadiene | < 0.5 | 0.5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| naphthalene | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 1,2,3-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| dibromofluoromethane SUR | **105** | 78-114 | % | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| toluene-D8 SUR | **91** | 88-110 | % | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |
| 4-bromofluorobenzene SUR | **86** | 86-115 | % | 1 | LMM | | 1403131 | 11/19/14 | 20:01 | SW5030C8260C |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-004
**Sample ID:** CA-MW-4
**Matrix:** Water
**Sampled:** 11/12/14 14:30

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| dichlorodifluoromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| chloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| vinyl chloride | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| bromomethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| chloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| trichlorofluoromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| diethyl ether | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| acetone | < 50 | 50 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,1-dichloroethene | < 1 | 1 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| methylene chloride | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| carbon disulfide | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| methyl t-butyl ether (MTBE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| trans-1,2-dichloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| isopropyl ether (DIPE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| ethyl t-butyl ether (ETBE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,1-dichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| t-butanol (TBA) | < 30 | 30 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 2-butanone (MEK) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 2,2-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| cis-1,2-dichloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| chloroform | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| bromochloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| tetrahydrofuran (THF) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,1,1-trichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,1-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| t-amyl-methyl ether (TAME) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| carbon tetrachloride | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,2-dichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| benzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| trichloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,2-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| bromodichloromethane | < 0.6 | 0.6 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,4-dioxane | < 50 | 50 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| dibromomethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 4-methyl-2-pentanone (MIBK) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| cis-1,3-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| toluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| trans-1,3-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 2-hexanone | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,1,2-trichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,3-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| tetrachloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| dibromochloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-004
**Sample ID:** CA-MW-4
**Matrix:** Water
**Sampled:** 11/12/14 14:30

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-dibromoethane (EDB) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| chlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,1,1,2-tetrachloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| ethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| m&p-xylenes | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| o-xylene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| styrene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| bromoform | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| isopropylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,1,2,2-tetrachloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,2,3-trichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| n-propylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| bromobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,3,5-trimethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 2-chlorotoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 4-chlorotoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| tert-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,2,4-trimethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| sec-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,3-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 4-isopropyltoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,4-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,2-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| n-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,2-dibromo-3-chloropropane (DBCP) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,2,4-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,3,5-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| hexachlorobutadiene | < 0.5 | 0.5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| naphthalene | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 1,2,3-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| dibromofluoromethane SUR | **104** | 78-114 | % | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| toluene-D8 SUR | **94** | 88-110 | % | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |
| 4-bromofluorobenzene SUR | **92** | 86-115 | % | 1 | LMM | | 1403131 | 11/19/14 | 20:33 | SW5030C8260C |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-005
**Sample ID:** CA-MW-3
**Matrix:** Water
**Sampled:** 11/12/14 9:35

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| dichlorodifluoromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| chloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| vinyl chloride | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| bromomethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| chloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| trichlorofluoromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| diethyl ether | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| acetone | < 50 | 50 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,1-dichloroethene | < 1 | 1 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| methylene chloride | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| carbon disulfide | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| methyl t-butyl ether (MTBE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| trans-1,2-dichloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| isopropyl ether (DIPE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| ethyl t-butyl ether (ETBE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,1-dichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| t-butanol (TBA) | < 30 | 30 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 2-butanone (MEK) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 2,2-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| cis-1,2-dichloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| chloroform | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| bromochloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| tetrahydrofuran (THF) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,1,1-trichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,1-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| t-amyl-methyl ether (TAME) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| carbon tetrachloride | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,2-dichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| benzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| trichloroethene | **2** | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,2-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| bromodichloromethane | < 0.6 | 0.6 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,4-dioxane | < 50 | 50 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| dibromomethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 4-methyl-2-pentanone (MIBK) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| cis-1,3-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| toluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| trans-1,3-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 2-hexanone | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,1,2-trichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,3-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| tetrachloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| dibromochloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-005
**Sample ID:** CA-MW-3
**Matrix:** Water
**Sampled:** 11/12/14 9:35

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-dibromoethane (EDB) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| chlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,1,1,2-tetrachloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| ethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| m&p-xylenes | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| o-xylene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| styrene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| bromoform | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| isopropylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,1,2,2-tetrachloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,2,3-trichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| n-propylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| bromobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,3,5-trimethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 2-chlorotoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 4-chlorotoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| tert-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,2,4-trimethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| sec-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,3-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 4-isopropyltoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,4-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,2-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| n-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,2-dibromo-3-chloropropane (DBCP) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,2,4-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,3,5-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| hexachlorobutadiene | < 0.5 | 0.5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| naphthalene | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 1,2,3-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| dibromofluoromethane SUR | **110** | 78-114 | % | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| toluene-D8 SUR | **93** | 88-110 | % | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |
| 4-bromofluorobenzene SUR | **90** | 86-115 | % | 1 | LMM | | 1403131 | 11/19/14 | 21:06 | SW5030C8260C |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-006
**Sample ID:** Trip Blank
**Matrix:** Water
**Sampled:** 11/12/14 0:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| dichlorodifluoromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| chloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| vinyl chloride | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| bromomethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| chloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| trichlorofluoromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| diethyl ether | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| acetone | < 50 | 50 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,1-dichloroethene | < 1 | 1 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| methylene chloride | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| carbon disulfide | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| methyl t-butyl ether (MTBE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| trans-1,2-dichloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| isopropyl ether (DIPE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| ethyl t-butyl ether (ETBE) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,1-dichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| t-butanol (TBA) | < 30 | 30 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 2-butanone (MEK) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 2,2-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| cis-1,2-dichloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| chloroform | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| bromochloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| tetrahydrofuran (THF) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,1,1-trichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,1-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| t-amyl-methyl ether (TAME) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| carbon tetrachloride | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,2-dichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| benzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| trichloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,2-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| bromodichloromethane | < 0.6 | 0.6 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,4-dioxane | < 50 | 50 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| dibromomethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 4-methyl-2-pentanone (MIBK) | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| cis-1,3-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| toluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| trans-1,3-dichloropropene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 2-hexanone | < 10 | 10 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,1,2-trichloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,3-dichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| tetrachloroethene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| dibromochloromethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-006
**Sample ID:** Trip Blank
**Matrix:** Water
**Sampled:** 11/12/14 0:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-dibromoethane (EDB) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| chlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,1,1,2-tetrachloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| ethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| m&p-xylenes | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| o-xylene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| styrene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| bromoform | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| isopropylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,1,2,2-tetrachloroethane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,2,3-trichloropropane | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| n-propylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| bromobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,3,5-trimethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 2-chlorotoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 4-chlorotoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| tert-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,2,4-trimethylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| sec-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,3-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 4-isopropyltoluene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,4-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,2-dichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| n-butylbenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,2-dibromo-3-chloropropane (DBCP) | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,2,4-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,3,5-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| hexachlorobutadiene | < 0.5 | 0.5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| naphthalene | < 5 | 5 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 1,2,3-trichlorobenzene | < 2 | 2 | ug/L | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| dibromofluoromethane SUR | **106** | 78-114 | % | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| toluene-D8 SUR | **93** | 88-110 | % | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |
| 4-bromofluorobenzene SUR | **89** | 86-115 | % | 1 | LMM | | 1403131 | 11/19/14 | 17:51 | SW5030C8260C |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-001
**Sample ID:** CA-MW-2
**Matrix:** Water
**Sampled:** 11/12/14 9:35

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| N-nitrosodimethylamine | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| aniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| phenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| 2-chlorophenol | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| bis(2-chloroethyl)ether | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 1,3-dichlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 1,4-dichlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 1,2-dichlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| benzyl alcohol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 2-methylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| bis(2-chloroisopropyl) ether | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| hexachloroethane | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| N-nitroso-di-N-propylamine | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 4-methylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| nitrobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| isophorone | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 2-nitrophenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| 2,4-dimethylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| bis(2-chloroethoxy)methane | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 2,4-dichlorophenol | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| 1,2,4-trichlorobenzene | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| naphthalene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| benzoic acid | < 47 | 47 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| 4-chloroaniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| hexachlorobutadiene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 4-chloro-3-methylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| 2-methylnaphthalene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| hexachlorocyclopentadiene | < 9 | 9 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 2,4,6-trichlorophenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| 2,4,5-trichlorophenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| 2-chloronaphthalene | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 2-nitroaniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| acenaphthylene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| dimethylphthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 2,6-dinitrotoluene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 2,4-dinitrotoluene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| acenaphthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 3-nitroaniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 2,4-dinitrophenol | < 47 | 47 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| dibenzofuran | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 4-nitrophenol | < 9 | 9 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| fluorene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| diethyl phthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-001
**Sample ID:** CA-MW-2
**Matrix:** Water
**Sampled:** 11/12/14 9:35

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 4-chlorophenyl phenyl ether | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 4-nitroaniline | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 4,6-dinitro-2-methylphenol | < 19 | 19 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| azobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| N-nitrosodiphenylamine | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 4-bromophenyl phenyl ether | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| hexachlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| pentachlorophenol | < 9 | 9 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| phenanthrene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| anthracene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| carbazole | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| di-n-butylphthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| fluoranthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| benzidine | < 28 | 28 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| pyrene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| butyl benzyl phthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| benzo(a)anthracene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| chrysene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 3,3'-dichlorobenzidine | < 28 | 28 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| bis(2-ethylhexyl)phthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| di-n-octyl phthalate | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| benzo(b)fluoranthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| benzo(k)fluoranthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| benzo(a)pyrene | < 0.2 | 0.2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| indeno(1,2,3-cd)pyrene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| dibenzo(a,h)anthracene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| benzo(g,h,i)perylene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| 2-fluorophenol SUR | **21** | 21-100 | % | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| phenol-D5 SUR | **12** | 10-102 | % | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| 2,4,6-tribromophenol SUR | **71** | 10-123 | % | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 21:00 | SW3510C8270D |
| nitrobenzene-D5 SUR | **66** | 35-114 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| 2-fluorobiphenyl SUR | **60** | 43-116 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |
| p-terphenyl-D14 SUR | **98** | 33-141 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 6:13 | SW3510C8270D |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-002
**Sample ID:** CA-MW-1
**Matrix:** Water
**Sampled:** 11/12/14 10:30

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| N-nitrosodimethylamine | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| aniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| phenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| 2-chlorophenol | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| bis(2-chloroethyl)ether | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 1,3-dichlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 1,4-dichlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 1,2-dichlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| benzyl alcohol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 2-methylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| bis(2-chloroisopropyl) ether | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| hexachloroethane | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| N-nitroso-di-N-propylamine | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 4-methylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| nitrobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| isophorone | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 2-nitrophenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| 2,4-dimethylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| bis(2-chloroethoxy)methane | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 2,4-dichlorophenol | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| 1,2,4-trichlorobenzene | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| naphthalene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| benzoic acid | < 46 | 46 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| 4-chloroaniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| hexachlorobutadiene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 4-chloro-3-methylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| 2-methylnaphthalene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| hexachlorocyclopentadiene | < 9 | 9 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 2,4,6-trichlorophenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| 2,4,5-trichlorophenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| 2-chloronaphthalene | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 2-nitroaniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| acenaphthylene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| dimethylphthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 2,6-dinitrotoluene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 2,4-dinitrotoluene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| acenaphthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 3-nitroaniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 2,4-dinitrophenol | < 46 | 46 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| dibenzofuran | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 4-nitrophenol | < 9 | 9 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| fluorene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| diethyl phthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-002
**Sample ID:** CA-MW-1
**Matrix:** Water
**Sampled:** 11/12/14 10:30

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 4-chlorophenyl phenyl ether | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 4-nitroaniline | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 4,6-dinitro-2-methylphenol | < 19 | 19 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| azobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| N-nitrosodiphenylamine | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 4-bromophenyl phenyl ether | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| hexachlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| pentachlorophenol | < 9 | 9 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| phenanthrene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| anthracene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| carbazole | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| di-n-butylphthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| fluoranthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| benzidine | < 28 | 28 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| pyrene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| butyl benzyl phthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| benzo(a)anthracene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| chrysene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 3,3'-dichlorobenzidine | < 28 | 28 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| bis(2-ethylhexyl)phthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| di-n-octyl phthalate | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| benzo(b)fluoranthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| benzo(k)fluoranthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| benzo(a)pyrene | < 0.2 | 0.2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| indeno(1,2,3-cd)pyrene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| dibenzo(a,h)anthracene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| benzo(g,h,i)perylene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| 2-fluorophenol SUR | **23** | 21-100 | % | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| phenol-D5 SUR | **13** | 10-102 | % | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| 2,4,6-tribromophenol SUR | **76** | 10-123 | % | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 22:51 | SW3510C8270D |
| nitrobenzene-D5 SUR | **67** | 35-114 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| 2-fluorobiphenyl SUR | **61** | 43-116 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |
| p-terphenyl-D14 SUR | **94** | 33-141 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 3:46 | SW3510C8270D |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-003
**Sample ID:** DUP-GW-1
**Matrix:** Water
**Sampled:** 11/12/14 0:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| N-nitrosodimethylamine | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| aniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| phenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| 2-chlorophenol | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| bis(2-chloroethyl)ether | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 1,3-dichlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 1,4-dichlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 1,2-dichlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| benzyl alcohol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 2-methylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| bis(2-chloroisopropyl) ether | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| hexachloroethane | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| N-nitroso-di-N-propylamine | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 4-methylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| nitrobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| isophorone | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 2-nitrophenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| 2,4-dimethylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| bis(2-chloroethoxy)methane | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 2,4-dichlorophenol | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| 1,2,4-trichlorobenzene | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| naphthalene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| benzoic acid | < 46 | 46 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| 4-chloroaniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| hexachlorobutadiene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 4-chloro-3-methylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| 2-methylnaphthalene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| hexachlorocyclopentadiene | < 9 | 9 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 2,4,6-trichlorophenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| 2,4,5-trichlorophenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| 2-chloronaphthalene | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 2-nitroaniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| acenaphthylene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| dimethylphthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 2,6-dinitrotoluene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 2,4-dinitrotoluene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| acenaphthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 3-nitroaniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 2,4-dinitrophenol | < 46 | 46 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| dibenzofuran | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 4-nitrophenol | < 9 | 9 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| fluorene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| diethyl phthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-003
**Sample ID:** DUP-GW-1
**Matrix:** Water
**Sampled:** 11/12/14 0:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 4-chlorophenyl phenyl ether | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 4-nitroaniline | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 4,6-dinitro-2-methylphenol | < 19 | 19 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| azobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| N-nitrosodiphenylamine | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 4-bromophenyl phenyl ether | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| hexachlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| pentachlorophenol | < 9 | 9 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| phenanthrene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| anthracene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| carbazole | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| di-n-butylphthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| fluoranthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| benzidine | < 28 | 28 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| pyrene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| butyl benzyl phthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| benzo(a)anthracene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| chrysene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 3,3'-dichlorobenzidine | < 28 | 28 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| bis(2-ethylhexyl)phthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| di-n-octyl phthalate | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| benzo(b)fluoranthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| benzo(k)fluoranthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| benzo(a)pyrene | < 0.2 | 0.2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| indeno(1,2,3-cd)pyrene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| dibenzo(a,h)anthracene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| benzo(g,h,i)perylene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| 2-fluorophenol SUR | **23** | 21-100 | % | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| phenol-D5 SUR | **13** | 10-102 | % | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| 2,4,6-tribromophenol SUR | **74** | 10-123 | % | 1 | AJD | 11/18/14 | 7395 | 11/18/14 | 23:28 | SW3510C8270D |
| nitrobenzene-D5 SUR | **62** | 35-114 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| 2-fluorobiphenyl SUR | **58** | 43-116 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |
| p-terphenyl-D14 SUR | **87** | 33-141 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 4:23 | SW3510C8270D |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-004
**Sample ID:** CA-MW-4
**Matrix:** Water
**Sampled:** 11/12/14 14:30

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| N-nitrosodimethylamine | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| aniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| phenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| 2-chlorophenol | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| bis(2-chloroethyl)ether | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 1,3-dichlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 1,4-dichlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 1,2-dichlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| benzyl alcohol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 2-methylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| bis(2-chloroisopropyl) ether | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| hexachloroethane | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| N-nitroso-di-N-propylamine | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 4-methylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| nitrobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| isophorone | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 2-nitrophenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| 2,4-dimethylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| bis(2-chloroethoxy)methane | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 2,4-dichlorophenol | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| 1,2,4-trichlorobenzene | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| naphthalene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| benzoic acid | < 46 | 46 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| 4-chloroaniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| hexachlorobutadiene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 4-chloro-3-methylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| 2-methylnaphthalene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| hexachlorocyclopentadiene | < 9 | 9 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 2,4,6-trichlorophenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| 2,4,5-trichlorophenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| 2-chloronaphthalene | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 2-nitroaniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| acenaphthylene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| dimethylphthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 2,6-dinitrotoluene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 2,4-dinitrotoluene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| acenaphthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 3-nitroaniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 2,4-dinitrophenol | < 46 | 46 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| dibenzofuran | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 4-nitrophenol | < 9 | 9 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| fluorene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| diethyl phthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-004
**Sample ID:** CA-MW-4
**Matrix:** Water
**Sampled:** 11/12/14 14:30

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 4-chlorophenyl phenyl ether | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 4-nitroaniline | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 4,6-dinitro-2-methylphenol | < 19 | 19 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| azobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| N-nitrosodiphenylamine | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 4-bromophenyl phenyl ether | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| hexachlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| pentachlorophenol | < 9 | 9 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| phenanthrene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| anthracene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| carbazole | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| di-n-butylphthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| fluoranthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| benzidine | < 28 | 28 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| pyrene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| butyl benzyl phthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| benzo(a)anthracene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| chrysene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 3,3'-dichlorobenzidine | < 28 | 28 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| bis(2-ethylhexyl)phthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| di-n-octyl phthalate | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| benzo(b)fluoranthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| benzo(k)fluoranthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| benzo(a)pyrene | < 0.2 | 0.2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| indeno(1,2,3-cd)pyrene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| dibenzo(a,h)anthracene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| benzo(g,h,i)perylene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| 2-fluorophenol SUR | **24** | 21-100 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| phenol-D5 SUR | **14** | 10-102 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| 2,4,6-tribromophenol SUR | **73** | 10-123 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:05 | SW3510C8270D |
| nitrobenzene-D5 SUR | **68** | 35-114 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| 2-fluorobiphenyl SUR | **62** | 43-116 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |
| p-terphenyl-D14 SUR | **96** | 33-141 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:00 | SW3510C8270D |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-005
**Sample ID:** CA-MW-3
**Matrix:** Water
**Sampled:** 11/12/14 9:35

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| N-nitrosodimethylamine | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| aniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| phenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| 2-chlorophenol | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| bis(2-chloroethyl)ether | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 1,3-dichlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 1,4-dichlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 1,2-dichlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| benzyl alcohol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 2-methylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| bis(2-chloroisopropyl) ether | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| hexachloroethane | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| N-nitroso-di-N-propylamine | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 4-methylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| nitrobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| isophorone | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 2-nitrophenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| 2,4-dimethylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| bis(2-chloroethoxy)methane | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 2,4-dichlorophenol | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| 1,2,4-trichlorobenzene | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| naphthalene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| benzoic acid | < 46 | 46 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| 4-chloroaniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| hexachlorobutadiene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 4-chloro-3-methylphenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| 2-methylnaphthalene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| hexachlorocyclopentadiene | < 9 | 9 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 2,4,6-trichlorophenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| 2,4,5-trichlorophenol | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| 2-chloronaphthalene | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 2-nitroaniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| acenaphthylene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| dimethylphthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 2,6-dinitrotoluene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 2,4-dinitrotoluene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| acenaphthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 3-nitroaniline | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 2,4-dinitrophenol | < 46 | 46 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| dibenzofuran | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 4-nitrophenol | < 9 | 9 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| fluorene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| diethyl phthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |

**Project ID:** R+D Paving 14001247
**Job ID:** 31611
**Sample#:** 31611-005
**Sample ID:** CA-MW-3
**Matrix:** Water
**Sampled:** 11/12/14 9:35

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| 4-chlorophenyl phenyl ether | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 4-nitroaniline | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 4,6-dinitro-2-methylphenol | < 19 | 19 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| azobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| N-nitrosodiphenylamine | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 4-bromophenyl phenyl ether | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| hexachlorobenzene | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| pentachlorophenol | < 9 | 9 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| phenanthrene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| anthracene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| carbazole | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| di-n-butylphthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| fluoranthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| benzidine | < 28 | 28 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| pyrene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| butyl benzyl phthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| benzo(a)anthracene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| chrysene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 3,3'-dichlorobenzidine | < 28 | 28 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| bis(2-ethylhexyl)phthalate | < 5 | 5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| di-n-octyl phthalate | < 2 | 2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| benzo(b)fluoranthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| benzo(k)fluoranthene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| benzo(a)pyrene | < 0.2 | 0.2 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| indeno(1,2,3-cd)pyrene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| dibenzo(a,h)anthracene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| benzo(g,h,i)perylene | < 0.5 | 0.5 | ug/L | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| **Surrogate Recovery** | | **Limits** | | | | | | | | |
| 2-fluorophenol SUR | **25** | 21-100 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| phenol-D5 SUR | **14** | 10-102 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| 2,4,6-tribromophenol SUR | **80** | 10-123 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 0:41 | SW3510C8270D |
| nitrobenzene-D5 SUR | **69** | 35-114 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| 2-fluorobiphenyl SUR | **63** | 43-116 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |
| p-terphenyl-D14 SUR | **92** | 33-141 | % | 1 | AJD | 11/18/14 | 7395 | 11/19/14 | 5:36 | SW3510C8270D |

**Project ID:** R+D Paving 14001247

**Job ID:** 31611

**Sample#:** 31611-001

**Sample ID:** CA-MW-2

**Matrix:** Water

**Sampled:** 11/12/14 9:35

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | < 0.008 | 0.008 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:00 | SW3005A6010C |
| Barium | < 0.05 | 0.05 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:00 | SW3005A6010C |
| Cadmium | < 0.004 | 0.004 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:00 | SW3005A6010C |
| Chromium | < 0.05 | 0.05 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:00 | SW3005A6010C |
| Lead | < 0.008 | 0.008 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:00 | SW3005A6010C |
| Mercury | < 0.0002 | 0.0002 | mg/L | 1 | AC | 11/19/14 | 7402 | 11/19/14 | 16:36 | SW7470A |
| Selenium | < 0.05 | 0.05 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:00 | SW3005A6010C |
| Silver | < 0.007 | 0.007 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:00 | SW3005A6010C |

**Sample#:** 31611-002

**Sample ID:** CA-MW-1

**Matrix:** Water

**Sampled:** 11/12/14 10:30

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | < 0.008 | 0.008 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:07 | SW3005A6010C |
| Barium | < 0.05 | 0.05 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:07 | SW3005A6010C |
| Cadmium | < 0.004 | 0.004 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:07 | SW3005A6010C |
| Chromium | < 0.05 | 0.05 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:07 | SW3005A6010C |
| Lead | < 0.008 | 0.008 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:07 | SW3005A6010C |
| Mercury | < 0.0002 | 0.0002 | mg/L | 1 | AC | 11/19/14 | 7402 | 11/19/14 | 16:38 | SW7470A |
| Selenium | < 0.05 | 0.05 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:07 | SW3005A6010C |
| Silver | < 0.007 | 0.007 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:07 | SW3005A6010C |

**Sample#:** 31611-003

**Sample ID:** DUP-GW-1

**Matrix:** Water

**Sampled:** 11/12/14 0:00

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | < 0.008 | 0.008 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:14 | SW3005A6010C |
| Barium | < 0.05 | 0.05 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:14 | SW3005A6010C |
| Cadmium | < 0.004 | 0.004 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:14 | SW3005A6010C |
| Chromium | < 0.05 | 0.05 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:14 | SW3005A6010C |
| Lead | < 0.008 | 0.008 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:14 | SW3005A6010C |
| Mercury | < 0.0002 | 0.0002 | mg/L | 1 | AC | 11/19/14 | 7402 | 11/19/14 | 16:39 | SW7470A |
| Selenium | < 0.05 | 0.05 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:14 | SW3005A6010C |
| Silver | < 0.007 | 0.007 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:14 | SW3005A6010C |

**Project ID:** R+D Paving 14001247

**Job ID:** 31611

**Sample#:** 31611-004

**Sample ID:** CA-MW-4

**Matrix:** Water

**Sampled:** 11/12/14 14:30

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | < 0.008 | 0.008 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:43 | SW3005A6010C |
| Barium | **0.07** | 0.05 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:43 | SW3005A6010C |
| Cadmium | < 0.004 | 0.004 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:43 | SW3005A6010C |
| Chromium | < 0.05 | 0.05 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:43 | SW3005A6010C |
| Lead | < 0.008 | 0.008 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:43 | SW3005A6010C |
| Mercury | < 0.0002 | 0.0002 | mg/L | 1 | AC | 11/19/14 | 7402 | 11/19/14 | 16:41 | SW7470A |
| Selenium | < 0.05 | 0.05 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:43 | SW3005A6010C |
| Silver | < 0.007 | 0.007 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:43 | SW3005A6010C |

**Sample#:** 31611-005

**Sample ID:** CA-MW-3

**Matrix:** Water

**Sampled:** 11/12/14 9:35

| Parameter | Result | Reporting Limit | Units | Instr Dil'n Factor | Analyst | Prep Date | Batch | Analysis Date | Time | Reference |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | < 0.008 | 0.008 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:51 | SW3005A6010C |
| Barium | < 0.05 | 0.05 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:51 | SW3005A6010C |
| Cadmium | < 0.004 | 0.004 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:51 | SW3005A6010C |
| Chromium | < 0.05 | 0.05 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:51 | SW3005A6010C |
| Lead | < 0.008 | 0.008 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:51 | SW3005A6010C |
| Mercury | < 0.0002 | 0.0002 | mg/L | 1 | AC | 11/19/14 | 7402 | 11/19/14 | 16:43 | SW7470A |
| Selenium | < 0.05 | 0.05 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:51 | SW3005A6010C |
| Silver | < 0.007 | 0.007 | mg/L | 1 | AB | 11/20/14 | 7411 | 11/20/14 | 19:51 | SW3005A6010C |

# Quality Control Report


124 Heritage Avenue Unit 16
Portsmouth, NH 03801
www.absoluteresourceassociates.com

**Case Narrative**
**Lab # 31611**

## Sample Receiving and Chain of Custody Discrepancies

Samples were received in acceptable condition, at 5 degrees C, on ice, and in accordance with sample handling, preservation and integrity guidelines.
The reported results are calculated on a "dry weight" basis.

## Calibration

No exceptions noted.

## Method Blank

VOC: The compound, hexachlorobutadiene, was detected in the BLK1403131 at 0.7ug/L. There is no impact to the data as this analyte was not detected in the associated field samples.

## Surrogate Recoveries

No exceptions noted.

## Laboratory Control Sample Results

VOC: The LCS/D1403131 did not meet the acceptance criteria for dichlorodifluoromethane,t-butanol (TBA), and 1,4-dioxane. Since <10% of the compounds were outside of the acceptance criteria, reanalysis is not required.
SVOC: The LCS/D7395 did not meet the acceptance criteria for phenol and hexachloroethane. Since <10% of the compounds were outside of the acceptance criteria, reanalysis is not required.

## Matrix Spike/Matrix Spike Duplicate/Duplicate Results

No exceptions noted.

## Other

Reporting Limits: Dilutions performed during the analysis are noted on the result pages.

No other exceptions noted.

# - QC Report -

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SW5030C8260C | BLK1403131 | dichlorodifluoromethane | | < | 2 | ug/L | | | | | |
| | | chloromethane | | < | 2 | ug/L | | | | | |
| | | vinyl chloride | | < | 2 | ug/L | | | | | |
| | | bromomethane | | < | 2 | ug/L | | | | | |
| | | chloroethane | | < | 2 | ug/L | | | | | |
| | | trichlorofluoromethane | | < | 2 | ug/L | | | | | |
| | | diethyl ether | | < | 10 | ug/L | | | | | |
| | | acetone | | < | 50 | ug/L | | | | | |
| | | 1,1-dichloroethene | | < | 1 | ug/L | | | | | |
| | | methylene chloride | | < | 5 | ug/L | | | | | |
| | | carbon disulfide | | < | 2 | ug/L | | | | | |
| | | methyl t-butyl ether (MTBE) | | < | 2 | ug/L | | | | | |
| | | trans-1,2-dichloroethene | | < | 2 | ug/L | | | | | |
| | | isopropyl ether (DIPE) | | < | 2 | ug/L | | | | | |
| | | ethyl t-butyl ether (ETBE) | | < | 2 | ug/L | | | | | |
| | | 1,1-dichloroethane | | < | 2 | ug/L | | | | | |
| | | t-butanol (TBA) | | < | 30 | ug/L | | | | | |
| | | 2-butanone (MEK) | | < | 10 | ug/L | | | | | |
| | | 2,2-dichloropropane | | < | 2 | ug/L | | | | | |
| | | cis-1,2-dichloroethene | | < | 2 | ug/L | | | | | |
| | | chloroform | | < | 2 | ug/L | | | | | |
| | | bromochloromethane | | < | 2 | ug/L | | | | | |
| | | tetrahydrofuran (THF) | | < | 10 | ug/L | | | | | |
| | | 1,1,1-trichloroethane | | < | 2 | ug/L | | | | | |
| | | 1,1-dichloropropene | | < | 2 | ug/L | | | | | |
| | | t-amyl-methyl ether (TAME) | | < | 2 | ug/L | | | | | |
| | | carbon tetrachloride | | < | 2 | ug/L | | | | | |
| | | 1,2-dichloroethane | | < | 2 | ug/L | | | | | |
| | | benzene | | < | 2 | ug/L | | | | | |
| | | trichloroethene | | < | 2 | ug/L | | | | | |
| | | 1,2-dichloropropane | | < | 2 | ug/L | | | | | |
| | | bromodichloromethane | | < | 0.6 | ug/L | | | | | |
| | | 1,4-dioxane | | < | 50 | ug/L | | | | | |
| | | dibromomethane | | < | 2 | ug/L | | | | | |
| | | 4-methyl-2-pentanone (MIBK) | | < | 10 | ug/L | | | | | |
| | | cis-1,3-dichloropropene | | < | 2 | ug/L | | | | | |
| | | toluene | | < | 2 | ug/L | | | | | |
| | | trans-1,3-dichloropropene | | < | 2 | ug/L | | | | | |
| | | 2-hexanone | | < | 10 | ug/L | | | | | |
| | | 1,1,2-trichloroethane | | < | 2 | ug/L | | | | | |
| | | 1,3-dichloropropane | | < | 2 | ug/L | | | | | |
| | | tetrachloroethene | | < | 2 | ug/L | | | | | |
| | | dibromochloromethane | | < | 2 | ug/L | | | | | |
| | | 1,2-dibromoethane (EDB) | | < | 2 | ug/L | | | | | |
| | | chlorobenzene | | < | 2 | ug/L | | | | | |
| | | 1,1,1,2-tetrachloroethane | | < | 2 | ug/L | | | | | |
| | | ethylbenzene | | < | 2 | ug/L | | | | | |
| | | m&p-xylenes | | < | 2 | ug/L | | | | | |
| | | o-xylene | | < | 2 | ug/L | | | | | |
| | | styrene | | < | 2 | ug/L | | | | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW5030C8260C | BLK1403131 | bromoform | | < | 2 | ug/L | | | | | | |
| | | isopropylbenzene | | < | 2 | ug/L | | | | | | |
| | | 1,1,2,2-tetrachloroethane | | < | 2 | ug/L | | | | | | |
| | | 1,2,3-trichloropropane | | < | 2 | ug/L | | | | | | |
| | | n-propylbenzene | | < | 2 | ug/L | | | | | | |
| | | bromobenzene | | < | 2 | ug/L | | | | | | |
| | | 1,3,5-trimethylbenzene | | < | 2 | ug/L | | | | | | |
| | | 2-chlorotoluene | | < | 2 | ug/L | | | | | | |
| | | 4-chlorotoluene | | < | 2 | ug/L | | | | | | |
| | | tert-butylbenzene | | < | 2 | ug/L | | | | | | |
| | | 1,2,4-trimethylbenzene | | < | 2 | ug/L | | | | | | |
| | | sec-butylbenzene | | < | 2 | ug/L | | | | | | |
| | | 1,3-dichlorobenzene | | < | 2 | ug/L | | | | | | |
| | | 4-isopropyltoluene | | < | 2 | ug/L | | | | | | |
| | | 1,4-dichlorobenzene | | < | 2 | ug/L | | | | | | |
| | | 1,2-dichlorobenzene | | < | 2 | ug/L | | | | | | |
| | | n-butylbenzene | | < | 2 | ug/L | | | | | | |
| | | 1,2-dibromo-3-chloropropane (DBCP) | | < | 2 | ug/L | | | | | | |
| | | 1,2,4-trichlorobenzene | | < | 2 | ug/L | | | | | | |
| | | 1,3,5-trichlorobenzene | | < | 2 | ug/L | | | | | | |
| | | hexachlorobutadiene | | | 0.7 | ug/L | | | | | | |
| | | naphthalene | | < | 5 | ug/L | | | | | | |
| | | 1,2,3-trichlorobenzene | | < | 2 | ug/L | | | | | | |
| | | dibromofluoromethane SUR | | | 102 | % | | | 78 | 114 | | |
| | | toluene-D8 SUR | | | 95 | % | | | 88 | 110 | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW5030C8260C | LCS1403131 | dichlorodifluoromethane | | | 15 | ug/L | 20 | 76 | | 70 | 130 | | |
| | | chloromethane | | | 17 | ug/L | 20 | 87 | | 70 | 130 | | |
| | | vinyl chloride | | | 17 | ug/L | 20 | 84 | | 70 | 130 | | |
| | | bromomethane | | | 15 | ug/L | 20 | 76 | | 70 | 130 | | |
| | | chloroethane | | | 18 | ug/L | 20 | 88 | | 70 | 130 | | |
| | | trichlorofluoromethane | | | 18 | ug/L | 20 | 92 | | 70 | 130 | | |
| | | diethyl ether | | | 21 | ug/L | 20 | 106 | | 70 | 130 | | |
| | | acetone | | < | 50 | ug/L | 20 | 112 | | | | | |
| | | 1,1-dichloroethene | | | 17 | ug/L | 20 | 86 | | 70 | 130 | | |
| | | methylene chloride | | | 19 | ug/L | 20 | 94 | | 70 | 130 | | |
| | | carbon disulfide | | | 17 | ug/L | 20 | 87 | | 70 | 130 | | |
| | | methyl t-butyl ether (MTBE) | | | 19 | ug/L | 20 | 94 | | 70 | 130 | | |
| | | trans-1,2-dichloroethene | | | 18 | ug/L | 20 | 91 | | 70 | 130 | | |
| | | isopropyl ether (DIPE) | | | 19 | ug/L | 20 | 96 | | 70 | 130 | | |
| | | ethyl t-butyl ether (ETBE) | | | 19 | ug/L | 20 | 94 | | 70 | 130 | | |
| | | 1,1-dichloroethane | | | 18 | ug/L | 20 | 92 | | 70 | 130 | | |
| | | t-butanol (TBA) | | | 130 | ug/L | 100 | 134 | * | 70 | 130 | | |
| | | 2-butanone (MEK) | | | 21 | ug/L | 20 | 103 | | 70 | 130 | | |
| | | 2,2-dichloropropane | | | 17 | ug/L | 20 | 84 | | 70 | 130 | | |
| | | cis-1,2-dichloroethene | | | 18 | ug/L | 20 | 91 | | 70 | 130 | | |
| | | chloroform | | | 19 | ug/L | 20 | 93 | | 70 | 130 | | |
| | | bromochloromethane | | | 19 | ug/L | 20 | 95 | | 70 | 130 | | |
| | | tetrahydrofuran (THF) | | | 20 | ug/L | 20 | 102 | | 70 | 130 | | |
| | | 1,1,1-trichloroethane | | | 18 | ug/L | 20 | 90 | | 70 | 130 | | |
| | | 1,1-dichloropropene | | | 17 | ug/L | 20 | 87 | | 70 | 130 | | |
| | | t-amyl-methyl ether (TAME) | | | 18 | ug/L | 20 | 91 | | 70 | 130 | | |
| | | carbon tetrachloride | | | 16 | ug/L | 20 | 82 | | 70 | 130 | | |
| | | 1,2-dichloroethane | | | 19 | ug/L | 20 | 95 | | 70 | 130 | | |
| | | benzene | | | 18 | ug/L | 20 | 91 | | 70 | 130 | | |
| | | trichloroethene | | | 18 | ug/L | 20 | 89 | | 70 | 130 | | |
| | | 1,2-dichloropropane | | | 19 | ug/L | 20 | 93 | | 70 | 130 | | |
| | | bromodichloromethane | | | 18 | ug/L | 20 | 89 | | 70 | 130 | | |
| | | 1,4-dioxane | | | 84 | ug/L | 40 | 210 | * | 70 | 130 | | |
| | | dibromomethane | | | 19 | ug/L | 20 | 95 | | 70 | 130 | | |
| | | 4-methyl-2-pentanone (MIBK) | | | 20 | ug/L | 20 | 99 | | 70 | 130 | | |
| | | cis-1,3-dichloropropene | | | 18 | ug/L | 20 | 88 | | 70 | 130 | | |
| | | toluene | | | 18 | ug/L | 20 | 92 | | 70 | 130 | | |
| | | trans-1,3-dichloropropene | | | 17 | ug/L | 20 | 85 | | 70 | 130 | | |
| | | 2-hexanone | | | 20 | ug/L | 20 | 98 | | 70 | 130 | | |
| | | 1,1,2-trichloroethane | | | 20 | ug/L | 20 | 100 | | 70 | 130 | | |
| | | 1,3-dichloropropane | | | 20 | ug/L | 20 | 100 | | 70 | 130 | | |
| | | tetrachloroethene | | | 19 | ug/L | 20 | 96 | | 70 | 130 | | |
| | | dibromochloromethane | | | 19 | ug/L | 20 | 93 | | 70 | 130 | | |
| | | 1,2-dibromoethane (EDB) | | | 21 | ug/L | 20 | 103 | | 70 | 130 | | |
| | | chlorobenzene | | | 20 | ug/L | 20 | 99 | | 70 | 130 | | |
| | | 1,1,1,2-tetrachloroethane | | | 19 | ug/L | 20 | 96 | | 70 | 130 | | |
| | | ethylbenzene | | | 19 | ug/L | 20 | 94 | | 70 | 130 | | |
| | | m&p-xylenes | | | 38 | ug/L | 40 | 95 | | 70 | 130 | | |
| | | o-xylene | | | 20 | ug/L | 20 | 98 | | 70 | 130 | | |
| | | styrene | | | 19 | ug/L | 20 | 97 | | 70 | 130 | | |
| | | bromoform | | | 20 | ug/L | 20 | 102 | | 70 | 130 | | |

| Method | QC ID | Parameter | Associated Sample | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SW5030C8260C | LCS1403131 | isopropylbenzene | | 19 | ug/L | 20 | 96 | 70 | 130 | | |
| | | 1,1,2,2-tetrachloroethane | | 23 | ug/L | 20 | 114 | 70 | 130 | | |
| | | 1,2,3-trichloropropane | | 23 | ug/L | 20 | 113 | 70 | 130 | | |
| | | n-propylbenzene | | 21 | ug/L | 20 | 103 | 70 | 130 | | |
| | | bromobenzene | | 22 | ug/L | 20 | 110 | 70 | 130 | | |
| | | 1,3,5-trimethylbenzene | | 22 | ug/L | 20 | 111 | 70 | 130 | | |
| | | 2-chlorotoluene | | 22 | ug/L | 20 | 112 | 70 | 130 | | |
| | | 4-chlorotoluene | | 20 | ug/L | 20 | 101 | 70 | 130 | | |
| | | tert-butylbenzene | | 21 | ug/L | 20 | 106 | 70 | 130 | | |
| | | 1,2,4-trimethylbenzene | | 22 | ug/L | 20 | 109 | 70 | 130 | | |
| | | sec-butylbenzene | | 20 | ug/L | 20 | 99 | 70 | 130 | | |
| | | 1,3-dichlorobenzene | | 21 | ug/L | 20 | 104 | 70 | 130 | | |
| | | 4-isopropyltoluene | | 19 | ug/L | 20 | 97 | 70 | 130 | | |
| | | 1,4-dichlorobenzene | | 22 | ug/L | 20 | 110 | 70 | 130 | | |
| | | 1,2-dichlorobenzene | | 22 | ug/L | 20 | 109 | 70 | 130 | | |
| | | n-butylbenzene | | 18 | ug/L | 20 | 92 | 70 | 130 | | |
| | | 1,2-dibromo-3-chloropropane (DBCP) | | 21 | ug/L | 20 | 105 | 70 | 130 | | |
| | | 1,2,4-trichlorobenzene | | 21 | ug/L | 20 | 106 | 70 | 130 | | |
| | | 1,3,5-trichlorobenzene | | 21 | ug/L | 20 | 106 | 70 | 130 | | |
| | | hexachlorobutadiene | | 18 | ug/L | 20 | 90 | 70 | 130 | | |
| | | naphthalene | | 23 | ug/L | 20 | 114 | 70 | 130 | | |
| | | 1,2,3-trichlorobenzene | | 20 | ug/L | 20 | 99 | 70 | 130 | | |
| | | dibromofluoromethane SUR | | 91 | % | | | 78 | 114 | | |
| | | toluene-D8 SUR | | 98 | % | | | 88 | 110 | | |
| | | 4-bromofluorobenzene SUR | | 101 | % | | | 86 | 115 | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | | Limits | | RPD | | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW5030C8260C | LCSD1403131 | dichlorodifluoromethane | | | 14 | ug/L | 20 | 69 | * | 70 | 130 | 9 | | 20 |
| | | chloromethane | | | 16 | ug/L | 20 | 80 | | 70 | 130 | 8 | | 20 |
| | | vinyl chloride | | | 16 | ug/L | 20 | 81 | | 70 | 130 | 5 | | 20 |
| | | bromomethane | | | 18 | ug/L | 20 | 90 | | 70 | 130 | 17 | | 20 |
| | | chloroethane | | | 16 | ug/L | 20 | 82 | | 70 | 130 | 7 | | 20 |
| | | trichlorofluoromethane | | | 17 | ug/L | 20 | 84 | | 70 | 130 | 9 | | 20 |
| | | diethyl ether | | | 19 | ug/L | 20 | 95 | | 70 | 130 | 11 | | 20 |
| | | acetone | | < | 50 | ug/L | 20 | 89 | | | | 23 | * | 20 |
| | | 1,1-dichloroethene | | | 16 | ug/L | 20 | 82 | | 70 | 130 | 4 | | 20 |
| | | methylene chloride | | | 18 | ug/L | 20 | 92 | | 70 | 130 | 2 | | 20 |
| | | carbon disulfide | | | 17 | ug/L | 20 | 85 | | 70 | 130 | 2 | | 20 |
| | | methyl t-butyl ether (MTBE) | | | 18 | ug/L | 20 | 88 | | 70 | 130 | 6 | | 20 |
| | | trans-1,2-dichloroethene | | | 18 | ug/L | 20 | 89 | | 70 | 130 | 1 | | 20 |
| | | isopropyl ether (DIPE) | | | 18 | ug/L | 20 | 89 | | 70 | 130 | 8 | | 20 |
| | | ethyl t-butyl ether (ETBE) | | | 18 | ug/L | 20 | 88 | | 70 | 130 | 6 | | 20 |
| | | 1,1-dichloroethane | | | 17 | ug/L | 20 | 87 | | 70 | 130 | 5 | | 20 |
| | | t-butanol (TBA) | | | 120 | ug/L | 100 | 122 | | 70 | 130 | 10 | | 20 |
| | | 2-butanone (MEK) | | | 18 | ug/L | 20 | 89 | | 70 | 130 | 15 | | 20 |
| | | 2,2-dichloropropane | | | 17 | ug/L | 20 | 83 | | 70 | 130 | 2 | | 20 |
| | | cis-1,2-dichloroethene | | | 17 | ug/L | 20 | 85 | | 70 | 130 | 6 | | 20 |
| | | chloroform | | | 18 | ug/L | 20 | 89 | | 70 | 130 | 4 | | 20 |
| | | bromochloromethane | | | 17 | ug/L | 20 | 85 | | 70 | 130 | 11 | | 20 |
| | | tetrahydrofuran (THF) | | | 17 | ug/L | 20 | 84 | | 70 | 130 | 20 | | 20 |
| | | 1,1,1-trichloroethane | | | 18 | ug/L | 20 | 89 | | 70 | 130 | 1 | | 20 |
| | | 1,1-dichloropropene | | | 18 | ug/L | 20 | 88 | | 70 | 130 | 1 | | 20 |
| | | t-amyl-methyl ether (TAME) | | | 17 | ug/L | 20 | 85 | | 70 | 130 | 7 | | 20 |
| | | carbon tetrachloride | | | 16 | ug/L | 20 | 81 | | 70 | 130 | 2 | | 20 |
| | | 1,2-dichloroethane | | | 18 | ug/L | 20 | 88 | | 70 | 130 | 7 | | 20 |
| | | benzene | | | 18 | ug/L | 20 | 88 | | 70 | 130 | 3 | | 20 |
| | | trichloroethene | | | 17 | ug/L | 20 | 84 | | 70 | 130 | 6 | | 20 |
| | | 1,2-dichloropropane | | | 18 | ug/L | 20 | 88 | | 70 | 130 | 5 | | 20 |
| | | bromodichloromethane | | | 17 | ug/L | 20 | 86 | | 70 | 130 | 3 | | 20 |
| | | 1,4-dioxane | | | 55 | ug/L | 40 | 137 | * | 70 | 130 | 42 | * | 20 |
| | | dibromomethane | | | 19 | ug/L | 20 | 93 | | 70 | 130 | 2 | | 20 |
| | | 4-methyl-2-pentanone (MIBK) | | | 17 | ug/L | 20 | 83 | | 70 | 130 | 18 | | 20 |
| | | cis-1,3-dichloropropene | | | 16 | ug/L | 20 | 82 | | 70 | 130 | 7 | | 20 |
| | | toluene | | | 18 | ug/L | 20 | 88 | | 70 | 130 | 5 | | 20 |
| | | trans-1,3-dichloropropene | | | 16 | ug/L | 20 | 82 | | 70 | 130 | 4 | | 20 |
| | | 2-hexanone | | | 17 | ug/L | 20 | 86 | | 70 | 130 | 12 | | 20 |
| | | 1,1,2-trichloroethane | | | 18 | ug/L | 20 | 89 | | 70 | 130 | 11 | | 20 |
| | | 1,3-dichloropropane | | | 19 | ug/L | 20 | 97 | | 70 | 130 | 4 | | 20 |
| | | tetrachloroethene | | | 19 | ug/L | 20 | 97 | | 70 | 130 | 1 | | 20 |
| | | dibromochloromethane | | | 19 | ug/L | 20 | 94 | | 70 | 130 | 0 | | 20 |
| | | 1,2-dibromoethane (EDB) | | | 20 | ug/L | 20 | 100 | | 70 | 130 | 2 | | 20 |
| | | chlorobenzene | | | 19 | ug/L | 20 | 97 | | 70 | 130 | 2 | | 20 |
| | | 1,1,1,2-tetrachloroethane | | | 19 | ug/L | 20 | 95 | | 70 | 130 | 1 | | 20 |
| | | ethylbenzene | | | 18 | ug/L | 20 | 91 | | 70 | 130 | 3 | | 20 |
| | | m&p-xylenes | | | 38 | ug/L | 40 | 95 | | 70 | 130 | 0 | | 20 |
| | | o-xylene | | | 19 | ug/L | 20 | 97 | | 70 | 130 | 0 | | 20 |
| | | styrene | | | 19 | ug/L | 20 | 95 | | 70 | 130 | 2 | | 20 |
| | | bromoform | | | 19 | ug/L | 20 | 96 | | 70 | 130 | 6 | | 20 |

| Method | QC ID | Parameter | Associated Sample | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SW5030C8260C | LCSD1403131 | isopropylbenzene | | 19 | ug/L | 20 | 93 | 70 | 130 | 3 | 20 |
| | | 1,1,2,2-tetrachloroethane | | 23 | ug/L | 20 | 113 | 70 | 130 | 1 | 20 |
| | | 1,2,3-trichloropropane | | 22 | ug/L | 20 | 111 | 70 | 130 | 2 | 20 |
| | | n-propylbenzene | | 21 | ug/L | 20 | 103 | 70 | 130 | 0 | 20 |
| | | bromobenzene | | 22 | ug/L | 20 | 108 | 70 | 130 | 2 | 20 |
| | | 1,3,5-trimethylbenzene | | 22 | ug/L | 20 | 110 | 70 | 130 | 1 | 20 |
| | | 2-chlorotoluene | | 20 | ug/L | 20 | 98 | 70 | 130 | 14 | 20 |
| | | 4-chlorotoluene | | 22 | ug/L | 20 | 112 | 70 | 130 | 10 | 20 |
| | | tert-butylbenzene | | 21 | ug/L | 20 | 103 | 70 | 130 | 3 | 20 |
| | | 1,2,4-trimethylbenzene | | 22 | ug/L | 20 | 110 | 70 | 130 | 0 | 20 |
| | | sec-butylbenzene | | 20 | ug/L | 20 | 101 | 70 | 130 | 2 | 20 |
| | | 1,3-dichlorobenzene | | 21 | ug/L | 20 | 103 | 70 | 130 | 0 | 20 |
| | | 4-isopropyltoluene | | 20 | ug/L | 20 | 99 | 70 | 130 | 2 | 20 |
| | | 1,4-dichlorobenzene | | 22 | ug/L | 20 | 108 | 70 | 130 | 2 | 20 |
| | | 1,2-dichlorobenzene | | 22 | ug/L | 20 | 109 | 70 | 130 | 0 | 20 |
| | | n-butylbenzene | | 19 | ug/L | 20 | 95 | 70 | 130 | 3 | 20 |
| | | 1,2-dibromo-3-chloropropane (DBCP) | | 20 | ug/L | 20 | 98 | 70 | 130 | 7 | 20 |
| | | 1,2,4-trichlorobenzene | | 21 | ug/L | 20 | 107 | 70 | 130 | 1 | 20 |
| | | 1,3,5-trichlorobenzene | | 21 | ug/L | 20 | 106 | 70 | 130 | 0 | 20 |
| | | hexachlorobutadiene | | 19 | ug/L | 20 | 97 | 70 | 130 | 7 | 20 |
| | | naphthalene | | 22 | ug/L | 20 | 109 | 70 | 130 | 4 | 20 |
| | | 1,2,3-trichlorobenzene | | 20 | ug/L | 20 | 98 | 70 | 130 | 1 | 20 |
| | | dibromofluoromethane SUR | | 99 | % | | | 78 | 114 | | |
| | | toluene-D8 SUR | | 97 | % | | | 88 | 110 | | |
| | | 4-bromofluorobenzene SUR | | 100 | % | | | 86 | 115 | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SW3510C8270D | BLK7395 | N-nitrosodimethylamine | | < | 2 | ug/L | | | | | |
| | | aniline | | < | 2 | ug/L | | | | | |
| | | phenol | | < | 2 | ug/L | | | | | |
| | | 2-chlorophenol | | < | 5 | ug/L | | | | | |
| | | bis(2-chloroethyl)ether | | < | 2 | ug/L | | | | | |
| | | 1,3-dichlorobenzene | | < | 2 | ug/L | | | | | |
| | | 1,4-dichlorobenzene | | < | 2 | ug/L | | | | | |
| | | 1,2-dichlorobenzene | | < | 2 | ug/L | | | | | |
| | | benzyl alcohol | | < | 2 | ug/L | | | | | |
| | | 2-methylphenol | | < | 2 | ug/L | | | | | |
| | | bis(2-chloroisopropyl) ether | | < | 2 | ug/L | | | | | |
| | | hexachloroethane | | < | 2 | ug/L | | | | | |
| | | N-nitroso-di-N-propylamine | | < | 2 | ug/L | | | | | |
| | | 4-methylphenol | | < | 2 | ug/L | | | | | |
| | | nitrobenzene | | < | 2 | ug/L | | | | | |
| | | isophorone | | < | 5 | ug/L | | | | | |
| | | 2-nitrophenol | | < | 2 | ug/L | | | | | |
| | | 2,4-dimethylphenol | | < | 2 | ug/L | | | | | |
| | | bis(2-chloroethoxy)methane | | < | 5 | ug/L | | | | | |
| | | 2,4-dichlorophenol | | < | 5 | ug/L | | | | | |
| | | 1,2,4-trichlorobenzene | | < | 5 | ug/L | | | | | |
| | | naphthalene | | < | 0.5 | ug/L | | | | | |
| | | benzoic acid | | < | 50 | ug/L | | | | | |
| | | 4-chloroaniline | | < | 2 | ug/L | | | | | |
| | | hexachlorobutadiene | | < | 2 | ug/L | | | | | |
| | | 4-chloro-3-methylphenol | | < | 2 | ug/L | | | | | |
| | | 2-methylnaphthalene | | < | 0.5 | ug/L | | | | | |
| | | hexachlorocyclopentadiene | | < | 10 | ug/L | | | | | |
| | | 2,4,6-trichlorophenol | | < | 2 | ug/L | | | | | |
| | | 2,4,5-trichlorophenol | | < | 2 | ug/L | | | | | |
| | | 2-chloronaphthalene | | < | 5 | ug/L | | | | | |
| | | 2-nitroaniline | | < | 2 | ug/L | | | | | |
| | | acenaphthylene | | < | 0.5 | ug/L | | | | | |
| | | dimethylphthalate | | < | 5 | ug/L | | | | | |
| | | 2,6-dinitrotoluene | | < | 2 | ug/L | | | | | |
| | | 2,4-dinitrotoluene | | < | 2 | ug/L | | | | | |
| | | acenaphthene | | < | 0.5 | ug/L | | | | | |
| | | 3-nitroaniline | | < | 2 | ug/L | | | | | |
| | | 2,4-dinitrophenol | | < | 50 | ug/L | | | | | |
| | | dibenzofuran | | < | 0.5 | ug/L | | | | | |
| | | 4-nitrophenol | | < | 10 | ug/L | | | | | |
| | | fluorene | | < | 0.5 | ug/L | | | | | |
| | | diethyl phthalate | | < | 5 | ug/L | | | | | |
| | | 4-chlorophenyl phenyl ether | | < | 5 | ug/L | | | | | |
| | | 4-nitroaniline | | < | 5 | ug/L | | | | | |
| | | 4,6-dinitro-2-methylphenol | | < | 20 | ug/L | | | | | |
| | | azobenzene | | < | 2 | ug/L | | | | | |
| | | N-nitrosodiphenylamine | | < | 2 | ug/L | | | | | |
| | | 4-bromophenyl phenyl ether | | < | 2 | ug/L | | | | | |
| | | hexachlorobenzene | | < | 2 | ug/L | | | | | |
| | | pentachlorophenol | | < | 10 | ug/L | | | | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW3510C8270D | BLK7395 | phenanthrene | | < | 0.5 | ug/L | | | | | | |
| | | anthracene | | < | 0.5 | ug/L | | | | | | |
| | | carbazole | | < | 2 | ug/L | | | | | | |
| | | di-n-butylphthalate | | < | 5 | ug/L | | | | | | |
| | | fluoranthene | | < | 0.5 | ug/L | | | | | | |
| | | benzidine | | < | 30 | ug/L | | | | | | |
| | | pyrene | | < | 0.5 | ug/L | | | | | | |
| | | butyl benzyl phthalate | | < | 5 | ug/L | | | | | | |
| | | benzo(a)anthracene | | < | 0.5 | ug/L | | | | | | |
| | | chrysene | | < | 0.5 | ug/L | | | | | | |
| | | 3,3'-dichlorobenzidine | | < | 30 | ug/L | | | | | | |
| | | bis(2-ethylhexyl)phthalate | | < | 5 | ug/L | | | | | | |
| | | di-n-octyl phthalate | | < | 2 | ug/L | | | | | | |
| | | benzo(b)fluoranthene | | < | 0.5 | ug/L | | | | | | |
| | | benzo(k)fluoranthene | | < | 0.5 | ug/L | | | | | | |
| | | benzo(a)pyrene | | < | 0.2 | ug/L | | | | | | |
| | | indeno(1,2,3-cd)pyrene | | < | 0.5 | ug/L | | | | | | |
| | | dibenzo(a,h)anthracene | | < | 0.5 | ug/L | | | | | | |
| | | benzo(g,h,i)perylene | | < | 0.5 | ug/L | | | | | | |
| | | 2-fluorophenol SUR | | | 41 | % | | | 21 | 100 | | |
| | | phenol-D5 SUR | | | 28 | % | | | 10 | 102 | | |
| | | 2,4,6-tribromophenol SUR | | | 83 | % | | | 10 | 123 | | |
| | | nitrobenzene-D5 SUR | | | 72 | % | | | 35 | 114 | | |
| | | 2-fluorobiphenyl SUR | | | 60 | % | | | 43 | 116 | | |
| | | p-terphenyl-D14 SUR | | | 113 | % | | | 33 | 141 | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW3510C8270D | LCS7395 | N-nitrosodimethylamine | | | 16 | ug/L | 40 | 40 | | 40 | 140 | | |
| | | aniline | | | 25 | ug/L | 40 | 62 | | 40 | 140 | | |
| | | phenol | | | 12 | ug/L | 40 | 30 | | 30 | 130 | | |
| | | 2-chlorophenol | | | 25 | ug/L | 40 | 62 | | 30 | 130 | | |
| | | bis(2-chloroethyl)ether | | | 26 | ug/L | 40 | 65 | | 40 | 140 | | |
| | | 1,3-dichlorobenzene | | | 17 | ug/L | 40 | 43 | | 40 | 140 | | |
| | | 1,4-dichlorobenzene | | | 18 | ug/L | 40 | 46 | | 40 | 140 | | |
| | | 1,2-dichlorobenzene | | | 19 | ug/L | 40 | 47 | | 40 | 140 | | |
| | | benzyl alcohol | | | 22 | ug/L | 40 | 55 | | 30 | 130 | | |
| | | 2-methylphenol | | | 23 | ug/L | 40 | 57 | | 30 | 130 | | |
| | | bis(2-chloroisopropyl) ether | | | 25 | ug/L | 40 | 62 | | 40 | 140 | | |
| | | hexachloroethane | | | 16 | ug/L | 40 | 39 | * | 40 | 140 | | |
| | | N-nitroso-di-N-propylamine | | | 26 | ug/L | 40 | 65 | | 40 | 140 | | |
| | | 4-methylphenol | | | 23 | ug/L | 40 | 56 | | 30 | 130 | | |
| | | nitrobenzene | | | 27 | ug/L | 40 | 67 | | 40 | 140 | | |
| | | isophorone | | | 31 | ug/L | 40 | 76 | | 40 | 140 | | |
| | | 2-nitrophenol | | | 26 | ug/L | 40 | 64 | | 30 | 130 | | |
| | | 2,4-dimethylphenol | | | 17 | ug/L | 40 | 41 | | 30 | 130 | | |
| | | bis(2-chloroethoxy)methane | | | 28 | ug/L | 40 | 69 | | 40 | 140 | | |
| | | 2,4-dichlorophenol | | | 29 | ug/L | 40 | 71 | | 30 | 130 | | |
| | | 1,2,4-trichlorobenzene | | | 22 | ug/L | 40 | 54 | | 40 | 140 | | |
| | | naphthalene | | | 22 | ug/L | 40 | 56 | | 40 | 140 | | |
| | | benzoic acid | | < | 50 | ug/L | | | | | | | |
| | | 4-chloroaniline | | | 32 | ug/L | 40 | 81 | | 40 | 140 | | |
| | | hexachlorobutadiene | | | 20 | ug/L | 40 | 50 | | 40 | 140 | | |
| | | 4-chloro-3-methylphenol | | | 30 | ug/L | 40 | 74 | | 30 | 130 | | |
| | | 2-methylnaphthalene | | | 24 | ug/L | 40 | 59 | | 40 | 140 | | |
| | | hexachlorocyclopentadiene | | | 17 | ug/L | 40 | 43 | | 40 | 140 | | |
| | | 2,4,6-trichlorophenol | | | 32 | ug/L | 40 | 81 | | 30 | 130 | | |
| | | 2,4,5-trichlorophenol | | | 31 | ug/L | 40 | 77 | | 30 | 130 | | |
| | | 2-chloronaphthalene | | | 25 | ug/L | 40 | 63 | | 40 | 140 | | |
| | | 2-nitroaniline | | | 27 | ug/L | 40 | 66 | | 40 | 140 | | |
| | | acenaphthylene | | | 26 | ug/L | 40 | 64 | | 40 | 140 | | |
| | | dimethylphthalate | | | 20 | ug/L | 40 | 51 | | 40 | 140 | | |
| | | 2,6-dinitrotoluene | | | 29 | ug/L | 40 | 73 | | 40 | 140 | | |
| | | 2,4-dinitrotoluene | | | 29 | ug/L | 40 | 74 | | 40 | 140 | | |
| | | acenaphthene | | | 25 | ug/L | 40 | 63 | | 40 | 140 | | |
| | | 3-nitroaniline | | | 31 | ug/L | 40 | 77 | | 40 | 140 | | |
| | | 2,4-dinitrophenol | | < | 50 | ug/L | | | | | | | |
| | | dibenzofuran | | | 29 | ug/L | 40 | 72 | | 40 | 140 | | |
| | | 4-nitrophenol | | | 12 | ug/L | 40 | 30 | | 30 | 130 | | |
| | | fluorene | | | 28 | ug/L | 40 | 69 | | 40 | 140 | | |
| | | diethyl phthalate | | | 27 | ug/L | 40 | 68 | | 40 | 140 | | |
| | | 4-chlorophenyl phenyl ether | | | 29 | ug/L | 40 | 72 | | 40 | 140 | | |
| | | 4-nitroaniline | | | 27 | ug/L | 40 | 68 | | 40 | 140 | | |
| | | 4,6-dinitro-2-methylphenol | | | 30 | ug/L | | | | | | | |
| | | azobenzene | | | 30 | ug/L | 40 | 74 | | 40 | 140 | | |
| | | N-nitrosodiphenylamine | | | 30 | ug/L | 40 | 76 | | 40 | 140 | | |
| | | 4-bromophenyl phenyl ether | | | 28 | ug/L | 40 | 69 | | 40 | 140 | | |
| | | hexachlorobenzene | | | 30 | ug/L | 40 | 75 | | 40 | 140 | | |
| | | pentachlorophenol | | | 30 | ug/L | 40 | 75 | | 30 | 130 | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW3510C8270D | LCS7395 | phenanthrene | | | 29 | ug/L | 40 | 72 | 40 | 140 | | |
| | | anthracene | | | 28 | ug/L | 40 | 69 | 40 | 140 | | |
| | | carbazole | | | 27 | ug/L | 40 | 68 | 40 | 140 | | |
| | | di-n-butylphthalate | | | 29 | ug/L | 40 | 74 | 40 | 140 | | |
| | | fluoranthene | | | 28 | ug/L | 40 | 70 | 40 | 140 | | |
| | | benzidine | | < | 30 | ug/L | | | | | | |
| | | pyrene | | | 32 | ug/L | 40 | 80 | 40 | 140 | | |
| | | butyl benzyl phthalate | | | 38 | ug/L | 40 | 95 | 40 | 140 | | |
| | | benzo(a)anthracene | | | 31 | ug/L | 40 | 77 | 40 | 140 | | |
| | | chrysene | | | 30 | ug/L | 40 | 75 | 40 | 140 | | |
| | | 3,3'-dichlorobenzidine | | < | 30 | ug/L | | | | | | |
| | | bis(2-ethylhexyl)phthalate | | | 32 | ug/L | 40 | 79 | 40 | 140 | | |
| | | di-n-octyl phthalate | | | 33 | ug/L | 40 | 81 | 40 | 140 | | |
| | | benzo(b)fluoranthene | | | 27 | ug/L | 40 | 68 | 40 | 140 | | |
| | | benzo(k)fluoranthene | | | 30 | ug/L | 40 | 75 | 40 | 140 | | |
| | | benzo(a)pyrene | | | 30 | ug/L | 40 | 76 | 40 | 140 | | |
| | | indeno(1,2,3-cd)pyrene | | | 33 | ug/L | 40 | 82 | 40 | 140 | | |
| | | dibenzo(a,h)anthracene | | | 33 | ug/L | 40 | 83 | 40 | 140 | | |
| | | benzo(g,h,i)perylene | | | 33 | ug/L | 40 | 83 | 40 | 140 | | |
| | | 2-fluorophenol SUR | | | 49 | % | | | 21 | 100 | | |
| | | phenol-D5 SUR | | | 35 | % | | | 10 | 102 | | |
| | | 2,4,6-tribromophenol SUR | | | 95 | % | | | 10 | 123 | | |
| | | nitrobenzene-D5 SUR | | | 76 | % | | | 35 | 114 | | |
| | | 2-fluorobiphenyl SUR | | | 71 | % | | | 43 | 116 | | |
| | | p-terphenyl-D14 SUR | | | 102 | % | | | 33 | 141 | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW3510C8270D | LCSD7395 | N-nitrosodimethylamine | | | 16 | ug/L | 40 | 41 | | 40 | 140 | 1 | 20 |
| | | aniline | | | 23 | ug/L | 40 | 59 | | 40 | 140 | 5 | 20 |
| | | phenol | | | 11 | ug/L | 40 | 29 | * | 30 | 130 | 5 | 20 |
| | | 2-chlorophenol | | | 23 | ug/L | 40 | 58 | | 30 | 130 | 6 | 20 |
| | | bis(2-chloroethyl)ether | | | 28 | ug/L | 40 | 70 | | 40 | 140 | 7 | 20 |
| | | 1,3-dichlorobenzene | | | 16 | ug/L | 40 | 41 | | 40 | 140 | 5 | 20 |
| | | 1,4-dichlorobenzene | | | 17 | ug/L | 40 | 44 | | 40 | 140 | 5 | 20 |
| | | 1,2-dichlorobenzene | | | 17 | ug/L | 40 | 44 | | 40 | 140 | 6 | 20 |
| | | benzyl alcohol | | | 22 | ug/L | 40 | 55 | | 30 | 130 | 1 | 20 |
| | | 2-methylphenol | | | 21 | ug/L | 40 | 53 | | 30 | 130 | 7 | 20 |
| | | bis(2-chloroisopropyl) ether | | | 25 | ug/L | 40 | 62 | | 40 | 140 | 0 | 20 |
| | | hexachloroethane | | | 14 | ug/L | 40 | 36 | * | 40 | 140 | 9 | 20 |
| | | N-nitroso-di-N-propylamine | | | 26 | ug/L | 40 | 64 | | 40 | 140 | 2 | 20 |
| | | 4-methylphenol | | | 21 | ug/L | 40 | 53 | | 30 | 130 | 7 | 20 |
| | | nitrobenzene | | | 27 | ug/L | 40 | 69 | | 40 | 140 | 3 | 20 |
| | | isophorone | | | 30 | ug/L | 40 | 75 | | 40 | 140 | 1 | 20 |
| | | 2-nitrophenol | | | 23 | ug/L | 40 | 58 | | 30 | 130 | 10 | 20 |
| | | 2,4-dimethylphenol | | | 13 | ug/L | 40 | 33 | | 30 | 130 | 24 * | 20 |
| | | bis(2-chloroethoxy)methane | | | 27 | ug/L | 40 | 68 | | 40 | 140 | 2 | 20 |
| | | 2,4-dichlorophenol | | | 27 | ug/L | 40 | 67 | | 30 | 130 | 6 | 20 |
| | | 1,2,4-trichlorobenzene | | | 21 | ug/L | 40 | 54 | | 40 | 140 | 1 | 20 |
| | | naphthalene | | | 22 | ug/L | 40 | 56 | | 40 | 140 | 0 | 20 |
| | | benzoic acid | | < | 50 | ug/L | | | | | | | 20 |
| | | 4-chloroaniline | | | 32 | ug/L | 40 | 79 | | 40 | 140 | 2 | 20 |
| | | hexachlorobutadiene | | | 19 | ug/L | 40 | 48 | | 40 | 140 | 3 | 20 |
| | | 4-chloro-3-methylphenol | | | 29 | ug/L | 40 | 72 | | 30 | 130 | 3 | 20 |
| | | 2-methylnaphthalene | | | 23 | ug/L | 40 | 57 | | 40 | 140 | 2 | 20 |
| | | hexachlorocyclopentadiene | | | 16 | ug/L | 40 | 41 | | 40 | 140 | 4 | 20 |
| | | 2,4,6-trichlorophenol | | | 32 | ug/L | 40 | 79 | | 30 | 130 | 2 | 20 |
| | | 2,4,5-trichlorophenol | | | 30 | ug/L | 40 | 75 | | 30 | 130 | 3 | 20 |
| | | 2-chloronaphthalene | | | 24 | ug/L | 40 | 61 | | 40 | 140 | 4 | 20 |
| | | 2-nitroaniline | | | 26 | ug/L | 40 | 65 | | 40 | 140 | 2 | 20 |
| | | acenaphthylene | | | 25 | ug/L | 40 | 62 | | 40 | 140 | 3 | 20 |
| | | dimethylphthalate | | | 19 | ug/L | 40 | 48 | | 40 | 140 | 7 | 20 |
| | | 2,6-dinitrotoluene | | | 28 | ug/L | 40 | 69 | | 40 | 140 | 5 | 20 |
| | | 2,4-dinitrotoluene | | | 28 | ug/L | 40 | 70 | | 40 | 140 | 4 | 20 |
| | | acenaphthene | | | 24 | ug/L | 40 | 59 | | 40 | 140 | 6 | 20 |
| | | 3-nitroaniline | | | 30 | ug/L | 40 | 75 | | 40 | 140 | 3 | 20 |
| | | 2,4-dinitrophenol | | < | 50 | ug/L | | | | | | | 20 |
| | | dibenzofuran | | | 28 | ug/L | 40 | 69 | | 40 | 140 | 4 | 20 |
| | | 4-nitrophenol | | | 13 | ug/L | 40 | 32 | | 30 | 130 | 7 | 20 |
| | | fluorene | | | 27 | ug/L | 40 | 67 | | 40 | 140 | 3 | 20 |
| | | diethyl phthalate | | | 27 | ug/L | 40 | 66 | | 40 | 140 | 3 | 20 |
| | | 4-chlorophenyl phenyl ether | | | 28 | ug/L | 40 | 69 | | 40 | 140 | 3 | 20 |
| | | 4-nitroaniline | | | 26 | ug/L | 40 | 65 | | 40 | 140 | 3 | 20 |
| | | 4,6-dinitro-2-methylphenol | | | 29 | ug/L | | | | | | | 20 |
| | | azobenzene | | | 29 | ug/L | 40 | 73 | | 40 | 140 | 2 | 20 |
| | | N-nitrosodiphenylamine | | | 30 | ug/L | 40 | 74 | | 40 | 140 | 2 | 20 |
| | | 4-bromophenyl phenyl ether | | | 27 | ug/L | 40 | 67 | | 40 | 140 | 2 | 20 |
| | | hexachlorobenzene | | | 29 | ug/L | 40 | 73 | | 40 | 140 | 3 | 20 |
| | | pentachlorophenol | | | 30 | ug/L | 40 | 74 | | 30 | 130 | 1 | 20 |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW3510C8270D | LCSD7395 | phenanthrene | | | 28 | ug/L | 40 | 70 | 40 | 140 | 3 | 20 |
| | | anthracene | | | 27 | ug/L | 40 | 67 | 40 | 140 | 3 | 20 |
| | | carbazole | | | 27 | ug/L | 40 | 66 | 40 | 140 | 3 | 20 |
| | | di-n-butylphthalate | | | 28 | ug/L | 40 | 71 | 40 | 140 | 4 | 20 |
| | | fluoranthene | | | 27 | ug/L | 40 | 69 | 40 | 140 | 2 | 20 |
| | | benzidine | | < | 30 | ug/L | | | | | | 20 |
| | | pyrene | | | 32 | ug/L | 40 | 79 | 40 | 140 | 2 | 20 |
| | | butyl benzyl phthalate | | | 37 | ug/L | 40 | 93 | 40 | 140 | 2 | 20 |
| | | benzo(a)anthracene | | | 30 | ug/L | 40 | 74 | 40 | 140 | 3 | 20 |
| | | chrysene | | | 30 | ug/L | 40 | 75 | 40 | 140 | 0 | 20 |
| | | 3,3'-dichlorobenzidine | | < | 30 | ug/L | | | | | | 20 |
| | | bis(2-ethylhexyl)phthalate | | | 31 | ug/L | 40 | 78 | 40 | 140 | 2 | 20 |
| | | di-n-octyl phthalate | | | 32 | ug/L | 40 | 80 | 40 | 140 | 2 | 20 |
| | | benzo(b)fluoranthene | | | 30 | ug/L | 40 | 75 | 40 | 140 | 9 | 20 |
| | | benzo(k)fluoranthene | | | 31 | ug/L | 40 | 78 | 40 | 140 | 4 | 20 |
| | | benzo(a)pyrene | | | 30 | ug/L | 40 | 75 | 40 | 140 | 1 | 20 |
| | | indeno(1,2,3-cd)pyrene | | | 33 | ug/L | 40 | 82 | 40 | 140 | 0 | 20 |
| | | dibenzo(a,h)anthracene | | | 33 | ug/L | 40 | 82 | 40 | 140 | 1 | 20 |
| | | benzo(g,h,i)perylene | | | 33 | ug/L | 40 | 83 | 40 | 140 | 1 | 20 |
| | | 2-fluorophenol SUR | | | 46 | % | | | 21 | 100 | | |
| | | phenol-D5 SUR | | | 33 | % | | | 10 | 102 | | |
| | | 2,4,6-tribromophenol SUR | | | 94 | % | | | 10 | 123 | | |
| | | nitrobenzene-D5 SUR | | | 76 | % | | | 35 | 114 | | |
| | | 2-fluorobiphenyl SUR | | | 68 | % | | | 43 | 116 | | |
| | | p-terphenyl-D14 SUR | | | 98 | % | | | 33 | 141 | | |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW3005A6010C | BLK7411 | Silver | | < | 0.005 | mg/L | | | | | | |
| | | Arsenic | | < | 0.008 | mg/L | | | | | | |
| | | Barium | | < | 0.05 | mg/L | | | | | | |
| | | Cadmium | | < | 0.004 | mg/L | | | | | | |
| | | Chromium | | < | 0.05 | mg/L | | | | | | |
| | | Lead | | < | 0.01 | mg/L | | | | | | |
| | | Selenium | | < | 0.05 | mg/L | | | | | | |
| SW3005A6010C | LCS7411 | Silver | | | 0.26 | mg/L | 0.25 | 102 | 80 | 120 | | |
| | | Arsenic | | | 0.51 | mg/L | 0.5 | 102 | 80 | 120 | | |
| | | Barium | | | 0.51 | mg/L | 0.5 | 102 | 80 | 120 | | |
| | | Cadmium | | | 0.51 | mg/L | 0.5 | 101 | 80 | 120 | | |
| | | Chromium | | | 0.52 | mg/L | 0.5 | 104 | 80 | 120 | | |
| | | Lead | | | 0.52 | mg/L | 0.5 | 103 | 80 | 120 | | |
| | | Selenium | | | 0.51 | mg/L | 0.5 | 103 | 80 | 120 | | |
| SW3005A6010C | MS7411 | Silver | 31599-010 | | 0.19 | mg/L | 0.25 | 75 | 75 | 125 | | |
| | | Arsenic | 31599-010 | | 0.47 | mg/L | 0.5 | 93 | 75 | 125 | | |
| | | Cadmium | 31599-010 | | 0.48 | mg/L | 0.5 | 95 | 75 | 125 | | |
| | | Chromium | 31599-010 | | 0.48 | mg/L | 0.5 | 95 | 75 | 125 | | |
| | | Lead | 31599-010 | | 0.49 | mg/L | 0.5 | 98 | 75 | 125 | | |
| | | Selenium | 31599-010 | | 0.51 | mg/L | 0.5 | 101 | 75 | 125 | | |
| SW3005A6010C | MS7411 | Silver | 31611-005 | | 0.19 | mg/L | 0.25 | 75 | 75 | 125 | | |
| | | Arsenic | 31611-005 | | 0.49 | mg/L | 0.5 | 96 | 75 | 125 | | |
| | | Barium | 31611-005 | | 0.53 | mg/L | 0.5 | 97 | 75 | 125 | | |
| | | Cadmium | 31611-005 | | 0.48 | mg/L | 0.5 | 97 | 75 | 125 | | |
| | | Chromium | 31611-005 | | 0.49 | mg/L | 0.5 | 98 | 75 | 125 | | |
| | | Lead | 31611-005 | | 0.49 | mg/L | 0.5 | 98 | 75 | 125 | | |
| | | Selenium | 31611-005 | | 0.52 | mg/L | 0.5 | 104 | 75 | 125 | | |
| SW3005A6010C | MSD7411 | Silver | 31599-010 | | 0.19 | mg/L | 0.25 | 75 | 75 | 125 | 0 | 20 |
| | | Arsenic | 31599-010 | | 0.48 | mg/L | 0.5 | 94 | 75 | 125 | 2 | 20 |
| | | Cadmium | 31599-010 | | 0.48 | mg/L | 0.5 | 97 | 75 | 125 | 2 | 20 |
| | | Chromium | 31599-010 | | 0.48 | mg/L | 0.5 | 97 | 75 | 125 | 1 | 20 |
| | | Lead | 31599-010 | | 0.49 | mg/L | 0.5 | 99 | 75 | 125 | 1 | 20 |
| | | Selenium | 31599-010 | | 0.51 | mg/L | 0.5 | 102 | 75 | 125 | 1 | 20 |
| SW3005A6010C | MSD7411 | Silver | 31611-005 | | 0.19 | mg/L | 0.25 | 77 | 75 | 125 | 2 | 20 |
| | | Arsenic | 31611-005 | | 0.50 | mg/L | 0.5 | 98 | 75 | 125 | 2 | 20 |
| | | Barium | 31611-005 | | 0.54 | mg/L | 0.5 | 98 | 75 | 125 | 1 | 20 |
| | | Cadmium | 31611-005 | | 0.50 | mg/L | 0.5 | 99 | 75 | 125 | 2 | 20 |
| | | Chromium | 31611-005 | | 0.50 | mg/L | 0.5 | 100 | 75 | 125 | 2 | 20 |
| | | Lead | 31611-005 | | 0.50 | mg/L | 0.5 | 101 | 75 | 125 | 2 | 20 |
| | | Selenium | 31611-005 | | 0.53 | mg/L | 0.5 | 106 | 75 | 125 | 2 | 20 |

| Method | QC ID | Parameter | Associated Sample | | Result | Units | Amt Added | %R | Limits | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW7470A | BLK7402 | Mercury | | < | 0.0002 | mg/L | | | | | | |
| SW7470A | LCS7402 | Mercury | | | 0.0019 | mg/L | 0.002 | 94 | 80 | 120 | | |
| SW7470A | LCSD7402 | Mercury | | | 0.0018 | mg/L | 0.002 | 91 | 80 | 120 | 3 | 20 |
| SW7470A | MS7402 | Mercury | 31599-010 | | 0.0019 | mg/L | 0.002 | 95 | 75 | 125 | | |
| SW7470A | MS7402 | Mercury | 31611-005 | | 0.0019 | mg/L | 0.002 | 96 | 75 | 125 | | |
| SW7470A | MSD7402 | Mercury | 31599-010 | | 0.0019 | mg/L | 0.002 | 97 | 75 | 125 | 2 | 20 |
| SW7470A | MSD7402 | Mercury | 31611-005 | | 0.0019 | mg/L | 0.002 | 96 | 75 | 125 | 1 | 20 |

Absolute Resource associates
124 Heritage Avenue #16
Portsmouth, NH 03801
603-436-2001
absoluteresourceassociates.com

# CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

31611

Company Name: Credere Associates, LLC
Company Address: 776 Main St Westbrook, ME
Report To: Allison Draum
Phone #: 207-749-1141
Invoice to Email: TPatten@credenellc.com
☐ Hard Copy Invoice Required

Project Name: R+D Paving
Project #: 14001247
Project Location: (NH) MA ME VT NY Other
Protocol: RCRA SDWA NPDES MCP (NHDES) OTHER
Reporting Limits: (QAPP) GW-1 S-1 EPA DW Other
Quote # ☐ NH Reimbursement Pricing
PO #

## ANALYSIS REQUEST

| Lab Sample ID (Lab Use Only) | Field ID | # CONTAINERS | Matrix: WATER | SOLID | OTHER | Preservation Method: HCl | $HNO_3$ | $H_2SO_4$ | NaOH | MeOH | Sampling: DATE | TIME | SAMPLER | VOC 8260 | VOC 624 | VPH MADEP | VOC 524.2 | TPH | 8270/PAH | 8082 PCB | O&G 1664 | pH | TSS | RCRA Metals | Total Metals-list: | Dissolved Metals-list: | Ammonia | T-Phosphorus | Cyanide | Nitrate | Nitrite | Corrosivity | TCLP Metals | Subcontract: | Grab (G) or Composite (C) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31611-01 | CA-MW-2 | 4 | X | | | X | X | | | | 11/12/14 | 0935 | ASD | X | | | | | X | | | | | X | | | | | | | | | | | G |
| -02 | CA-MW-1 | 4 | | | | | | | | | | 1030 | | X | | | | | X | | | | | X | | | | | | | | | | | G |
| -03 | DUP-GW-1 | 4 | | | | | | | | | | | | X | | | | | X | | | | | X | | | | | | | | | | | G |
| -04 | CA-MW-4 | 4 | | | | | | | | | | 1430 | | X | | | | | X | | | | | X | | | | | | | | | | | G |
| -05 | CA-MW-3 | 6 | | | | | | | | | 11/13/14 | 0935 | | X | | | | | X | | | | | X | | | | | | | MS | MSD | | | G |
| -06 | Trip Blank | 1 | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | |

**TAT REQUESTED**
Priority (24 hr)* ☐
Expedited (48 hr)* ☐
Standard (10 Business Days) ☒
*Date Needed 11/21

See absoluteresourceassociates.com for sample acceptance policy and current accreditation lists.

SPECIAL INSTRUCTIONS
*Field filtered

REPORTING INSTRUCTIONS ☒ PDF (e-mail address) adraum@credenellc.com
☐ HARD COPY REQUIRED ☐ FAX (FAX#)

RECEIVED ON ICE ☒ YES ☐ NO
TEMPERATURE 5 °C

**CUSTODY RECORD**
QSD-01 Revision 08/05/14

| Relinquished by Sampler: | Date | Time | Received by: | Date | Time |
|---|---|---|---|---|---|
| Allison Draum | 11/14/14 | 1035 | | 11/14/14 | 1035 |
| Relinquished by: | 11/14/14 | 1145 | Received by: | Date | Time |
| Relinquished by: | Date | Time | Received by Laboratory: | 11/14/14 | 17:00 |

1145 JS 11/17 pm receipt

44