# REMEDIAL ACTION WORK PLAN

## 211 FRANKLIN STREET
## OLEAN, NEW YORK
## NYSDEC BROWNFIELD CLEANUP PROGRAM
## SITE #C905038

**Prepared for:** Silence Dogood, LLC
211 Franklin Street
Olean, New York

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**Project No.:** 4884S-13

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## 1.0 INTRODUCTION

Day Environmental, Inc. (DAY) prepared this Remedial Action Work Plan (RAWP) on behalf of Silence Dogood, LLC. This RAWP describes the methods proposed for the long term remediation of the property addressed 211 Franklin Street, Olean, New York (the Site), which is identified as BCP Site #C905038. The RAWP also presents the results of a Soil Vapor Intrusion (SVI) Evaluation Study completed at the Site in April 2015.

### 1.1 Background

Silence Dogood, LLC entered the Brownfield Cleanup Program (BCP) administered by the New York State Department of Environmental Conservation (NYSDEC) as a Volunteer (with respect to the requirements of the BCP) under Brownfield Cleanup Agreement (BCA) Index # C095038-05-14, which was executed on May 22, 2014 to complete certain studies and remedial activities at the Site.

The Site is located in an industrial-use urban area in the Northwest Quadrant district of the City of Olean, New York, and is within the boundary of the New York State Department of State (NYSDOS) Brownfield Opportunity Area (BOA) identified as the City of Olean Northwest BOA. The Site is bound to the north-northwest by Franklin Street followed by a parking lot, athletic field, and undeveloped land; to the east-northeast by a grass-covered area with a residential neighborhood beyond; to the south-southeast by a railroad Right-of-Way (ROW) with a residential neighborhood beyond; and to the west-northwest by a railroad ROW with commercial/industrial properties beyond. The approximate 5.79 acre Site is currently developed with an approximate 280,000-square foot, two-story industrial building with a partial basement that covers approximately 89% of the Site. The remaining 11% of the Site is comprised of grass-covered and landscaped areas on the northern portion and gravel-covered areas on the western and southern portions. A Project Locus Map is attached as Figure 1, and a plan showing the Site and the existing building layout is attached as Figure 2.

Industrial activities are known to have been conducted on the Site since at least 1882, and former occupants and uses are known to include:

- The Olean Chemical Company, which was located on the western portion of the Site from 1882 (or earlier) until circa 1898, when a portion of the facility was partially destroyed by a fire.

- A glass bottle manufacturing facility, which was constructed on the Olean Chemical Co. property in about 1906, but was destroyed by a fire and explosion in 1907.

- Olean Metal Cabinet Works, which was constructed on the western portion of the Site sometime around 1932, and operated until around 1934.

- The Daystrom Corporation, which initiated operations in the former Olean Metal Cabinet Works building on the western portion of the Site sometime after 1934, subsequently

expanded the building, and later constructed another addition on the eastern side of the building sometime between 1943 and 1949. This latter addition was constructed over the Spruce Street ROW, and a portion of the West Connell Avenue ROW. Daystrom Corporation occupied this building until at least 1961, during which time the facility was used for manufacturing of metal furniture and metal wares.

- Hysol, a Division of the Dexter Corporation, which occupied the Site sometime after 1966, and operated until at least 1996, manufacturing plastics and epoxy resins.

- The Henkel Corporation, which occupied the Site in 2001, and operated until 2011, manufacturing adhesive and sealants.

- SolEpoxy, Inc., which has occupied the building at the Site since 2010, and currently manufactures epoxy resins for use by others to manufacture electric components at off-site locations.

Some of the chemicals, hazardous substances and waste products used and/or generated during the historic use of the Site include: materials and waste products associated with Olean Chemical Company (e.g., acids, sulfur waste, coal/coke associated with a heating plant); plating and paint waste associated with operations conducted during the manufacturing of metal furniture and cabinets by Olean Metal Cabinet Works and Daystrom Industries; and liquid resins and waste solvents used during epoxy manufacturing operations conducted by Hysol, a division of the Dexter Corporation and the Henkel Corporation.

Remedial Investigation

Remedial investigation activities completed to date are summarized in the *Remedial Investigation/Alternatives Analysis Report* dated January 2015; revised April 10, 2015 (the RI/AA report). The RI/AA report summarizes studies previously conducted at the Site, and presents the results of Remedial Investigation (RI) work activities, underground storage tank removal Interim Remedial Measure (IRM) activities, and presents various remedial alternatives developed to address contaminant impact identified at the Site. The RI/AAR report also identified the contaminants of concern (COC) at the Site, and these include (by media):

*Soil Vapor*

- TCE
- PCE

The specific source of the COCs detected in the soil vapor was not identified during the RI, as results from groundwater and soil/fill sampling activities did not indicate any areas of significantly elevated VOC concentrations. Testing conducted during the RI also did not detect concentrations of COCs in the soil vapor that represented a concern to potential off-site receptors (i.e., nearby residences).

*Surface Soil*

- PAHs: benzo(a)pyrene
- PCBs: one location only
- Metals: arsenic, cadmium, copper, mercury and nickel

*Soil/Fill*

- PAHs: benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene
- SVOCs: hexachlorobenzene
- Metals: arsenic, barium, cadmium, copper, lead, mercury, nickel, and zinc

The COCs in the soil/fill at the Site are believed to be associated with either waste materials (e.g., PCBs) or heterogeneous fill materials placed during the historic use of the Site (e.g., railroad ballast).

*Groundwater*

- Metals: potentially barium, chromium, selenium, thallium and magnesium

The groundwater in the western portion of the Site is impacted with petroleum that originated from an off-site location. This impact is characterized by elevated PID readings, petroleum odors, stained soil and elevated concentrations of VOC and SVOC TICs. The petroleum-impacted groundwater does not degrade further as it migrates across the Site, which indicates that the Site is not contributing to the further degradation of the groundwater, and should not be considered a potential contaminant source for petroleum-related contaminants. As such, petroleum-impact and VOC/SVOC TICs are not identified as COCs for the Site.

The only contaminants in the groundwater that are potentially attributable to the Site are the metals chromium, barium, selenium, thallium and magnesium; however, the elevated concentrations of these metals detected during the RI were either isolated to a single monitoring well location, or could not be confirmed during the RI, as they were only reported at concentrations of concern during one of the monitoring events. Furthermore, results from analysis of downgradient monitoring wells did not identify elevated metals concentrations, indicating that (if present) any potentially metals-impacted groundwater is strictly localized, and is not migrating.

<u>Selected Remedial Alternative</u>

The NYSDEC approved the RI/AAR on April 15, 2015 and issued a Decision Document dated September 1, 2015 (the Decision Document), which specifies the selected remedy for the Site is a Track 4 Restricted (Commercial) Use with site-specific soil cleanup objectives via soil vapor mitigation and cover (the Remedy). The elements of the Remedy are as follows:

- A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial

program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the Remedy as per DER-31.

- A site cover will be required to allow for commercial use of the site. The cover will consist either of structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

- The site will be re-graded to accommodate installation of a cover system as described above. Excess soil derived from the re-grading will be sampled and properly disposed off-site.

- The 'proposed vapor mitigation area' beneath the existing on-site building will have a sub-slab depressurization system, or a similar engineered system, to prevent the migration of vapors into the building from soil and/or groundwater. Soil vapor intrusion sampling, including both sub-slab and indoor air sampling, will be completed in Areas 1 through 6 (i.e., those isolated portions of the building not addressed by the proposed SSDS, located in proximity of soil vapor screening sample locations SV-02, SV-13, SV-14, SV-18, SV-22, and SV-25, completed as part of the RI study). A sub-slab depressurization system, or a similar engineered system, will be installed as necessary to prevent the migration of vapors into the building in these areas.

- Imposition of an institutional control in the form of an environmental easement for the controlled property that:

    - requires the remedial party or site owner to complete and submit to the NYSDEC periodic certifications of institutional and engineering controls in accordance with 6 NYCRR Part 375-1.8 (h)(3);

    - allows the use and development of the controlled property for commercial and industrial uses as defined by 6 NYCRR Part 375-1.8(g), although land use is subject to local zoning laws;

    - restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH;

    - requires compliance with the NYSDEC approved Site Management Plan.

- A Site Management Plan is required, which includes the following:

- an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective.

- a Monitoring Plan to assess the performance and effectiveness of the Remedy.

## 1.2 Objective

The objective of this remediation project is to implement the Decision Document for the Site in accordance with the requirements of the BCP. This includes implementing the remedial tasks, institutional controls, engineering controls, long-term groundwater monitoring, and reporting tasks required for this project that allow the redevelopment of the Site for its proposed future use (i.e., industrial and/or commercial use) while satisfying cleanup criteria established by applicable regulatory agencies as they relate to human health and the environment.

## 1.3 Applicable Project SCGs

Applicable standards, criteria and guidance (SCGs) that may be used for this project are outlined below:

- Appropriate SCO and other guidance as set forth in 6 NYCRR Part 375-3 Brownfield Cleanup Program dated December 14, 2006.

- Appropriate Soil Cleanup Levels (SCL) and other guidance as set forth in NYSDEC Policy CP-51/Soil Cleanup Guidance dated October 21, 2010.

- Guidelines referenced in the NYSDEC document titled “DER-10 Technical Guidance for Site Investigation and Remediation”, May 2010.

- Appropriate water quality standards and guidance values (WQS/GV) as set forth in NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1) document titled “Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations”, June 1998 and amended by a January 1999 Errata Sheet, an April 2000 Addendum and a June 2004 Addendum.

- City of Olean Sewer Use Permit Effluent Standards.

- Soil Vapor/Indoor Air Matrix 1 and Soil Vapor/Indoor Air Matrix 2 as set forth in Section 3.4 of the NYSDOH document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006 (NYSDOH Guidance Document).

## 1.4 Health and Safety Plan

A copy of the site-specific Health and Safety Plan (HASP) that includes the requirements for a Community Air Monitoring Program (CAMP) is included in Appendix A. These plans will be implemented during completion of remediation actions that have the potential to encounter/release COC.

## 2.0 REMEDIAL ACTIONS

This section of the RAWP provides details on the components of remedial actions that will be implemented at Site. In general, the remedial actions will include:

- Decommissioning and closure of a sump pit located in a basement in the northwest portion of the building at the Site (previously approved by the NYSDEC as an IRM);

- Closure of an empty approximate 10,000-gallon UST located in southern portion of the building at the Site (previously approved by the NYSDEC as an IRM);

- Excavation and stockpiling soil (i.e., to determine suitability for re-use or disposal) in limited exterior areas for grading purposes. These areas include portions adjacent to existing structures on or adjacent to the Site (e.g. sidewalks, curbs, visitor parking area, etc.);

- Maintaining a continuous cover (i.e., concrete floor slab) within the building at the Site as an engineering control to prevent contact with soil/fill impacted with COCs;

- Installation of engineering controls to prevent contact with soil/fill impacted with COCs in the form of an asphalt, concrete, or 1-foot thick soil cover around the perimeter of building;

- Installation of a sub-slab depressurization system (SSDS) to address potential soil vapor intrusion in an approximate 10,000 square foot area in the central portion of the building, evaluation of the performance of the SSDS subsequent to installation, and periodic monitoring of the SSDS to document the continuing operation of the system components;

- Completion of a soil vapor intrusion (SVI) evaluation study to assess the potential for vapor intrusion into those isolated portions of the building not addressed by the proposed SSDS (i.e., in proximity of soil vapor screening sample locations SV-02, SV-13, SV-14, SV-18, SV-22, and SV-25, completed as part of the RI study). The results of the completed SVI study will be used to evaluate the need for, and the extent of, additional or expanded vapor mitigation system(s) required at the Site. [Note: the SVI evaluation study was completed in April 2015 and the results are presented in Section 2.8.]

- Implementation of a long-term monitoring program to assess the effectiveness of the remedial actions implemented at the Site.

### 2.1 Sump Pit Decommissioning and Closure IRM

The sump pit located in the southern room of the basement of the building at the Site is constructed of an apparent poured 2.7 feet (ft.) diameter concrete crock that extends to an approximate depth of 6.3 ft. below the surface of the basement floor (i.e., the elevation of the bottom of the sump pit is approximately 1417.1 ft.). The approximate location of the sump pit is depicted on Figure 2. Efforts to characterize the contents of the Sump Pit, as well as the studies

completed to assess the potential for impacts to the subsurface from those contents, are documented in the RI/AA report.

The sump pit will be closed as outlined in the RI/AA report. Specifically, the condensate piping that formerly drained into the Sump Pit will be re-routed to the sanitary sewer, and the sump crock will be filled to the ground surface with flowable fill, and the work completed will be documented.

## 2.2 Empty UST Decommissioning and Closure IRM

The empty UST that is located in the south-central portion of the building will be decommissioned. This UST is about 10.3 ft. in diameter and approximately 17.5 ft. long (i.e., an approximate capacity of 10,000 gallons), and the approximate location of this UST is depicted on Figure 2. This UST is located about 1.8 ft. beneath the floor of the building, and the only access to the tank is an opening in the floor. As such, the invert of the tank is approximately 12.1 ft. below the floor surface or approximate elevation 1421.9 ft. The former use of this tank is not known. The studies completed to assess the potential for impacts to the subsurface from the former contents of this UST are documented in the RI/AA report.

The empty UST will be closed in place in accordance with applicable provisions outlined in Section 5.5 of DER-10 and the NYSDEC guidance document titled *Permanent Closure of Petroleum Tanks* dated January 20, 1987 and modified December 3, 2003, as outlined in the RI/AA report. This closure will likely include the removal of piping from the interior of the tank, the filling of the tank with flowable fill, and the documentation of the work completed.

## 2.3 Characterization for Limited Soil Removal

As described in Section 2.4, limited soil removal will be completed at locations along the perimeter of the Site. Prior to completing this soil removal, samples will be collected for characterization purposes.

Soil samples will be collected from a depth of 0 to 1 foot below the ground surface at the approximate locations shown on Figure 3. The number of samples collected for characterization purposes will be representative of the quantity of soil proposed for excavation, as outlined in Table 5.4(e)10 of DER-10. [Note: Based on the estimated quantity of soil that will be removed from the Site, one discrete and one five-to-one composite sample will be collected for subsequent testing.] Initially, vegetation (if present) will be removed with a shovel or hand auger and placed to the side of the sample location. The shovel or hand auger will then be used to collect the soil sample from the 0 to 1 foot depth interval. Portions of the samples will be placed directly into laboratory-supplied glassware for subsequent analysis. To the extent feasible based on visual and olfactory observations, the portions placed in laboratory-supplied glassware will consist of materials identified in the field to have the highest potential for contamination. Other portions of the samples will be placed in Ziploc®-type plastic baggies that will subsequently be

field screened with a PID. Additional soil samples will be collected from two of the locations shown on Figure 3 using United States Environmental Protection Agency (USEPA) Method 5035 protocols, and these locations will be determined in the field, based on the results of the field screening. The laboratory containers for each sample location will be labeled and placed in a cooler maintained at or below 4ºC.

The soil samples will be submitted under chain-of-custody control to a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified analytical laboratory. A portion of each sample will be combined by the laboratory to create composite samples proportional to the proposed volume of soil to be removed, as outlined in Table 5.4(e)10 of DER-10. Each composite sample will be tested for the following parameters:

- Target Compound List (TCL) SVOCs using USEPA Method 8270;
- TCL Pesticides using USEPA Method 8081;;
- TCL PCBs using USEPA Method 8080; and
- TAL Metals using multiple USEPA Methods.

The composite samples may also be tested for other parameters required to obtain disposal approvals, including:

- Ignitability/Flash USEPA Method 1030
- Corrosivity USEPA Method 9045; and
- Reactivity using multiple Methods

The soil samples collected using USEPA Method 5035 protocols will be tested for TCL VOCs using USEPA 8260.

Upon receipt of the test results from the analytical laboratory, the data will be reviewed and the NYSDEC will be consulted to determine the fate of the soil (i.e., leave in place, excavation and disposal at a regulated facility, etc.).

## 2.4 Limited Soil Removal

Subsequent to obtaining the laboratory results for the soil samples described in Section 2.3, and obtaining approvals from the disposal facility (if necessary), soil will be removed from the zones shown on Figure 3. The purpose of the limited soil removal will be to provide adequate depth to place the 1-foot thick clean cover soil to the edge of the Site boundary and maintain the existing grade over adjacent areas (i.e., sidewalks, parking areas, etc.). The extent of the cover soil placement is depicted on Figure 4. An instrument survey will be used to layout property boundaries, and the extent of the limited soil removal areas will be measured in the field using a measuring tape, with reference to the surveyed property boundaries.

The approximate extent and volume of each soil removal zone is presented on the following table (refer to Figure 3 for zone locations and areas):

| **Zone** | Zone A | Zone B | Zone C | Zone D | Zone E | Zone F |
|---|---|---|---|---|---|---|
| **Volume of Soil ($Yd^3$)** | 7.5 | 16.5 | 9.5 | 4.3 | 0.5 | 7 |
| **Excavation depth (Ft)** | 0.7 | 0.7 | 0.7 | 0.2 | 0.7 | 0.2 |

A typical sectional excavation plan for Zone A - Zone C and Zone E is presented on Figure 5 (refer to the sectional plan titled, *Proposed excavation and cover plan – typical northwest edge of Site*).

Silence DoGood, LLC will retain the services of a subcontractor to complete the limited soil removal, and transport the excavated material off-site (as necessary). It is anticipated that the excavations will be completed using a mini-excavator. If it has been determined that soil disposal is necessary, based on the results of the testing described in Section 2.3, the excavated soil will be loaded directly into NYSDEC Part 364 permitted trucks, and transported off-site to the approved disposal facility. [Note: If it has been determined that the soil does not exceed Restricted Commercial SCOs, as set forth in Table 6.8b of 6 NYCRR Part 375-6, the soil will be left in place. Subsequently the soil cover described in Section 2.5 will be placed so as to meet the existing grade at the property line.]

A DAY representative will be on-site full-time to monitor and document this work. The DAY representative will also conduct health and safety air monitoring for VOCs and particulates during the removal work in accordance with provisions of the HASP and Community Air Monitoring Plan (CAMP) (refer to Appendix A). The subcontractor will either utilize this HASP or the components of its own HASP for the protection of its on-site workers.

## 2.5 Soil Cover Placement

Subsequent to completing the limited soil removal described in Section 2.4, a one-foot thick soil cover will be placed over exterior portions of the Site as an engineering control in the approximate locations depicted on Figure 4. Typical sectional plans for the placement of the one-foot thick soil cover are depicted on Figure 5 and Figure 6. Prior to the placement of the one-foot thick soil cover, the landscaping mulch located in the landscaping beds on the northwest side of the building will be consolidated and stockpiled for re-use. Also, it is anticipated that limited areas located along the southwest side of the building will be graded, using a bulldozer or equivalent, to provide an even surface on which to place the cover soil (refer to the sectional diagram provided as Figure 6). A demarcation layer (i.e., consisting of landscaping fabric, snow fencing, or similar materials) will be placed over the soil cover areas prior to the placement of the 1-foot thick soil cover and grade stakes will subsequently be installed at approximate 50-foot intervals along the soil cover areas, and used to document the thickness of the soil cover.

Silence DoGood, LLC will retain the services of a subcontractor to source, transport and place the cover material at the Site. The one-foot thick soil cover will be composed of approximately 0.8 to 0.9 feet fill material covered by approximately 0.1 to 0.2 feet of topsoil that are

documented to be free of contamination exceeding the Part 375 Restricted Commercial Use SCO values. Documentation that shows the fill is "clean" will be provided to the NYSDEC prior to its use at the Site.

A DAY representative will conduct health and safety air monitoring for VOCs and particulates during the grading work in accordance with provisions of the HASP and CAMP (refer to Appendix A). The DAY representative will also monitor the work completed and document the thickness of the soil cover by photographing the grade stakes prior to and subsequent to completion of the cover placement.

## 2.6 Asphalt/Concrete Cover Placement

Asphalt or concrete pavement will be constructed as an engineering control over limited exterior areas located to the northwest and southeast of the building, as depicted on Figure 5. Silence DoGood, LLC will retain the services of a pavement contractor to provide the following services:

- Sub-grade preparation/compaction over an approximate 6,900 square foot area located northwest of the building in the vicinity of the shipping docks.

- Provide and place 8 inches of roller compacted concrete over an approximate 6,900 square foot area in the vicinity of the shipping docks. [Note: Alternatively, an approximate 2,600 square foot portion of this area may be paved with asphalt, depending on the decision of Silence DoGood, LLC at the time of paving. The concrete/asphalt pavement will extend onto the adjacent property to the west, with consent of the property owner.]

- Provide and place 2 inches of asphalt over an approximate 1,300 square foot area in the vicinity of the loading docks located on the southeast side of the building [Note: limited soil removal for this area is described in Section 2.4, described as Zone F.]

- Provide and place 2 inches of asphalt over areas totaling approximately 175 square feet to extend the visitor's parking lot located on northwest side of the building. [Note: limited soil removal for this area is described in Section 2.4, described as Zone D.]

## 2.7 Sub-Slab Depressurization System

This section summarizes the proposed activities for design, installation and operation of a sub-slab depressurization system (SSDS) to provide mitigation for potential soil vapor intrusion within the area depicted on Figure 2.

### 2.7.1 Air Communication Testing and SSDS Design

On February 6, 2015, DAY representatives completed a site review and evaluation to identify site-specific criteria and data applicable to the SSDS design, including completion of diagnostic testing (i.e., air communication testing) to evaluate the subsurface conditions and estimate the potential radius of influence that could be established with a SSDS. Prior to conducting the air communication test, available site drawings were reviewed to identify the location of underground utilities that could interfere with SSDS effectiveness, and the floor surface in the vicinity of the soil vapor mitigation area was observed for material defects and penetrations that could potentially contribute to soil vapor intrusion and reduce the effectiveness of the SSDS operation. The concrete floor slab was found to be in generally good condition, with minimal cracks or integrity issues; however, several penetrations through the floor slab (e.g., floor drains, utility piping penetrations, etc.) were observed, and various underground utility lines and structures (including footers and pier support) were identified that could potentially inhibit the effectiveness of the SSDS. These criteria were noted and mapped to the extent feasible during the site review.

Air communication testing was conducted in general conformance with Section 4.2 of the NYSDOH Guidance Document. The test procedure consisted of drilling a small diameter vacuum point in a central location, with vacuum monitoring points installed at varying distances and directions from the vacuum point. A known vacuum was applied to the vacuum point and differential pressure readings were collected (using a digital manometer) at the various monitoring points. Air communication test data that could be used to calculate the anticipated radius of influence within the soil vapor mitigation area was collected by repeating this process at different locations throughout this area. Upon completion of the air communication testing program, the vacuum and monitoring test points were sealed.

The data obtained from the site review, evaluation and air communication test activities described above was used in the design of the SSDS to determine suction piping configuration, airflow and ductwork sizing, vacuum pressure requirements, and fan location and specifications (i.e., capacity and power). The layout and details for the proposed SSDS is presented on Figure 7.

### 2.7.2 SSDS Installation

Silence DoGood, LLC will retain the services of a subcontractor to install the SSDS shown in Figure 7 through Figure 9. The SSDS installation will include completion of the following activities:

- Saw cut, remove, and subsequently dispose approximately 8 cubic yards of concrete floor along approximately 330 linear feet of trench, and at the four point locations depicted on Figure 7.
- Excavate soil/fill from within the trench and point locations to a depth of approximately eight inches to one foot below the bottom of the concrete floor.
- Stockpile the excavated soil (up to 16 cubic yards) in a roll-off container, and collect samples to be tested for the waste characterization parameters outlined in Section 2.3. Based on the results of the testing, the containerized soil will be transported off-site to a disposal facility as described in Section 2.4, or may be reused on-site if concentrations are below the Part 375 restricted Commercial Use SCO.
- Install pipe bedding (NYSDOT #2 gravel, clean/washed).
- Install approximately 330 linear feet of perforated PVC pipe along the trench.
- Install suction point assemblies at the four point locations.
- Backfill the trench and point locations (NYSDOT #2 gravel, clean/washed).
- Install vapor barrier (plastic sheeting).
- Repair and refinish floor slab to existing grade.
- Install suction piping and pipe laterals to the roof.
- Install the vacuum fan on the roof (fan discharge to be at least 12 inches above the surface of the roof and at least 10 feet away from any air intake or building opening).

### 2.7.3 Pressure Field Extension Test

Following installation and start-up of the SSDS, a pressure field extension test will be performed at various locations within the soil vapor mitigation area to demonstrate the effectiveness of the SSDS. Four sub-slab monitoring points will be installed as detailed in Figure 9 at locations within the soil vapor mitigation area that are remote from the SSDS suction piping (locations to be determined in field to minimize impact on facility operations and equipment layout). Observance of a negative sub-slab pressure in relation to the building indoor air pressure (minimum differential of 0.002 inches water gauge) at each of the test point locations will be considered indicative of a successfully installed and operating depressurization system.

In the event that pressure field extension test data indicates that the installed SSDS does not appear to be effective, the SSDS design will be re-evaluated and modified (i.e., the installation of additional vapor extraction points, increasing number of fans, increasing fan power, etc.). Subsequent to the SSDS modification, additional pressure field extension tests will be performed to demonstrate the effectiveness of the SSDS.

### 2.7.4 Routine Monitoring of the SSDS

Once negative pressure in the sub-slab has been verified, subsequent routine monitoring will be conducted by monitoring vacuum pressure at the inlet side of each of the two exhaust fans. Maintaining suction pipe vacuum pressures similar to those observed during the initial start-up and testing of the system will be considered indicative of maintaining corresponding sub-slab vacuum conditions and SSDS effectiveness.

## 2.8 Soil Vapor Intrusion Evaluation

The results of the soil vapor screening completed during the RI identified elevated concentrations of COCs in select sub-slab vapor samples [i.e., trichloroethene (TCE) and tetrachloroethene (PCE)]. These samples were generally located in the central portion of the facility (i.e., in the soil vapor mitigation area discussed in Section 2.7). Several additional isolated areas where elevated concentrations of COCs were detected in sub-slab vapor samples were also identified. Studies were completed to evaluate these areas to assess the need for subsequent mitigation in these locations. The results of these studies are described in this section.

### 2.8.1 Soil Vapor Intrusion Evaluation Work Plan

DAY prepared a work plan titled, *Soil Vapor Intrusion Evaluation Work Plan, 211 Franklin Street, Olean, New York, BCP Site #C905038*, dated April 2015, for the purpose of evaluating the potential for soil vapor intrusion into six discrete areas, identified as Area 1 though Area 6. A description of each area, and the corresponding soil vapor screening sample collected during the RI, are listed below:

- Area 1 – western portion of the open floor plan Main Office Area, located in the north-central portion of the facility, corresponding to RI soil vapor screening sample SV-02;
- Area 2 – eastern portion of the open floor plan Main Office Area, located in the north-central portion of the facility, corresponding to RI soil vapor screening sample SV-22;
- Area 3 – western portion of the Pelletizing Department, located in the northwestern portion of the facility, corresponding to RI soil vapor screening sample SV-14;
- Area 4– within the Supply Room and Tool Crib, located adjacent to the southwest of the facility's Packaging Department in the central portion of the facility, corresponding to RI soil vapor screening sample SV-13;
- Area 5 – within the Compressor Room, located in the south-central portion of the facility, corresponding to RI soil vapor screening sample SV-25; and
- Area 6 – eastern portion of the Liquids Department, located in the south-central portion of the facility, corresponding to RI soil vapor screening sample SV-18.

The soil vapor evaluation work plan was approved by the NYSDEC on April 6, 2015.

### 2.8.2 Indoor Air Quality Questionnaire and Building Inventory

Between April 13, 2015 and April 14, 2015, DAY representatives completed the NYSDOH Indoor Air Quality Questionnaire and Building Inventory, including a chemical inventory of the indoor areas of the building. A copy of the completed NYSDOH Indoor Air Quality Questionnaire is presented in Appendix B.

An attempt was made to re-locate the containers containing chlorinated chemicals (i.e., generally stored in the quality control laboratories in 1-gallon containers and smaller), including: dichloromethane, 1,1,1-trichloroethane, chlorobenzene, trichloroethene, carbon tetrachloride, chloroform, 1,2-dichlorobenzene, and a partially full waste solvent drum labeled “halogenated solvents”. On April 14, 2015 these containers were moved to the solvent storage room, located at the northwest corner of the building, and remained in this location thought the duration of the testing that occurred on April 16, 2015 (refer to Section 2.8.3). [Note: the solvent storage room is vented to the outside air via vents in the exterior building walls. Further the solvent storage room is not connected to other portions of the building via air ducts, HVAC, etc.] A full list of chemicals identified at the Site, and corresponding VOC concentrations, measured with a RAE System PPB RAE Photoionization Detector (PID), are available upon request.

### 2.8.3 Soil Vapor, Indoor Air and Background Sample Collection and Testing

On April 16, 2015, paired sub-slab soil vapor and indoor air samples (designated Area 1 SS, Area 1 IA, Area 2 SS, Area 2 IA, Area 3 SS, Area 3 IA, Area 4 SS, Area 4 IA, Area 5 SS, Area 5 IA, Area 6 SS, Area 6 IA) were collected from each area identified in above, in the approximate locations depicted on Figure 10. In conjunction with this testing an outdoor (background) sample (designated Outdoor Background) was collected from a location west of the visitor parking lot (refer to Figure 10). The samples were collected in accordance with the methodology outlined in Section 2.3 of the April 2015 Soil Vapor Intrusion Evaluation Work Plan. Sampling logs for sub-slab soil vapor samples, indoor air samples and outdoor background sample are presented in Appendix C, and include details regarding the construction of each sample point.

Following collection, thirteen samples were delivered under chain-of-custody control to Spectrum Analytical, Inc. in Agawam, Ma (Spectrum). Spectrum is a NYSDOH ELAP-certified laboratory. The indoor air and outdoor background air samples were tested for VOCs using the low-level/SIM technique analysis for USEPA Method TO-15. The sub-slab vapor samples were tested for VOCs using the standard USEPA Method TO-15. A copy of the report prepared by Spectrum is included as Appendix C.

### 2.8.4 Soil Vapor Intrusion Sample Results

Concentrations of the TO-15 List VOCs detected in the soil vapor, indoor air and background samples collected on April 16, 2015 are summarized on Table 1. Table 1 also includes a comparison of the detected VOC concentrations to guidance values for indoor air, as published by the NYSDOH document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006 [Note: guidance values for indoor air have only been established by the NYSDOH for the following compounds: methylene chloride, polychlorinated biphenyls, tetrachlorodibenzo-*p*-dioxin equivalents, TCE and PCE]. Those compounds

summarized on Table 1 for which the NYSDOH has not established guidance values for indoor air, the 90th percentile indoor air concentrations measured by the USEPA during a two year study of air quality conducted at 100 randomly selected public and commercial office buildings across the United States, also referenced in Table C2 of the above referenced NYSDOH document, are used for comparison purposes.

As indicated on Table 1, thirty-two TO-15 List VOCs were detected in one or more of the indoor air and/or sub-slab soil vapor samples collected on April 16, 2015. Nineteen of the thirty-two TO-15 List VOCs were also detected in the Outdoor Background sample. None of the indoor air concentrations summarized on Table 1 exceed the NYSDOH guidance values for indoor air. However, concentrations of the following TO-15 List VOCs were observed to exceed the applicable 90th percentile indoor air concentrations values presented at one or more locations: 2-butanone (Area 6 IA); acetone (Area 3 IA, Area 4 IA, Area 5 IA, and Area 6 IA); benzene (Area 3 IA and Area 6 IA); chloroform (Area 5 IA); ethyl acetate (Area 2 IA, Area 3 IA and Area 5 IA); hexane (Area 2 IA and Area 4 IA); and trichlorofluoromethane (Area 1 IA and Area 4 IA).

Fifteen of the thirty-two VOCs that were detected in the samples collected on April 16, 2015 (refer to Section 2.8.4) were identified at the Site during the chemical inventory, either as a chemical used in the production process (e.g., acetone, MBIK, etc.) or used/stored in the quality control laboratories (e.g., trichloroethene, carbon tetrachloride, etc), and these chemicals are designated on Table 1 using red text.

### 2.8.5 Soil Vapor Intrusion Study Findings

Soil Vapor COCs (i.e., TCE and PCE) were reported at detectable levels in at least one sample from each area. Specifically, TCE was detected in the indoor air (IA) samples collected from Area 2 (0.32 $\mu g/m^3$), Area 3 (0.32 $\mu g/m^3$), Area 4 (0.38 $\mu g/m^3$) and Area 6 (0.21$\mu g/m^3$) and in the sub-slab soil vapor (SS) samples from Area 1 (137.04 $\mu g/m^3$), Area 3 (57.5 $\mu g/m^3$), Area 4 (64.49 $\mu g/m^3$), Area 5 (37.67 $\mu g/m^3$) and Area 6 (73.09 $\mu g/m^3$). PCE was detected in the indoor air (IA) samples collected from Area 3 (0.14 $\mu g/m^3$), Area 4 (0.41 $\mu g/m^3$) and Area 6 (0.27$\mu g/m^3$) and in the sub-slab soil vapor (SS) samples from Area 2 (38.04 $\mu g/m^3$), Area 3 (11.60 $\mu g/m^3$), Area 4 (4.68 $\mu g/m^3$), Area 5 (66.59 $\mu g/m^3$) and Area 6 (77.31 $\mu g/m^3$). TCE was not detected in the Outdoor Background sample. However, PCE was detected in Outdoor Background sample at a concentration of 0.88 $\mu g/m^3$. The detection limits (i.e., reported by the laboratory for non-detect concentrations at or below the associated method detection limit) for PCE in indoor air samples ranged from 0.08 $\mu g/m^3$ (i.e., Area 2 IA and Area 5 IA) to 0.28 $\mu g/m^3$ (Area 1 IA) and the detection limit for the only sub-slab sample in which PCE was not detected (i.e., Area 1 SS) was 107.14 $\mu g/m^3$. The detection limits for TCE in indoor air samples ranged from 0.06 $\mu g/m^3$ (i.e., Area 5 IA and Outdoor Background) to 0.22 $\mu g/m^3$ (Area 1 IA) and the detection limit for the only sub-slab sample in which TCE was not detected (i.e, Area 2 SS) was 0.06 $\mu g/m^3$.

The NYSDOH has developed two matrices to be used as tools in making decisions when soil vapor may be entering buildings, and these are included as Matrix 1 (i.e., relevant for TCE and carbon tetrachloride concentrations) and Matrix 2 (i.e., relevant for PCE and 1,1,1-trichloroethane concentrations) in Section 3.4 of the NYSDOH guidance document. Based on

the indoor air sample and sub-slab soil vapor sample results summarized on Table 1, the decision results for each area are presented below:

Area 1:

| Compound | Relevant Matrix | Indoor Air Concentration | Sub-Slab Vapor Concentration | Matrix Decision |
|---|---|---|---|---|
| TCE | 1 | U (0.22 µg/m$^3$) | 137.04 µg/m$^3$ | Monitor |
| Carbon Tetrachloride | 1 | 0.87 µg/m$^3$ | U (101.28 µg/m$^3$) | Monitor/Mitigate |
| PCE | 2 | U (0.28 µg/m$^3$) | U (107.14 µg/m$^3$) | Monitor |
| 1,1,1-Trichloroethane | 2 | 1.9 µg/m$^3$ | U (63.29 µg/m$^3$) | No Further Action |

Area 2:

| Compound | Relevant Matrix | Indoor Air Concentration | Sub-Slab Vapor Concentration | Matrix Decision |
|---|---|---|---|---|
| TCE | 1 | 0.32 µg/m$^3$ | U (0.06 µg/m$^3$) | Identify source/reduce exposure |
| Carbon Tetrachloride | 1 | 0.63 µg/m$^3$ | U (9.5 µg/m$^3$) | Monitor |
| PCE | 2 | U (0.08 µg/m$^3$) | 38.04 µg/m$^3$ | No Further Action |
| 1,1,1-Trichloroethane | 2 | 0.55 µg/m$^3$ | 5.95 µg/m$^3$ (J) | No Further Action |

Area 3:

| Compound | Relevant Matrix | Indoor Air Concentration | Sub-Slab Vapor Concentration | Matrix Decision |
|---|---|---|---|---|
| TCE | 1 | 0.32 µg/m$^3$ | 57.5 µg/m$^3$ | Monitor/Mitigate |
| Carbon Tetrachloride | 1 | 0.69 µg/m$^3$ | U (7.05 µg/m$^3$) | Monitor |
| PCE | 2 | 0.14 µg/m$^3$ (J) | 11.60 µg/m$^3$ | No Further Action |
| 1,1,1-Trichloroethane | 2 | 0.98 µg/m$^3$ | U (4.38 µg/m$^3$) | No Further Action |

Area 4:

| Compound | Relevant Matrix | Indoor Air Concentration | Sub-Slab Vapor Concentration | Matrix Decision |
|---|---|---|---|---|
| TCE | 1 | 0.38 µg/m$^3$ | 64.49 µg/m$^3$ | Monitor/Mitigate |
| Carbon Tetrachloride | 1 | 0.82 µg/m$^3$ | U (2.19 µg/m$^3$) | Identify source/reduce exposure |
| PCE | 2 | 0.41 µg/m$^3$) | 4.68 µg/m$^3$ | No Further Action |
| 1,1,1-Trichloroethane | 2 | 1.04 µg/m$^3$ | U (2.77 µg/m$^3$) | No Further Action |

Area 5:

| Compound | Relevant Matrix | Indoor Air Concentration | Sub-Slab Vapor Concentration | Matrix Decision |
|---|---|---|---|---|
| TCE | 1 | U (0.06 µg/m$^3$) | 37.67µg/m$^3$ | No Further Action |
| Carbon Tetrachloride | 1 | 0.69 µg/m$^3$ | 5.72 µg/m$^3$ | Monitor |
| PCE | 2 | U (0.08 µg/m$^3$) | 66.59 µg/m$^3$ | No Further Action |
| 1,1,1-Trichloroethane | 2 | U (1.36 µg/m$^3$) | 12.93 µg/m$^3$ | No Further Action |

Area 6:

| Compound | Relevant Matrix | Indoor Air Concentration | Sub-Slab Vapor Concentration | Matrix Decision |
|---|---|---|---|---|
| TCE | 1 | 0.21 µg/$m^3$ | 73.09µg/$m^3$ | Monitor |
| Carbon Tetrachloride | 1 | 0.75 µg/$m^3$ | U (10.95 µg/$m^3$) | Monitor |
| PCE | 2 | 0.27 µg/$m^3$ | 77.31 µg/$m^3$ | No Further Action |
| 1,1,1-Trichloroethane | 2 | 1.15 µg/$m^3$ | U (6.77 µg/$m^3$) | No Further Action |

Note:
U = Not detected at concentration above analytical laboratory detection limit indicated in parenthesis.

### 2.8.6 Proposed Periodic Monitoring for Soil Vapor Intrusion

As no definitive source or source areas have been identified for the VOCs listed above, and based on the Matrix Decisions presented in Section 2.8.5, it is proposed that annual monitoring of the indoor air be completed at each of the areas listed above (i.e., Area 1 through Area 6). This annual indoor air monitoring will be completed for a period of 3 years. At the end of Year 3, Silence DoGood, LLC will evaluate the indoor air monitoring program and make recommendations to the NYSDEC and NYSDOH as to the need for additional monitoring.

## 2.9 Long-term Monitoring

This section describes the proposed long term monitoring for the Site.

### 2.9.1 Periodic Indoor Air Monitoring

To further evaluate the potential for soil vapor intrusion into select areas of the building (i.e. the six discrete areas identified as Area 1 though Area 6 in Section 2.8.1), annual monitoring of the indoor air at these areas will be completed as proposed in Section 2.8.6. Prior to the collection of samples, the chemical product inventory will be updated for products used in the sample location and surrounding areas of the building in accordance with the NYSDOH guidance document protocols. Subsequent to the completion of the chemical product inventory, indoor air samples will be collected from each location (i.e., Area 1 through Area 6). In conjunction with this testing an outdoor (background) sample will be collected from a location positioned upwind of the Site (the specific location will be determined during the sampling event).

Indoor air samples will be collected concurrently over an 8-hour period (i.e., to replicate the typical period of occupancy of the building) using Summa Canisters. In addition, one outdoor background air sample will be collected over the same approximate 8-hour period from an upwind exterior location positioned approximately five feet above the ground surface. The summa canisters designated to collect the indoor air and outdoor background air samples will be configured for low-level/SIM sample analysis. The Suma Canister air/vapor intake rates will be controlled with pre-calibrated regulators supplied by the analytical laboratory. In addition, vacuum gauges will be connected to the regulators in order to monitor the Summa Canister for proper operation (i.e., slow changes in vacuum) on an hourly basis. The Summa Canister samples collected will be delivered under chain-of-custody control to a NYSDOH ELAP-certified laboratory for analysis of VOCs using USEPA Method TO-15. The indoor air and

outdoor background air samples will be tested using the low-level technique analysis for USEPA Method TO-15.

The findings of the indoor air monitoring will be summarized in a letter submittal to NYSDEC to be submitted within 15 business days of receipt of the analytical results. Full details of each indoor air monitoring event will be provided in the periodic review report (PRR) to be submitted annually to the NYSDEC, including: a narrative describing the work completed, a copy of the completed chemical inventory form, summary tables of current and historical results, copies of the analytical laboratory reports, and conclusions and recommendations. The data generated by the analytical laboratory will be submitted to the NYSDEC EQUIS system. The test results will be compared to applicable guideline values that are outlined in the NYSDOH Guidance Document. The results summary table will include the detected VOCs (if any) and corresponding NYSDOH guidance values for the constituents detected as applicable.

### 2.9.2 Periodic Groundwater Monitoring

To further evaluate the presence and potential for migration of the potential Site-related groundwater impacts identified during the RI, a long-term groundwater monitoring program will be implemented using existing monitoring wells that are installed at the Site. Specifically, groundwater monitoring wells MW-B through MW-N (12 Wells) will comprise the long-term groundwater monitoring system. The location of each of these wells is shown on Figure 2.

Prior to the commencement of the long-term groundwater monitoring program, the above monitoring wells will be repaired as necessary to assure that they are functioning, and the protective casings around monitoring wells MW-B, MW-C, MW-D, MW-F, and MW-K will be raised to accommodate the placement of the soil cover or pavement described in Section 2.5 and Section 2.6.

It is proposed that the groundwater monitoring be conducted for an initial period of five years. Groundwater samples will be collected from the long term monitoring system on a quarterly basis during the 1st year, and on a bi-annual basis for the 2nd through 5th years (i.e., total of 12 sampling events). At the end of Year 5, Silence DoGood, LLC will evaluate the groundwater monitoring program and make recommendations to the NYSDEC and NYSDOH as to the need for additional monitoring.

Each groundwater monitoring event will consist of the following activities, which will be documented as necessary to provide a record of the work completed:

- Prior to purging and sampling, static water level measurements will be taken from each well included in the long-term groundwater monitoring system using an oil/water interface meter. The presence of LNAPL will be evaluated by using visual observations and the oil/water interface meter at each well location.

- In order to minimize the potential re-suspension of solids in the bottom of the well, well depths will not be measured prior to or during low-flow purging and sampling. Well

depth information will be obtained from: 1) measurements collected during well development; 2) from well logs; or 3) will be measured after sampling is completed.

- Subsequent to obtaining static water level measurements and monitoring the wells for free LNAPL, the following low-flow purge and sample techniques will be used to collect a groundwater sample from each well:

  - A portable bladder pump connected to new disposable polyethylene tubing will be lowered and positioned at or slightly above the mid-point of the water column within the well screen when the screened interval is set in relatively homogeneous material. When the screened interval is set in heterogeneous materials, the pump will be positioned adjacent to the zone of highest hydraulic conductivity (as defined by geologic samples). Care will be taken to install and lower the bladder pump slowly in order to minimize disturbance of the water column.

  - The pump will be connected to a control box that is operated on compressed gas (nitrogen, air, etc.) and is capable of varying pumping rates. An in-line flow-through cell attached to a Horiba U-22 water quality meter (or similar equipment) will be connected to the bladder pump effluent tubing to measure water quality data.

  - The pump will be started at a pumping rate of 100 ml/min or less (for pumps that can not achieve a flow rate this low, the pump will be started at the lowest pump rate possible). The water level in the well will be measured and the pump rate will be adjusted (i.e., increased or decreased) until the drawdown is stabilized. In order to establish the optimum flow-rate for purging and sampling, the water level in the well will be measured on a periodic basis (i.e., every one or two minutes) using an electronic water level meter or an oil/water interface meter. When the water level in the well has stabilized (i.e., use goal of <0.33 ft. of constant drawdown), the water level measurements will be collected less frequently.

  - While purging the well at the stabilized water level, water quality indicator parameters will be monitored on a three to five minute basis with the Horiba U-22 water quality meter (or similar equipment). Water quality indicator parameters will be considered stabilized when the parameter readings listed below are generally achieved after three consecutive readings:

    - pH (+ 0.1);
    - specific conductance (+ 3%);
    - dissolved oxygen (+ 10 %);
    - oxidation-reduction potential (+ 10 mV);
    - temperature (+ 10%); and
    - turbidity (+ 10%, when turbidity is greater than 10 NTUs)

  - Following stabilization of the water quality parameters, the flow-through cell will be disconnected and a groundwater sample will be collected from the bladder pump effluent tubing. The pumping rate during sampling will remain at the established

purging rate or it may be adjusted downward to minimize aeration, bubble formation, or turbulent filling of sample containers. A pumping rate below 250 ml/min will be used when collecting VOC samples.

- The procedures and equipment used during the purging and groundwater sampling, and the field measurement data obtained, will be documented in the field and recorded on Monitoring Well Sampling Logs.

- During sampling, the following parameters will be measured using a water quality meter(s) and will later be presented on Monitoring Well Sampling Logs:

  - Dissolved Oxygen (DO)
  - Conductivity
  - Oxidation/Reduction Potential (redox)
  - pH
  - Temperature
  - Turbidity

The procedures and equipment used during the purging and groundwater sampling, and the field measurement data obtained, will be documented in the field and recorded on Monitoring Well Sampling Logs.

In addition to the 12 samples collected from the long-term groundwater monitoring system, one trip blank sample, one field blank sample and one MS/MSD sample will be collected and submitted under chain-of-custody control to a NYSDOH ELAP-certified analytical laboratory and tested via ASP protocol for TCL VOCs plus TICS, TCL SVOCs plus TICs and TAL metals (except the trip blank, which would only be tested for TCL VOCs plus TICs).

The test results will be summarized in a letter submittal to NYSDEC to be submitted within 4 to 6 weeks of receipt of the analytical results. Full details of each groundwater monitoring event will be provided in the periodic review report (PRR) to be submitted annually to the NYSDEC, including: a narrative describing the work completed, a summary of field data obtained, summary tables of current and historical analytical results, representative groundwater potentiometric maps developed from static water level data, copies of the analytical laboratory reports, and conclusions and recommendations. The data generated by the analytical laboratory will be submitted to the NYSDEC EQUIS system. The test results will be compared to applicable SCGs. The results summary table will include the detected COCs (if any) and corresponding SCGs for the constituents detected, as applicable. With approval from regulatory agencies and after adequate monitoring data is available for evaluation, the duration and frequency of subsequent groundwater monitoring events, the number of wells sampled during subsequent monitoring events, and the test parameters for samples collected during subsequent monitoring events, may be modified based on the test results of samples from previous monitoring events.

### 2.9.3 Periodic Monitoring of Site Cover

The cover system (i.e., soil, concrete and asphalt) at the Site will be observed on an annual basis by an environmental professional to document its condition. The scope of the annual cover observation will be outlined in the Site Management Plan. The results of the annual cover observation event will be provided to the NYSDEC in the PRR.

## 3.0 DELIVERABLES

Following the installation and operation of the remedial systems required for the Site, a Final Engineering Report (FER) will be prepared and submitted to the NYSDEC. This FER will be prepared in accordance with the requirements outlined in *DER-10/Technical Guidance for Site Investigation and Remediation* dated May 3, 2010.

A Site Management Plan (SMP) will also be prepared. In accordance with the Decision Document, The SMP include an Institutional and Engineering Control Plan that identifies use restrictions and engineering controls for the site, and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective. The SMP will also include a Monitoring Plan to assess the performance and effectiveness of the remedy.

A Periodic Review Report (PRR) will be prepared and submitted the NYSDEC on an annual basis. The PRR will document the results of the long term monitoring (i.e., indoor air and groundwater) as well as the findings of the Site cover observation events and routine monitoring of the SSDS. Note: Interim reports describing monitoring events and presenting analytical laboratory test results will be submitted within fifteen business days of the receipt of the analytical laboratory report.

## 4.0 SCHEDULE

The tentative schedule for the various activities described in this RAWP is presented below. This schedule will be updated as the work progresses, and provided to the NYSDEC.

| Task | Anticipated Duration | Anticipated or Actual Completion/Submission Date |
|---|---|---|
| Sump Pit Decommissioning and Closure IRM | 1 day | May 2015 |
| Empty UST Decommissioning and Closure IRM | 1 day | May 2015 |
| Characterization for Limited Soil Removal | 1 day | May 2015 |
| Limited Soil Removal | 1 day | June 2015 |
| Soil Cover Placement | 1 week | June 2015 |
| Impervious Cap Installation | 1 month | June 2015 |
| | | |
| **Sub-Slab Depressurization System** | | |
| Air Communication Testing | 1 day | February 6, 2015 |
| Sub-Slab Depressurization System Design | N/A | May 15, 2015 |
| Sub-Slab Depressurization System Installation | 1 week | June 2015 |
| Pressure Field Extension Test | 1 day | July 2015 |
| Routine Monitoring of the SSDS | On-Going | (1) |
| | | |
| **Soil Vapor Intrusion Evaluation** | | |
| Soil Vapor Intrusion Evaluation Work Plan | N/A | April 2015 |
| Indoor Air Quality Questionnaire and Building Inventory | 2 Days | April 13-14, 2015 |
| Soil Vapor, Indoor Air and Background Sample Collection | 1 Day | April 16, 2015 |
| Periodic Monitoring for Soil Vapor Intrusion | On-Going | (2) |
| | | |
| Long-Term Groundwater Monitoring | On-Going | (3) |
| Site Management Plan | 2 months | August 2015 |
| Final Engineering Report | 2 months | September 2015 |

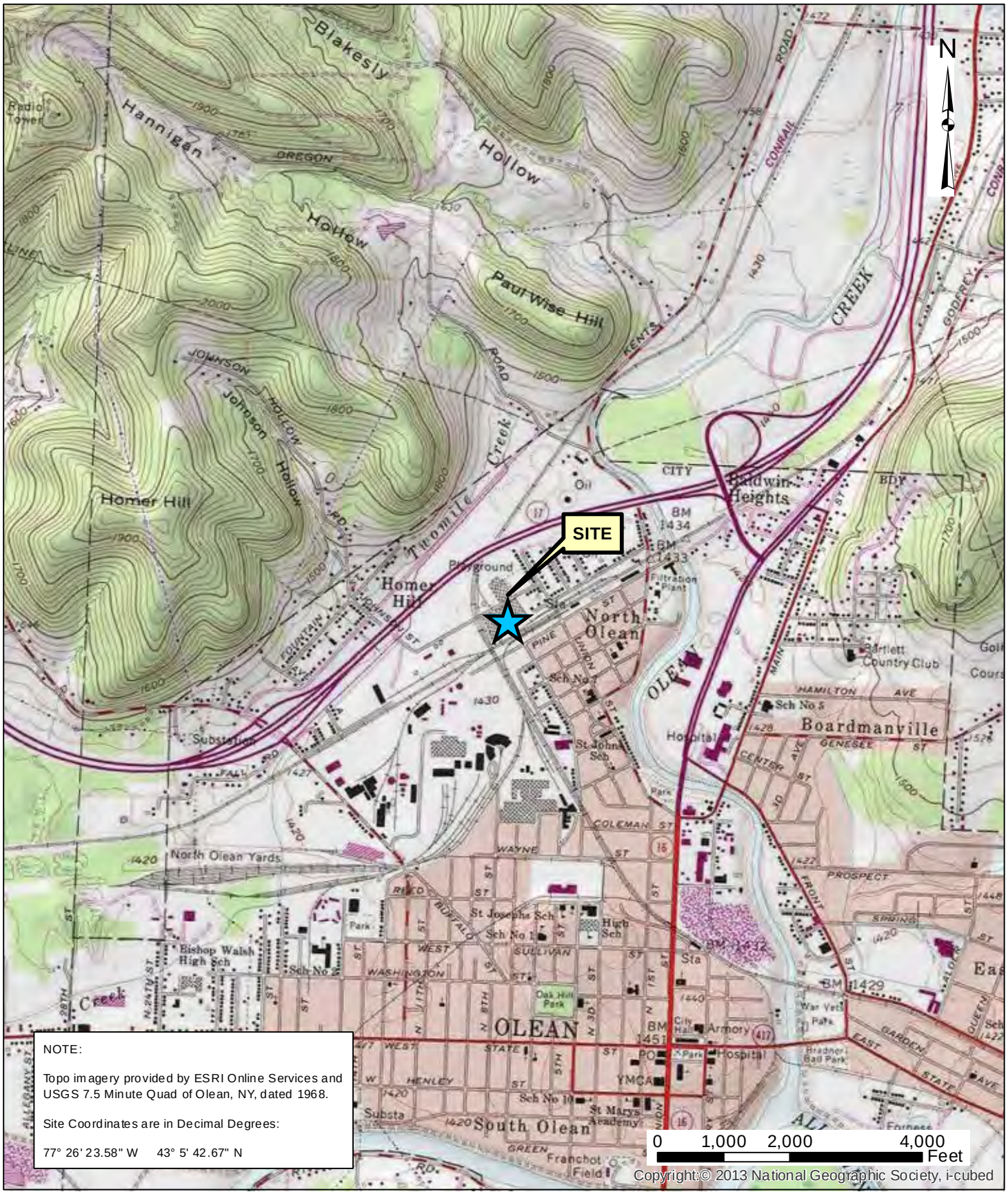
**Notes**

(1) It is anticipated that the vacuum pressure at the inlet side of each of the two exhaust fans will be checked on a monthly basis to confirm continued SSDS operation.

(2) Annual indoor air sampling events will be completed early in the heating season (e.g. in or around the month of December) for a minimum period of three consecutive years.

(3) Quarterly groundwater sampling events will be completed over a 12-month period in 2015-2016 (e.g. August 2015, November 2015, February 2016, and May 2016). Bi-annual groundwater sampling events will be collected over the subsequent 4-year period from 2016-2020 (e.g. November and May).

# FIGURES




NOTE:

Topo imagery provided by ESRI Online Services and USGS 7.5 Minute Quad of Olean, NY, dated 1968.

Site Coordinates are in Decimal Degrees:

77° 26' 23.58" W 43° 5' 42.67" N

Document Path: \\Smelt_optiplex\gis\GIS Mapping\4884S-13 Solepo\211 Franklin\4884S-54-211_Franklin.mxd

Last Date Saved: 30 Mar 2015

| | | | |
|---|---|---|---|
| Date: 05-12-2015 | day<br>**DAY ENVIRONMENTAL, INC.**<br>**Environmental Consultants**<br>**Rochester, New York 14606**<br>**New York, New York 10170** | Project Title:<br>211 FRANKLIN STREET<br>OLEAN, NEW YORK<br><br>NYSDEC BCP SITE NO. 905038<br>REMEDIAL ACTION WORK PLAN | Project No.<br>4884S-13 |
| Drawn By: CAH | | Drawing Title:<br>Project Locus Map | FIGURE 1 |
| Scale: AS NOTED | | | |

**Legend**

- Approximate extent of vapor mitigation area
- Basement
- UST
- Limits of the 211 Franklin Street Site

N

Basement Sump IRM

UST IRM

0 30 60 120 Feet

NOTES:
Facility layout provided by SolEpoxy, Inc.

Property boundary based on a Survey entitled, "Goodban Belt LLC of lands at211 Franklin Street", dated November 25, 2013, prepared by D. Michael Canada,New York State Licensed Land Surveyor,483 Union Street, Olean, NY 14760.

Aerial imagery provided by the New York State GIS Clearinghouse, date 2012.

| DESIGNED BY | DRAWN BY | SCALE | DATE |
|---|---|---|---|
| RLK | CAH | AS NOTED | 05-2015 |

| DATE DRAWN | DATE ISSUED |
|---|---|
| 05-2015 | 05-12-2015 |


day
DAY ENVIRONMENTAL, INC.
Environmental Consultants
Rochester, New York 14606
New York, New York 10170


Project Title
211 FRANKLIN STREET
OLEAN, NEW YORK

BCP SITE NO. C905038 REMEDIAL ACTION WORK PLAN

Drawing Title
Site Plan Showing Building Layout

Project No.
4884S-13

FIGURE 2

**Legend**

- Proposed soil characterization sample location
- Limited soil removal area for cover grading purposes
- Limited soil remvoval area for pavement subgrade
- Limits of the 211 Franklin Street Site

Zone A

Zone B

Zone C

Zone D

Zone E

Zone F

0 30 60 120 Feet

NOTES:
Facility layout provided by SolEpoxy, Inc.

Property boundary based on a Survey entitled, "Goodban Belt LLC of lands at211 Franklin Street", dated November 25, 2013, prepared by D. Michael Canada,New York State Licensed Land Surveyor,483 Union Street, Olean, NY 14760.

Aerial imagery provided by the New York State GIS Clearinghouse, date 2012.

| DESIGNED BY | DRAWN BY | SCALE |
|---|---|---|
| RLK | CAH | AS NOTED |

| DATE | DATE DRAWN | DATE ISSUED |
|---|---|---|
| 05-2015 | 05-2015 | 05-11-2015 |


DAY ENVIRONMENTAL, INC.
Environmental Consultants
Rochester, New York 14606
New York, New York 10170


Project Title
211 FRANKLIN STREET
OLEAN, NEW YORK

BCP SITE NO. C905038 REMEDIAL ACTION WORK PLAN

Drawing Title
Proposed Limited Soil Removal Area Plan with Soil Characterization Sample Locations

Project No.
4884S-13

FIGURE 3

**Legend**

- Limits of the 211 Franklin Street Site
- Approximate area of existing cover (Concrete/Asphalt)
- Approximate area of proposed soil cover
- Approximate area of proposed asphalt cover
- Approximate area of proposed roller compacted concrete cover
- Approximate area of proposed stone cover

NOTES:
Facility layout provided by SolEpoxy, Inc.

Property boundary based on a Survey entitled, "Goodban Belt LLC of lands at211 Franklin Street", dated November 25, 2013, prepared by D. Michael Canada,New York State Licensed Land Surveyor,483 Union Street, Olean, NY 14760.

Aerial imagery provided by the New York State GIS Clearinghouse, date 2012.

0 25 50 100 Feet

| DESIGNED BY | DATE |
|---|---|
| RLK | 05-2015 |
| DRAWN BY | DATE DRAWN |
| CAH | 05-2015 |
| SCALE | DATE ISSUED |
| AS NOTED | 05-11-2015 |


day
DAY ENVIRONMENTAL, INC.
Environmental Consultants
Rochester, New York 14606
New York, New York 10170


Project Title
211 FRANKLIN STREET
OLEAN, NEW YORK

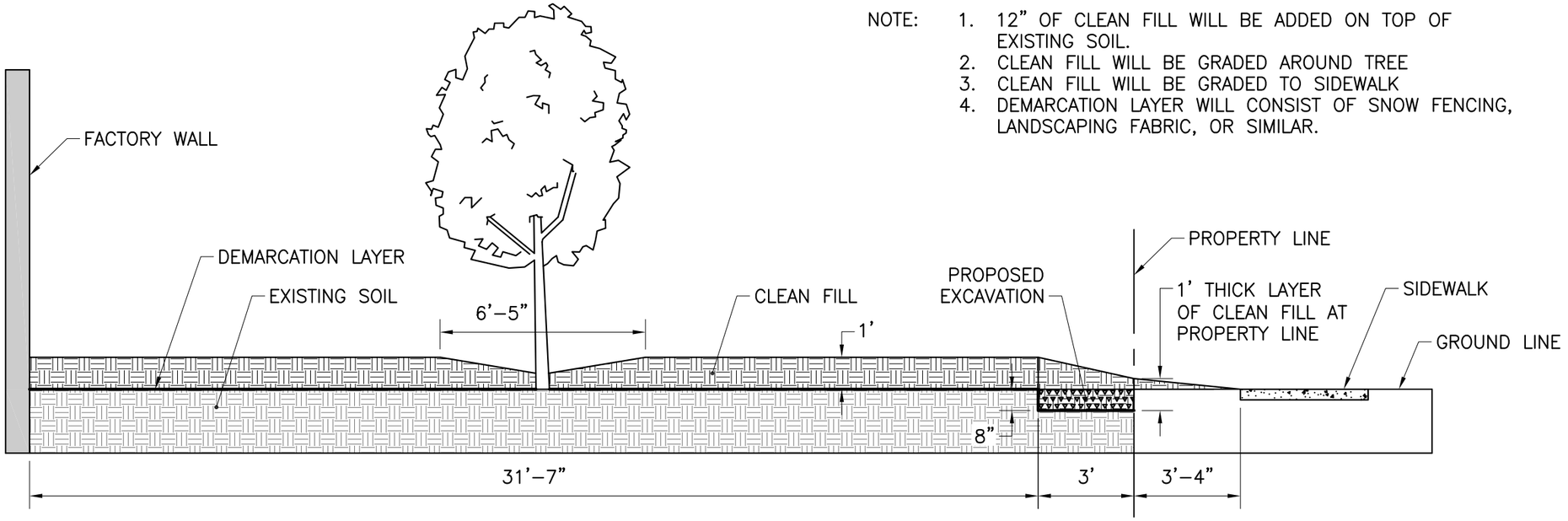
BCP SITE NO. C905038 REMEDIAL ACTION WORK PLAN

Drawing Title
Proposed Soil Cover and Pavement Plan

Project No.
4884S-13

FIGURE 4

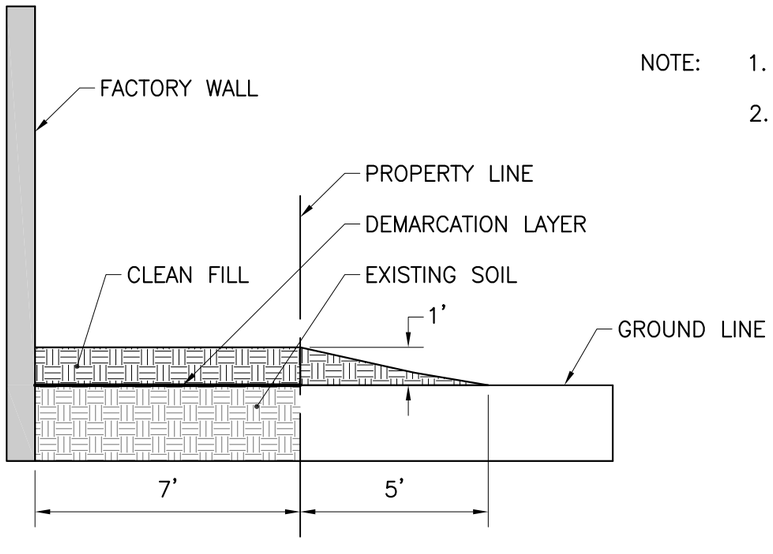
NOTE:
1. 12" OF CLEAN FILL WILL BE ADDED ON TOP OF EXISTING SOIL.
2. CLEAN FILL WILL BE GRADED AROUND TREE
3. CLEAN FILL WILL BE GRADED TO SIDEWALK
4. DEMARCATION LAYER WILL CONSIST OF SNOW FENCING, LANDSCAPING FABRIC, OR SIMILAR.




## PROPOSED EXCAVATION AND COVER PLAN - TYPICAL NORTHWEST EDGE OF SITE

SCALE: 1/4" = 1'-0"

NOTE:
1. 12" OF CLEAN FILL WILL BE ADDED ON TOP OF EXISTING SOIL.
2. DEMARCATION LAYER WILL CONSIST OF SNOW FENCING, LANDSCAPING FABRIC, OR SIMILAR.




## PROPOSED COVER PLAN - TYPICAL NORTHEAST EDGE OF SITE

SCALE: 1/4" = 1'-0"

NOTE:
Sections adapted from a CAD file provide by SolEpoxy entitled ES-101876 Site Plan parking.dwg.

| | |
|---|---|
| FIELD VERIFIED | CAH |
| DRAWN BY | RJM |
| SCALE | As Noted |
| DATE | 5-2015 |
| DATE DRAWN | 5-11-2015 |
| DATE ISSUED | 5-15-2015 |


DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
ROCHESTER, NEW YORK 14606
NEW YORK, NEW YORK 10170

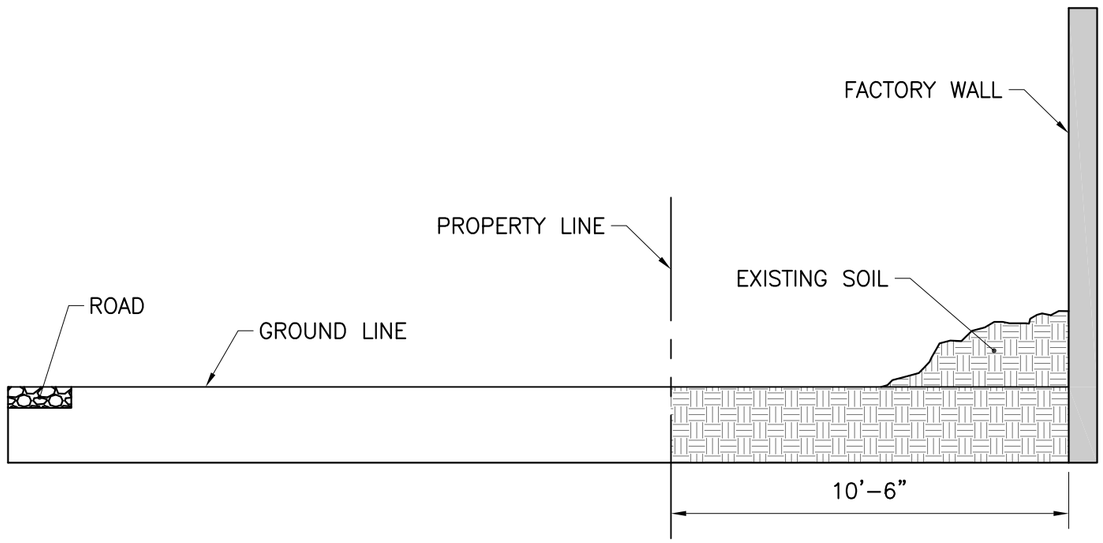

PROJECT TITLE
211 FRANKLIN STREET
OLEAN, NEW YORK

BROWNFIELD REMEDIATION

DRAWING TITLE
Sections

PROJECT NO.
4884S-13

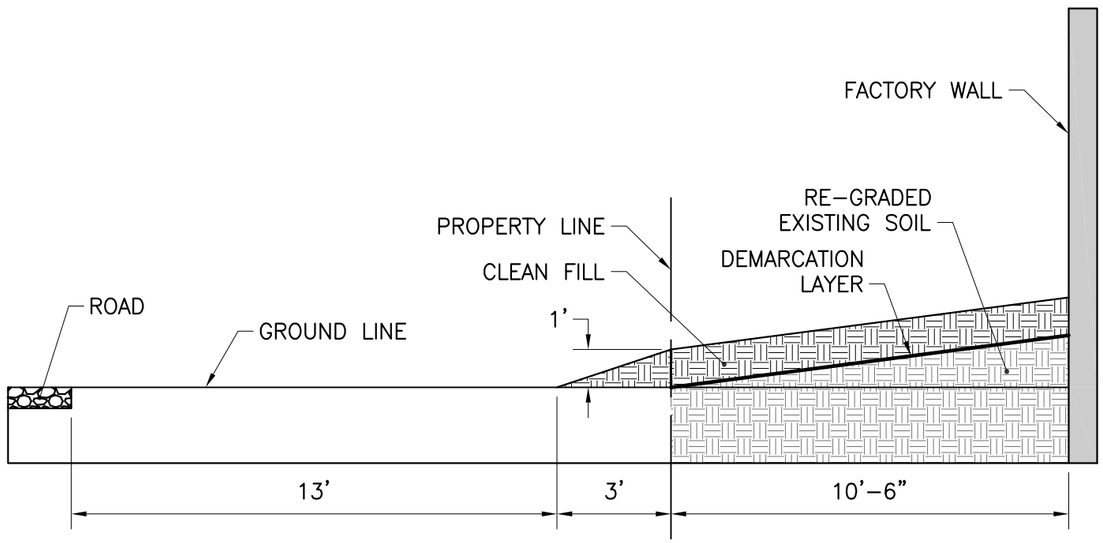
**FIGURE 5**




## CURRENT CONDITIONS - SOUTHEAST EDGE OF SITE

SCALE: 1/4" = 1'–0"

NOTE:
1. EXISTING SOIL BETWEEN FACTORY WALL AND PROPERTY LINE MAY BE RE–GRADED BEFORE CLEAN FILL IS ADDED
2. 12" OF CLEAN FILL WILL BE ADDED ON TOP OF EXISTING S(
3. DEMARCATION LAYER WILL CONSIST OF SNOW FENCING, LANDSCAPING FABRIC, OR SIMILAR.




## GRADING AND COVER PLACEMENT - TYPICAL SOUTHEAST EDGE OF SITE

SCALE: 1/4" = 1'–0"

NOTE:
Sections adapted from a CAD file provide by SolEpoxy entitled ES–101876 Site Plan parking.dwg.

| | | | |
|---|---|---|---|
| FIELD VERIFIED: CAH | DRAWN BY: RJM | SCALE: As Noted | DATE: 5-2015 |
| | DATE DRAWN: 5-11-2015 | DATE ISSUED: 5-15-2015 | |


DAY ENVIRONMENTAL, INC.
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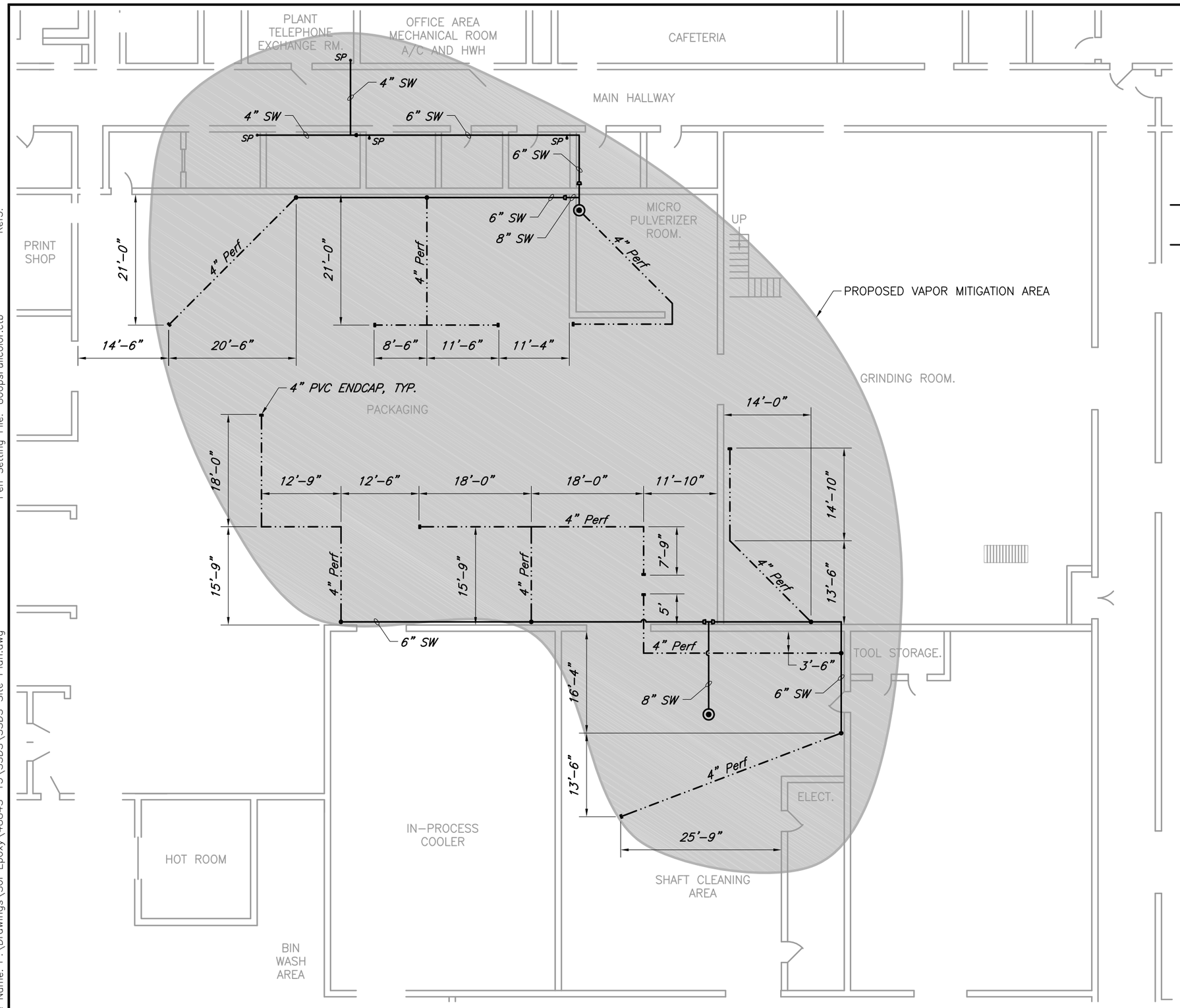
ROCHESTER, NEW YORK 14606
NEW YORK, NEW YORK 10170


PROJECT TITLE: 211 FRANKLIN STREET, OLEAN, NEW YORK — BROWNFIELD REMEDIATION
DRAWING TITLE: Sections

PROJECT NO. 4884S-13

**FIGURE 6**




N

LEGEND

4" Perf — Proposed SSDS Perforated Pipe

6" SW — Proposed SSDS Solid Wall Pipe

SP • Proposed SSDS Suction Point And Vertical Standpipe Location

⊙ Approximate Location Of Existing Roof Penetration (To Be Reused For SSDS Exhaust Vent To Rooftop Fan Location)

NOTE:

Facility layout provided by SolEpoxy, Inc.

## SUB-SLAB DEPRESSURIZATION SYSTEM (SSDS) PLAN

SCALE: 1/16 = 1'–0"

0' 16' 32'

| DESIGNED BY | DRAWN BY | SCALE | DATE |
|---|---|---|---|
| BFK | RJM | As Noted | 5-2015 |

| DATE DRAWN | DATE ISSUED |
|---|---|
| 5-13-2015 | 5-14-2015 |

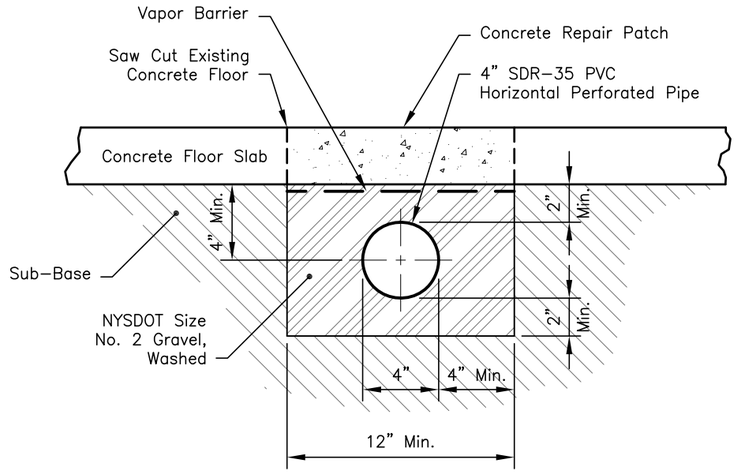

DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
ROCHESTER, NEW YORK 14606
NEW YORK, NEW YORK 10170


PROJECT TITLE
211 FRANKLIN STREET
OLEAN, NEW YORK
BCP SITE NO. C905038 REMEDIAL INVESTIGATION

DRAWING TITLE
Site Plan Depicting Sub-Slab Depressurization System (SSDS) Components

PROJECT NO.
4884S-13

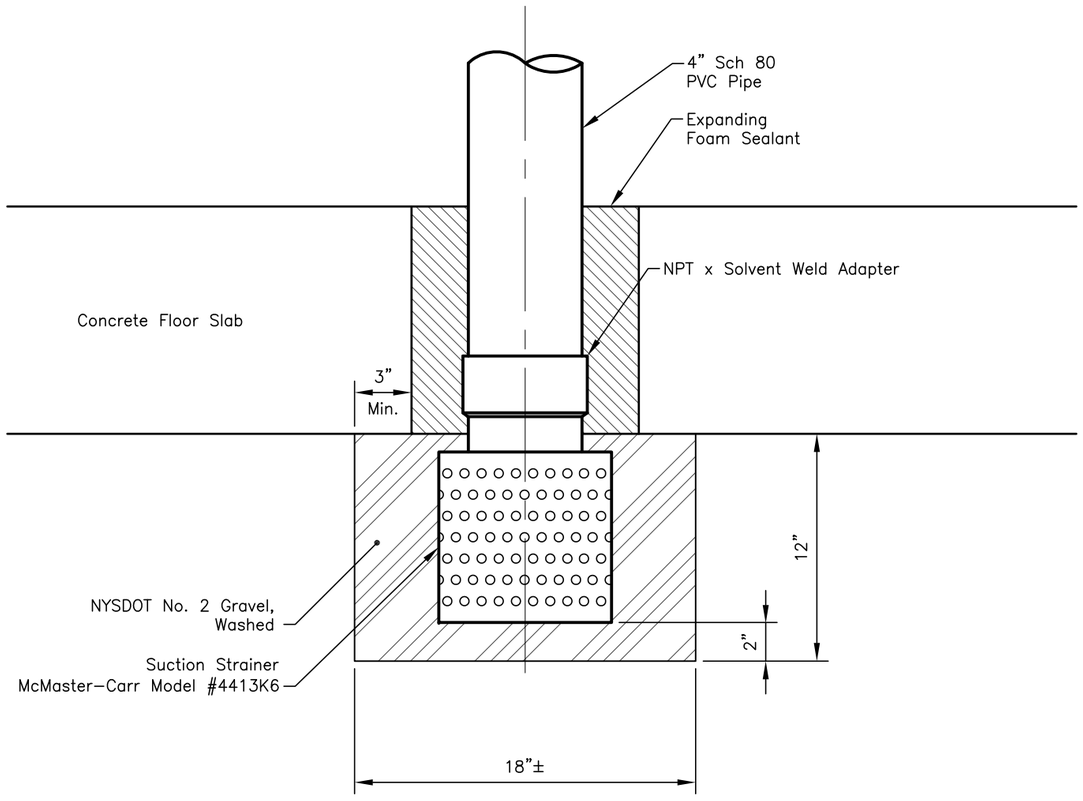
**FIGURE 7**




1 Fig. 8

# TYPICAL SECTION 4" PERFORATED PVC PIPE

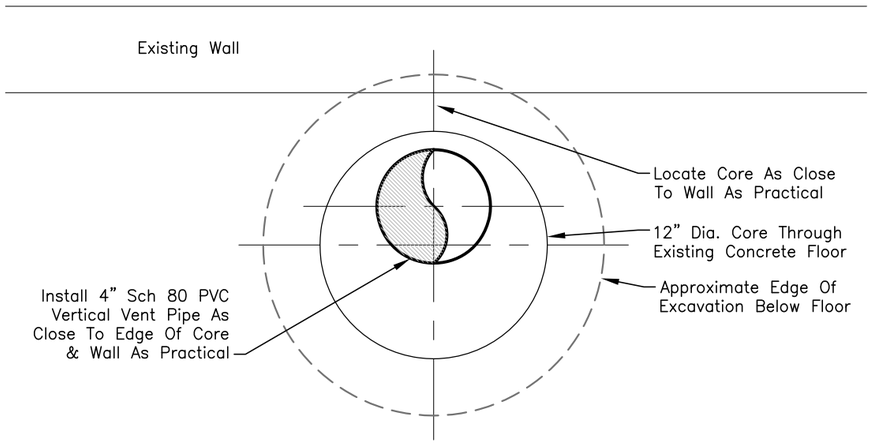
1 1/2" = 1'-0"




3 Fig. 8

# TYPICAL SECTION SUB-SLAB DEPRESSURIZATION VENT

1 1/2" = 1'-0"




2 Fig. 8

# PLAN VIEW VERTICAL VENT

1 1/2" = 1'-0"

DESIGNED BY BFK | DATE 5-2015
DRAWN BY RJM/Tw | DATE DRAWN 5-13-2015
SCALE As Noted | DATE ISSUED 5-14-2015


DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
ROCHESTER, NEW YORK 14606
NEW YORK, NEW YORK 10170


PROJECT TITLE
211 FRANKLIN STREET
OLEAN, NEW YORK
BCP SITE NO. C905038 REMEDIAL INVESTIGATION

DRAWING TITLE
Sub-Slab Depressurization System (SSDS) Details

PROJECT NO.
4884S-13

**FIGURE 8**

Notes:

1. Horizontal Pipe Below Slab: 4" Perforated (Perf.) PVC SDR–35 rubber gasketed pipe, standard perforation pattern (½" holes @ 5" spacing, 2 rows of holes @ 120 degree angle). Solid wall fittings. Perforated pipe constructed level with one row of perforations to underside of pipe. Solid end caps to be installed at the end of each perforated pipe run. Provide gasketed adapter at transition from SDR–35 to Schedule 40 pipe.

2. Aboveground Pipe and Fittings: Solid wall PVC schedule 80 solvent weld joint pipe. Secure pipe to walls, and provide firestops as needed. Insulate all pipe in unheated spaces.

3. Gravel: NYSDOT Standard Specification, Subsection 703–0201, Size 2, washed, or Engineered–approved equal (submit for approval prior to use).

4. Vapor Barrier: minimum thickness 6 mil reinforced polyethylene sheeting.

5. Fan: Fantech Model REC10XLT; 115V, 4.86A (max). Fan exhaust must be located at least 12–inches above the surface of the roof, and at least 10–feet away from nearest building opening or air intake. Fan to be provided with disconnect. Fan wiring to be in accordance with applicable National Electric Code Standards, and local and state building codes.

6. Vacuum Gauge: 0 to 3 inches water column, Dwyer Model 2003. One gauge installed on each fan system at accessible standpipe location. Coordinate installation location with Owner.

7. PVC material, installation, and inspection shall comply with the current edition of the Uniform Plumbing Code published by the International Association of Plumbing and Mechanical Officals.

8. The following signage shall be posted at or inside the fan shutoff switch panel, disconnect and/or circuit breaker:

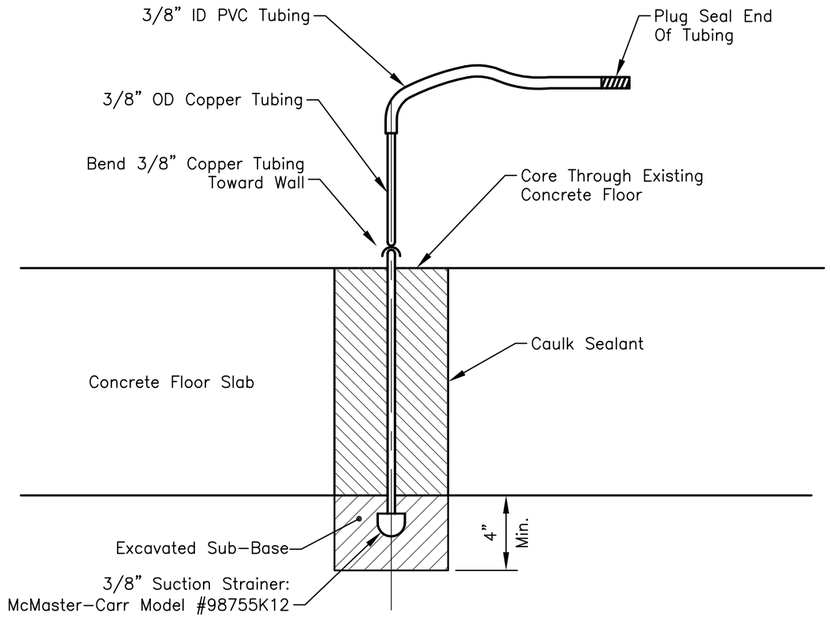
   SUB–SLAB DEPRESSURIZATION SYSTEM
   DO NOT SHUTOFF OR ALTER

9. The following signage shall be posted on aboveground piping:

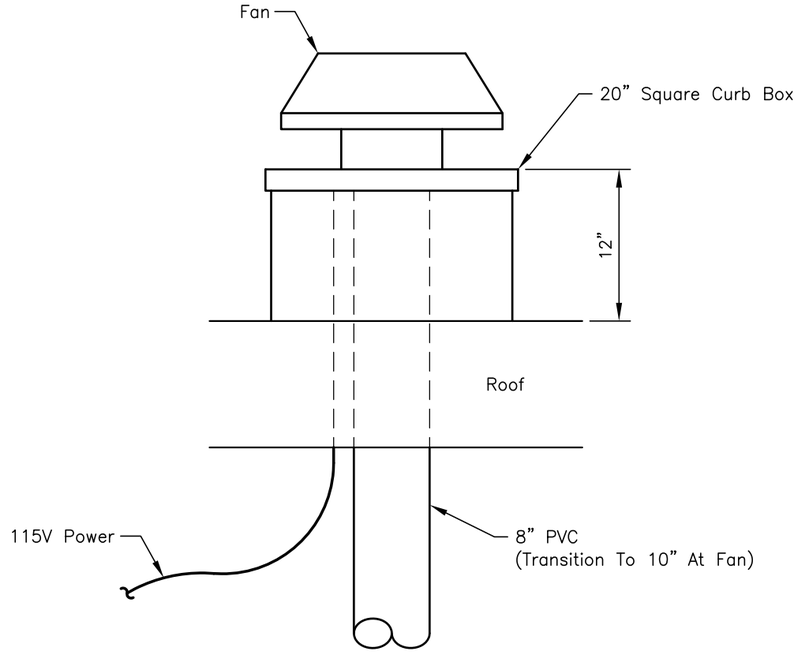
   COMPONENT OF SUB–SLAB DEPRESSURIZATION SYSTEM
   DO NOT ALTER OR DISCONNECT

NOTES:

1. Core locations to be determined in field.
2. Locate core as close to wall as practical. Center copper tubing in core, bent toward wall, run minimum 1 foot up wall.




4 Fig. 9 TEST PIPING DETAIL SUB–SLAB PRESSURE
1 1/2" = 1'–0"




5 Fig. 9 FAN DETAIL
Scale: 1" = 1'–0"

Ref1: Fan Detail.dwg
Ref2: Suction Details.dwg
Ref3:

Xerox4320AnsiB–2; 11 x 17
Layout Name: Layout2
Pen Setting File: 80PsFullcolor.ctb

Time Plotted: Thursday, May 14, 2015 7:37:52 AM
File Name: P:\Drawings\Sol Epoxy\4884S–13\SSDS\Detail Plot Sheet.dwg

DESIGNED BY BFK | DATE 5-2015
DRAWN BY RJM/Tw | DATE DRAWN 5-13-2015
SCALE As Noted | DATE ISSUED 5-14-2015

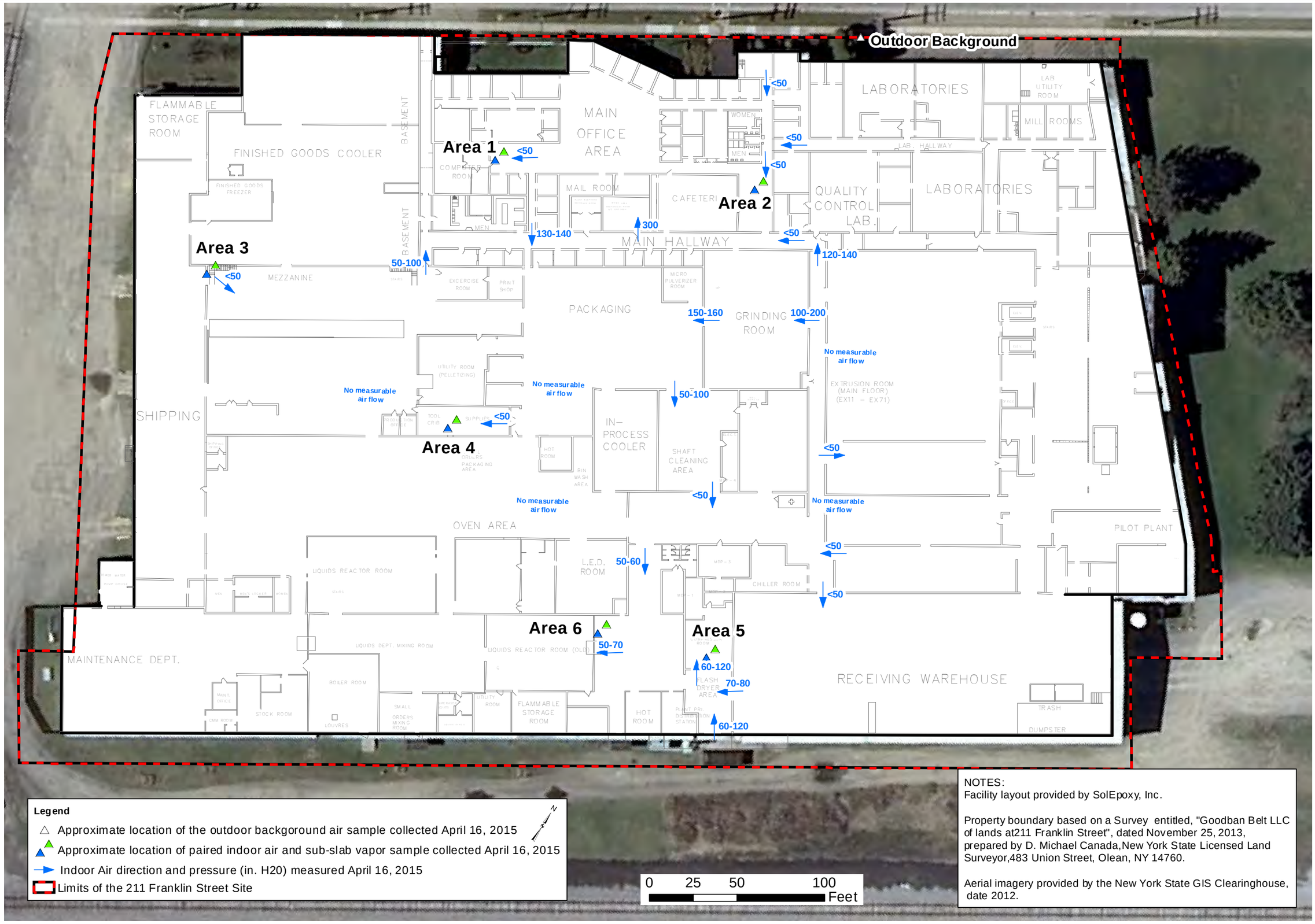
day
DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
ROCHESTER, NEW YORK 14606
NEW YORK, NEW YORK 10170

PROJECT TITLE
211 FRANKLIN STREET
OLEAN, NEW YORK
BCP SITE NO. C905038 REMEDIAL INVESTIGATION

DRAWING TITLE
Sub-Slab Depressurization System (SSDS) Details & Notes

PROJECT NO.
4884S-13

FIGURE 9




**Legend**

- △ Approximate location of the outdoor backgroound air sample collected April 16, 2015
- ▲ Approximate location of paired indoor air and sub-slab vapor sample collected April 16, 2015
- → Indoor Air direction and pressure (in. H20) measured April 16, 2015
- ▭ Limits of the 211 Franklin Street Site

NOTES:
Facility layout provided by SolEpoxy, Inc.

Property boundary based on a Survey entitled, "Goodban Belt LLC of lands at211 Franklin Street", dated November 25, 2013, prepared by D. Michael Canada,New York State Licensed Land Surveyor,483 Union Street, Olean, NY 14760.

Aerial imagery provided by the New York State GIS Clearinghouse, date 2012.

| DESIGNED BY | DRAWN BY | SCALE | DATE | DATE DRAWN | DATE ISSUED |
|---|---|---|---|---|---|
| RLK | CAH | AS NOTED | 05-2015 | 05-2015 | 05-11-2015 |


day
DAY ENVIRONMENTAL, INC.
Environmental Consultants
Rochester, New York 14606
New York, New York 10170


Project Title
211 FRANKLIN STREET
OLEAN, NEW YORK

BCP SITE NO. C905038 REMEDIAL ACTION WORK PLAN

Drawing Title
Site Plan Depicting Soil Vapor Intrusion Evaluation Study Sample Locations and Air Flow Measurements Collected April 16, 2015

Project No.
4884S-13

FIGURE 10

# TABLES

**TABLE 1**
**211 FRANKLIN STREET**
**OLEAN, NEW YORK**
**BCP SITE NO. C905038**

**SUMMARY OF VOLATILE ORGANIC COMPOUNDS**
**In**
**SOIL VAPOR, INDOOR AIR, AND BACKGROUND OUTDOOR AIR SAMPLES COLLECTED APRIL 16, 2015**

| Detected Constituent | NYSDOH Indoor Air Guidance Value (ug/m3)[1] | Sample Designation and Date | | | | | | | | | | | | | | | | | | | | | | Outdoor Background | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Area 1 | | | | Area 2 | | | | Area 3 | | | | Area 4 | | | | Area 5 | | | | Area 6 | | | |
| | | IA | | SS | | IA | | SS | | IA | | SS | | IA | | SS | | IA | | SS | | IA | | SS | | |
| | | 4/16/2015 | | 4/16/2015 | | 4/16/2015 | | 4/16/2015 | | 4/16/2015 | | 4/16/2015 | | 4/16/2015 | | 4/16/2015 | | 4/16/2015 | | 4/16/2015 | | 4/16/2015 | | 4/16/2015 | | 4/16/2015 | |
| 1,1,1-Trichloroethane | **20.6** | 1.9 | D | U (63.29) | | 0.55 | | 5.95 | J | 0.98 | | U (4.38) | | 1.04 | | U (2.77) | | U (1.36) | | 12.93 | | 1.15 | | U (6.77) | | 1.31 | |
| 1,1,2-Trichlorotrifluoroethane | **3.5** | U (2.29) | | U (134.13) | | 0.84 | | U (12.57) | | U (0.66) | | U (9.35) | | 0.84 | | U (2.90) | | U (2.9) | | U (2.90) | | 0.84 | | U (14.49) | | 0.69 | J |
| 1,2,4-Trimethylbenzene | **9.5** | U (1.44) | | U (88.98) | | U (0.41) | | **19.66** | | 0.84 | | 8.55 | | 1.52 | | 5.75 | | U (0.41) | | 4.08 | | 0.69 | | U (9.59) | | 1.67 | |
| 1,3,5-Trimethylbenzene | **3.7** | U (1.39) | | U (77.18) | | U (0.40) | | U (7.23) | | 0.54 | | U (5.36) | | 0.64 | | 1.67 | J | U (0.40) | | U (1.66) | | U (0.40) | | U (8.31) | | 0.74 | |
| 2-Butanone (MEK) | **12** | U (1.85) | | U (59.57) | | 1.83 | | U (5.57) | | 4.98 | | U (4.13) | | 6.52 | | U (1.28) | | U (1.28) | | 4.95 | | **20.05** | | 11.35 | | 2.45 | |
| 4-Isopropyltoluene | **NA** | 2.43 | D | U (101.42) | | U (0.35) | | U (9.50) | | U (0.35) | | U (7.03) | | U (0.35) | | U (2.19) | | U (0.35) | | U (2.19) | | U (0.35) | | U (10.95) | | U (0.35) | |
| 4-Methyl-2-Pentanone (MIBK) | **6** | U (1.20) | | U (52.87) | | 0.61 | | U (4.96) | | 1.52 | | U (3.68) | | 3.07 | | U (1.14) | | 1.19 | J | U (1.14) | | **13.93** | | **25.20** | | 0.49 | |
| Acetone | **98.9** | 93.39 | D | U (39.68) | | 29.23 | | **143.76** | | **335.06** | D | 44.91 | | **280.40** | D | 25.43 | | **107.88** | D | 25.66 | | **200.32** | D | **145.90** | | 29.23 | |
| Benzene | **9.4** | 2.11 | D | U (59.02) | | 0.73 | | U (5.52) | | **12.41** | | U (4.08) | | 8.29 | | U (1.27) | | 2.36 | | U (1.27) | | **13.91** | | U (6.35) | | 0.8 | |
| Carbon Disulfide | **4.2** | U (1.72) | | U (68.16) | | 0.5 | J | 6.63 | J | 0.5 | J | U (4.73) | | 0.53 | J | U (1.47) | | U (0.49) | | 2.58 | | U (0.49) | | U (7.35) | | U (0.49) | |
| Carbon Tetrachloride | **1.3** | 0.87 | D | U (101.28) | | 0.63 | | U (9.50) | | 0.69 | | U (7.05) | | 0.82 | | U (2.19) | | U (2.19) | | **5.72** | | 0.75 | | U (10.95) | | 0.75 | |
| Chloroform | **1.1** | U (1.44) | | U (91.01) | | 0.44 | J | U (8.57) | | U (0.41) | | U (6.33) | | U (0.41) | | 2.19 | J | **1.27** | | 22.73 | | U (0.41) | | U (9.83) | | U (0.41) | |
| cis-1,2-Dichloroethene | **1.9** | U (1.37) | | **7,930** | D | U (0.39) | | U (6.54) | | 2.38 | | **8.29** | | U (0.39) | | **319.6** | D | U (0.39) | | U (1.50) | | U (0.39) | | U (7.53) | | U (0.39) | |
| Cyclohexane | **NA** | U (0.95) | | U (67.81) | | U (0.27) | | U (6.37) | | 0.83 | | U (4.72) | | U (0.27) | | U (1.46) | | U (1.46) | | U (1.46) | | U (0.27) | | U (7.30) | | 0.83 | |
| Dichlorodifluoromethane | **16.5** | 4.48 | D | U (104.83) | | 2.82 | | U (9.84) | | 2.62 | | U (7.27) | | 2.77 | | U (2.26) | | 2.47 | | 2.72 | | 3.61 | | U (11.27) | | 3.41 | |
| Ethanol | **210** | 178.74 | D | U (40.91) | | 45.06 | D | 31.49 | | 87.49 | D | 22.25 | | 79.57 | D | 11.86 | | 41.29 | | 8.81 | | 84.47 | D | **659.92** | | 25.45 | |
| Ethyl acetate | **5.4** | U (1.15) | | U (73.87) | | **12.97** | | U (6.92) | | **23.85** | | U (5.12) | | U (0.33) | | U (1.59) | | **10.45** | | 5.26 | | U (0.33) | | U (7.93) | | U (0.33) | |
| Ethylbenzene | **5.7** | 2.26 | D | U (90.61) | | 0.43 | | U (8.50) | | 0.82 | | **472.56** | | 1.13 | | U (1.96) | | U (1.96) | | U (1.96) | | 0.65 | | U (19.55) | | U (0.37) | |
| Hexane | **10.2** | U (1.53) | | U (49.36) | | **11.00** | | 5.22 | J | 6.98 | | U (3.43) | | **10.72** | | U (1.06) | | 8.07 | | U (1.06) | | 1.62 | J | 7.23 | J | 2.93 | |
| Isopropyl alcohol | **NA** | 9.74 | D | U (54.48) | | 8.22 | | U (5.10) | | 12.86 | | 32.64 | | 15.14 | | U (1.18) | | U (1.18) | | 3.14 | | 14.92 | | 11.66 | | 28.96 | |
| m/p-Xylene | **22.2** | 5.59 | D | U (162.14) | | 1.04 | | U (15.22) | | 1.95 | | **1,031** | | 3.25 | | U (11.27) | | U (3.5) | | U (3.50) | | 1.6 | | **26.66** | | 1.00 | |
| Methylene Chloride | **60**[2] | 10.87 | D,B | U (65.63) | | 3.16 | B | 10.42 | | 3.78 | B | 6.25 | | 5.94 | B | 2.22 | | 2.05 | | U (1.42) | | 4.2 | B | U (7.08) | | 14.51 | B |
| Naphthalene | **NA** | 3.46 | J | U (89.00) | | 0.58 | J | 22.77 | | U (0.51) | | U (6.18) | | 0.63 | J | U (3.83) | | U (0.51) | | U (1.92) | | U (0.51) | | U (9.58) | | U (0.51) | |
| n-Butylbenzene | **NA** | 2.87 | D | U (94.96) | | U (0.46) | | U (8.89) | | U (0.46) | | U (6.59) | | U (0.46) | | U (2.05) | | U (0.46) | | U (2.05) | | U (0.46) | | U (10.21) | | U (0.46) | |
| n-Heptane | **NA** | 2.57 | D | U (74.59) | | U (0.75) | | U (7.01) | | 12.17 | | U (5.16) | | 10.49 | | U (1.61) | | 1.8 | J | U (1.61) | | 9.79 | | U (8.03) | | 0.74 | |
| o-Xylene | **7.9** | 2.11 | D | U (80.64) | | U (0.40) | | U (7.54) | | 0.74 | | **389.75** | | 0.87 | | U (5.59) | | U (1.74) | | U (1.74) | | 0.61 | | U (8.67) | | U (0.40) | |
| sec-Butylbenzene | **NA** | 2.29 | D | U (85.62) | | U (0.35) | | U (8.01) | | U (0.35) | | U (5.93) | | U (0.35) | | U (1.84) | | U (0.35) | | U (1.84) | | U (0.35) | | U (9.22) | | U (0.35) | |
| Styrene | **1.9** | U (1.02) | | U (66.78) | | U (0.29) | | U (6.25) | | U (0.29) | | U (4.64) | | 0.43 | | U (1.44) | | U (0.29) | | U (1.44) | | 0.51 | | U (7.23) | | U (0.29) | |
| Tetrachloroethene | **30**[3] | U (0.28) | | U (107.14) | | U (0.08) | | **38.04** | | 0.14 | J | 11.60 | | 0.41 | | 4.68 | | U (0.08) | | **66.59** | | 0.27 | | **77.31** | | 0.88 | |
| Toluene | **43** | 5.12 | D | U (63.59) | | 1.13 | | 10.95 | | 7.00 | | 37.63 | | 11.14 | | 2.52 | | 2.48 | | 2.14 | | 4.63 | | 22.95 | | 3.99 | |
| Trichloroethene | **5**[2] | U (0.22) | | **137.04** | D | 0.32 | | U (0.06) | | 0.32 | | **57.5** | | 0.38 | | **64.49** | | U (0.06) | | **37.67** | | 0.21 | | **73.09** | | U (0.06) | |
| Trichlorofluoromethane | **18.1** | **74.18** | D | U (91.04) | | 10.45 | | **20.29** | | **21.07** | | **66.87** | | **21.35** | | **29.17** | | 3.99 | | **30.9** | | 14.16 | | U (9.78) | | 2.42 | |

**NOTES**

Volatile organic compound (VOC) concentrations are presented in micrograms per cubic meter ($\mu g/m^3$).

U = Not detected at concentration above analytical laboratory detection limit indicated in parenthesis

NA = Not Available.

D = Sample Diluted.

B = Analyte is found in the associated blank as well as in the sample

No NYSDOH criteria is available for soil vapor samples

J = Estimated Value

[1] Unless otherwise noted the Indoor Air guidance value shown is the 90th percentile referenced in Table C2 of the NYSDOH document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006.

[2] NYSDOH derived air guidance values in NYSDOH document titled "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006.

[3] Value identified in NYSDOH September 2013 Fact Sheet "Tetrachloroethene (PERC) in Indoor and Outdoor Air".

**74.18** Highlighted value exceeds referenced NYSDOH indoor air guidance value

Constituent in Red Text = identified at the Site during the Chemical Inventory that was completed between April 13, 2015 and April 14, 2015

# APPENDIX A

HEALTH AND SAFETY PLAN

# HEALTH AND SAFETY PLAN

## REMEDIAL INVESTIGATION
## 211 FRANKLIN STEET
## OLEAN, NEW YORK

## NYSDEC SITE NUMBER C905038

**Prepared by:** Day Environmental, Inc.
1563 Lyell Avenue
Rochester, New York 14606

**Project No.:** 4884S-13

**Date:** May 2015

**TABLE OF CONTENTS**

ATTACHMENTS

## 1.0 INTRODUCTION

Day Environmental, Inc. (DAY) prepared this Health and Safety Plan (HASP) to outline policies and procedures to protect workers and the public from potential environmental hazards during the remediation activities to be conducted at the property addressed 211 Franklin Street, City of Olean, County of Cattaraugus, New York (the Site). Figure 1 depicts the general location of the Site.

Although the HASP focuses on the specific work activities planned for the Site, it must remain flexible due to the nature of this work. Conditions may change and unforeseen situations can arise that require deviations from the original HASP.

### 1.1 SITE HISTORY/OVERVIEW

The Site is located in an industrial-use area in the City of Olean, Cattaraugus County, New York. The Site is bounded to the north by Franklin Street with vacant land, a parking lot and playground/baseball field beyond, to the east by vacant land and residential housing beyond, to the south by railroad lines and West Pine Street beyond, and to the west by railroad lines and industrial use properties beyond. The Site is improved with a building that operates as a manufacturing facility for resins, epoxies and related materials. Specific information regarding current structures is provided below.

- ☐ 211 Franklin Street (SBL #94.040-1-21): An approximate 5.54-acre parcel of land, improved with an approximate 280,000-square foot, two-story industrial building with a partial basement.

Day Environmental, Inc. (DAY) completed various studies at the Site, which are summarized in a document titled Remedial Investigation/Alternatives Analysis (RIAA) Report, 211 Franklin Street, City of Olean, Cattaraugus County, New York, BCP #C905038 dated January 2015 (revised April 10, 2015). The contaminants of concern (COCs) identified at the Site during the studies completed to date are listed below in Section 4.1.

PLANNED ACTIVITIES COVERED BY HASP

This HASP is intended to be used during the completion of remediation activities at the Site. Currently, identified activities include:

- ☐ Site Preparation Activities;
- ☐ Decommissioning and closure of a sump pit located in a basement in the northwest portion of the building at the Site;
- ☐ Closure of an empty approximate 10,000-gallon UST located in southern portion of the building at the Site;
- ☐ Excavation, stockpiling, characterization and possible disposal of near surface soil in limited exterior areas for grading purposes;
- ☐ Placement of 1-foot thick cover soil over exterior portions of the Site;

- ☐ Preparation and pavement of exterior portions of the Site;
- ☐ Installation of a sub-slab depressurization system (SSDS) in an approximate 10,000 square foot area in the central portion of the building at the Site;
- ☐ Monitoring Well Sampling;

This HASP can be modified to cover other site activities as deemed appropriate. The owner of the property, its contractors, and other site workers will be responsible for the development and/or implementation of health and safety provisions associated with site activities.

## 2.0 KEY PERSONNEL AND MANAGEMENT

The Project Manager (PM) and Site Safety Officer (SSO) are responsible for formulating health and safety requirements, and implementing the HASP.

### 2.1 PROJECT MANAGER

The PM has the overall responsibility for the project and will coordinate with the SSO to ensure that the goals of the project are attained in a manner consistent with the HASP requirements.

### 2.2 SITE SAFETY OFFICER

The SSO has responsibility for administering the HASP relative to site activities, and will be in the field while activities are in progress. The SSO's operational responsibilities will be monitoring, including personal and environmental monitoring, ensuring personal protective equipment (PPE) maintenance, and identification of protection levels. The air monitoring data obtained by the SSO will be available for review by regulatory agencies and other on-site personnel.

### 2.3 EMPLOYEE SAFETY RESPONSIBILITY

Each employee is responsible for personal safety as well as safety of others in the area. The employee will use the equipment provided in a safe and responsible manner as directed by the SSO.

### 2.4 KEY SAFETY PERSONNEL

The following individuals are anticipated to share responsibility for health and safety of DAY representatives at the Site.

| | |
|---|---|
| DAY Project Manager | Raymond Kampff |
| DAY Site Safety Officer | William Batiste, Charles Hampton, or Zachary Tennies |

## 3.0 SAFETY RESPONSIBILITY

Contractors, consultants, state or local agencies, or other parties, and their employees, involved with this project will be responsible for their own safety while on-site. Their employees will be required to understand the information contained in this HSAP, and must follow the recommendations that are made in this document. As an alternative, contractors, consultants, state or local agencies, or other parties, and their employees, involved with this project can utilize their own health and safety plan for this project as long as it is found acceptable to the New York State Department of Health (NYSDOH) and /or the Cattaraugus County Health Department (CCHD).

## 4.0 JOB HAZARD ANALYSIS

There are many hazards associated with environmental work on a site, and this HASP discusses some of the anticipated hazards for this Site. The hazards listed below deal specifically with those hazards associated with the management of potentially contaminated media (e.g. soil, fill, etc.).

### 4.1 CHEMICAL HAZARDS

Chemical substances can enter the unprotected body by inhalation, skin absorption, ingestion, or injection (i.e., a puncture wound, etc.). A contaminant can cause damage to the point of contact or can act systemically, causing a toxic effect at a part of the body distant from the point of initial contact.

A list of selected constituents that have been detected at the Site (and the media in which detected) at concentrations that exceed soil or groundwater standards criteria and guidance (SCG) values (or have the potential to exceed NYSDOH indoor air standards), are presented below. This list also presents the Occupational Safety and Health Administration (OSHA) permissible exposure limits (PELs), National Institute for Occupational Safety and Health (NIOSH) recommended exposure limits (RELs), and NIOSH immediately dangerous to life or health (IDLH) levels.

| CONSTITUENT | MEDIA | OSHA PEL | NIOSH REL | IDLH |
|---|---|---|---|---|
| tert-butylbenzene | Groundwater | NA | NA | NA |
| Acetone | Groundwater | 2400 $mg/m^3$ | 590 $mg/m^3$ | 2500 ppm |
| Arsenic | Soil | 0.01 $mg/m^3$ | 0.002 $mg/m^3$ | 5 $mg/m^3$ |
| Barium | Groundwater | 0.5 $mg/m^3$ | 0.5 $mg/m^3$ | 50 $mg/m^3$ |
| Beryllium | Groundwater | 0.002 $mg/m^3$ | 0.0005 $mg/m^3$ | 4 $mg/m^3$ |
| Benzo(a)anthracene | Soil | 0.2 $mg/m^3$ | 0.1 $mg/m^3$ | 80 $mg/m^3$ |
| Benzo(a)pyrene | Soil | 0.2 $mg/m^3$ | 0.1 $mg/m^3$ | 80 $mg/m^3$ |
| Benzo(b)fluoranthene | Soil | | | |
| Cadmium | Soil | 0.005 $mg/m^3$ | NA | 9 $mg/m^3$ |
| Chromium | Groundwater | 1 $mg/m^3$ | 0.5 $mg/m^3$ | 250 $mg/m^3$ |
| Copper | Soil | 1 $mg/m^3$ | 1 $mg/m^3$ | 100 $mg/m^3$ |
| Dibenzo(a,h)anthracene | Soil | | | |
| Hexachlorobenzene | Soil | 10 $mg/m^3$ | 10 $mg/m^3$ | 3000 $mg/m^3$ |
| Indeno(1,2,3-cd)pyrene | Soil | | | |
| Iron[1] | Groundwater | 10 $mg/m^3$ | 5 $mg/m^3$ | 2500 $mg/m^3$ |
| Lead | Soil | 0.05 $mg/m^3$ | 0.05 $mg/m^3$ | 100 $mg/m^3$ |

[1] Iron Oxide dust and fume (as Fe)

| | | | | |
|---|---|---|---|---|
| Magnesium | Groundwater | 15 mg/$m^3$ | NA | 750 mg/$m^3$ |
| Manganese | Groundwater | 5 mg/$m^3$ | 1 mg/$m^3$ | 500 mg/$m^3$ |
| Mercury | soil | 0.1 mg/$m^3$ | 0.1 mg/$m^3$ | 10 mg/$m^3$ |
| Sodium | Groundwater | NA | NA | NA |
| Nickel | Soil | 1 mg/$m^3$ | 0.015 mg/$m^3$ | 10 mg/$m^3$ |
| Polychlorinated Biphenyls (PCBs) | Soil | 0.5 mg/$m^3$ | 0.001 mg/$m^3$ | 5 mg/$m^3$ |
| Selenium | Groundwater | 0.2 mg/$m^3$ | 0.2 mg/$m^3$ | 1 mg/$m^3$ |
| Tetrachloroethene (PCE) | Soil vapor | 678 mg/$m^3$ | NA | 1070 mg/$m^3$ |
| Thallium | Groundwater | 0.1 mg/$m^3$ | 0.1 mg/$m^3$ | 15 mg/$m^3$ |
| Trichloroethene (TCE) | Soil vapor | 537 mg/$m^3$ | NA | 5370 mg/$m^3$ |
| Zinc | Soil | 5 mg/$m^3$ | 5 mg/$m^3$ | 500 mg/$m^3$ |

NA = Not Available

The potential routes of exposure for these analytes and chemicals include inhalation, ingestion, skin absorption and/or skin/eye contact. The potential for exposure through any one of these routes will depend on the activity conducted. The most likely routes of exposure for these activities that are performed during environmental activities at the Site include inhalation and skin/eye contact.

## 4.2 Physical Hazards

There are physical hazards associated with this project, which might compound the chemical hazards. Hazard identification, training, adherence to the planned environmental measures, and careful housekeeping can prevent many problems or accidents arising from physical hazards. Potential physical hazards associated with this project and suggested preventative measures include:

- ☐ Slip/Trip/Fall Hazards – Some areas may have wet or frozen surfaces that will greatly increase the possibility of inadvertent slips. Caution must be exercised when using steps and stairs due to slippery surfaces in conjunction with the fall hazard. Good housekeeping practices are essential to minimize the trip hazards.
- ☐ Small Quantity Flammable Liquids – Small quantities of flammable liquids will be stored in "safety" cans and labeled according to contents.
- ☐ Electrical Hazards – Electrical devices and equipment shall be de-energized prior to working near them. All extension cords will be kept out of water, protected from crushing, and observed regularly to ensure structural integrity. Temporary electrical circuits will be protected with ground fault circuit interrupters. Only qualified electricians are authorized to work on electrical circuits. Heavy equipment (e.g., excavator, backhoe, drill rig) shall not be operated within 10 feet of high voltage lines, unless proper protection form the high voltage lines is provided by the appropriate utility company.

- ☐ Noise – Work around large equipment often creates excessive noise. The effects of noise can include:
  - Workers being startled, annoyed, or distracted.
  - Physical damage to the ear resulting in pain, or temporary and or/permanent hearing loss.
  - Communication interference that may increase potential hazards due to the inability to warn of danger and proper safety precautions to be taken.

  Proper hearing protection will be worn as deemed necessary. In general, feasible administrative or engineering controls shall be utilized when on-site personnel are subjected to noise exceeding an 8-hour time weighted average (TWA) sound level of 90 decibels on the A-weighted scale (dBA). In addition, whenever employee noise exposures equal or exceed an 8-hour TWA sound level of 85 dBA, employers shall administer a continuing, effective hearing conservation program as described in the OSHA Regulation 29 Code of Federal Rules (CFR) Part 1910.95.
- ☐ Heavy Equipment – Each morning before start-up, heavy equipment will be checked to ensure safety equipment and devices are operational and ready for immediate use.
- ☐ Subsurface and Overhead Hazards – Before any excavation activity, efforts will be made to determine whether underground utilities and potential overhead hazards will be encountered. Underground utility clearance must be obtained prior to subsurface work.
- ☐ Excavation and Trenching Hazards – Excavations and trenches (i.e., test pits and removal of underground storage tanks) required during the course of this project will be completed in accordance with the requirements of 29 CFR 196 Part P (OSHA Excavations Regulation). As shown in 29 CFR 196.652(a)(1)(ii), excavations that are greater than 5 feet in depth require an adequate protective system prior to entry by qualified personnel. The SSO will be responsible for identifying excavations that require protective systems and their implementation. Adequate protective systems will be designed and implemented as required in Part P of the applicable regulation.

  Qualified personnel should remain at least 3 feet from edge of sidewalls of excavation and should view excavation from end walls to avoid cave-in. Samples from excavation should be collected using remote methods such as with an excavator bucket.

## 4.2 ENVIRONMENTAL HAZARDS

Environmental factors such as weather, wild animals, insects, snakes and irritant plants can pose a hazard when performing outdoor tasks. The SSO shall make reasonable efforts to alleviate these hazards should they arise.

### *4.3.1 Heat Stress*

The combination of warm ambient temperature and protective clothing increases the potential for heat stress. In particular,

- ☐ Heat rash
- ☐ Heat cramps
- ☐ Heat exhaustion
- ☐ Heat stroke

Site workers will be encouraged to increase consumption of water or electrolyte-containing beverages such as Gatorade® when the potential for heat stress exists. In addition, workers are encouraged to take rests whenever they feel any adverse effects that may be heat-related. The frequency of breaks may need to be increased upon worker recommendation to the SSO.

### *4.3.2 Exposure to Cold*

With outdoor work in the winter months, the potential exists for hypothermia and frostbite. Protective clothing greatly reduces the possibility of hypothermia in workers. However, personnel will be instructed to wear warm clothing and to stop work to obtain more clothing if they become too cold. Employees will also be advised to change into dry clothes if their clothing becomes wet from perspiration or from exposure to precipitation.

## 5.0 SITE CONTROLS

To prevent migration of contamination caused through tracking by personnel or equipment, work areas, and personal protective equipment staging/decontamination areas will be specified prior to beginning operations.

### 5.1 SITE ZONES

In the area where contaminated materials present the potential for worker exposure (work zone), personnel entering the area must wear the mandated level of protection for the area. A "transition zone" shall be established where personnel can begin and complete personal and equipment decontamination procedures. This can reduce potential off-site migration of contaminated media. Contaminated equipment or clothing will not be allowed outside the transition zone (e.g., on clean portions of the Site) unless properly containerized for disposal. Operational support facilities will be located outside the transition zone (i.e., in a "support zone"), and normal work clothing and support equipment are appropriate in this area. If possible, the support zone should be located upwind of the work zone and transition zone.

### 5.2 GENERAL

The following items will be requirements to protect the health and safety of workers during implementation of activities that disturb contaminated material.

- ☐ Eating, drinking, chewing gum or tobacco, smoking, or any practice that increased the probability of hand to mouth transfer and ingestion of contamination shall not occur in the work zone and/or transition zone during disturbance of contaminated material.
- ☐ Personnel admitted in the work zone shall be properly trained in health and safety techniques and equipment usage.
- ☐ No personnel shall be admitted in the work zone without the proper safety equipment.
- ☐ Proper decontamination procedures shall be followed before leaving the Site.

## 6.0 PROTECTIVE EQUIPMENT

This section addresses the various levels of PPE, which are or may be required at this job site. Personnel entering the work zone and transition zone shall be trained in the use of the anticipated PPE to be utilized.

### 6.1 ANTICIPATED PROTECTION LEVELS

The following table summarizes the protection levels (refer to Section 6.2) anticipated for tasks to be implemented during this project.

| TASK | PROTECTION LEVEL | COMMENTS/MODIFICATIONS |
|---|---|---|
| Site mobilization | D | |
| Site preparation | D | |
| Intrusive work | C/Modified D/D | Based on air monitoring, and SSO discretion. |
| Decontamination Area | Modified D/D | |
| Site breakdown and demobilization | D | |

It is anticipated that work conducted as part of this project will be performed in Level D or modified Level D PPE. If conditions are encountered that require Level A or Level B PPE, the work will immediately be stopped. The appropriate government agencies (e.g., City, NYSDEC, NYSDOH, CCHD, etc.) will be notified and the proper health and safety measures will be implemented (e.g., develop and implement engineering controls, upgrade in PPE, etc.). If conditions are encountered that require Level C PPE, the work will be temporarily suspended and the work site will be evaluated to limit exposure prior to implementing Level C PPE.

### 6.2 PROTECTION LEVEL DESCRIPTIONS

This section lists the minimum requirements for each protection level. Modifications to these requirements can be made upon approval of the SSO. If Level A, Level B, and/or Level C PPE is required, Site personnel that enter the work zone and/or transition zone must be properly trained and certified in the use of those levels of PPE.

#### *6.2.1 Level D*

Level D consists of the following:

- ☐ Safety glasses
- ☐ Hard hat when working with heavy equipment
- ☐ Steel-toed or composite-toed work boots
- ☐ Protective gloves during sampling or handling of potentially contaminated media

- ☐ Work clothing as prescribed by weather

### *6.2.2 Modified Level D*

Modified Level D consists of the following:

- ☐ Safety glasses with side shields
- ☐ Hard hat when working with heavy equipment
- ☐ Steel-toed or composite-toed work boots
- ☐ Protective gloves during sampling or handling of potentially contaminated media
- ☐ Outer protective wear, such as Tyvek coverall [Tyveks (Sarans) and polyvinyl chloride (PVC) acid gear will be required when workers have a potential to be exposed to impacted liquids or impacted particulates].

### *6.2.3 Level C*

Level C consists of the following:

- ☐ Air-purifying respirator with appropriate cartridges
- ☐ Outer protective wear, such as Tyvek coverall [Tyveks (Sarans) and PVC acid gear will be required when workers have a potential to be exposed to impacted liquids or particulates].
- ☐ Hard hat when working with heavy equipment
- ☐ Steel-toed or composite-toed work boots
- ☐ Nitrile, neoprene, or PVC overboots, if appropriate
- ☐ Nitrile, neoprene, or PVC gloves, if appropriate
- ☐ Face shield (when projectiles or splashes pose a hazard)

### *6.2.4 Level B*

Level B protection consists of the items required for Level C protection with the exception that an air-supplied respirator is used in place of the air-purifying respirator. Level B PPE is not anticipated to be required during this project. If the need for level B PPE becomes evident, activities in the affected area will be stopped until conditions are further evaluated, and any necessary modifications to the HASP have been approved by the PM and SSO. Subsequently, the appropriate safety measures (including Level B PPE) must be implemented prior to commencing site activities.

### *6.2.5 Level A*

Level A protection consists of the items required for Level B protection with the addition of a fully-encapsulating, vapor-proof suit capable of maintaining positive pressure. Level A PPE is not anticipated to be required during this project. If the need for level A PPE becomes evident, activities in the affected area will be stopped until conditions are further evaluated, and any necessary modifications to the HASP have been approved by the PM and SSO. Subsequently, the appropriate safety measures (including Level A PPE) must be implemented prior to commencing site activities.

## 6.3 RESPIRATORY PROTECTION

Any respirator used will meet the requirements of the OSHA 29 CFR 1910.134. Both the respirator and cartridges specified shall be fit-tested prior to use in accordance with OSHA regulations (29 CFR 1910). Air purifying respirators shall not be worn if contaminant levels exceed designated use concentrations. The workers will wear respirators with approval for: organic vapors less than 1,000 ppm; and dusts, fumes and mists with a TWA less than 0.05 milligrams per cubic meter ($mg/m^3$).

No personnel who have facial hair, which interferes with respirator sealing surface, will be permitted to wear a respirator and will not be permitted to work in areas requiring respirator use.

Only workers who have been certified by a physician as being physically capable of respirator usage shall be issued a respirator. Personnel unable to pass a respiratory fit test or without medical clearance for respirator use will not be permitted to enter or work in areas that require respirator protection.

## 7.0 DECONTAMINATION PROCEDURES

This section describes the procedures necessary to ensure that both personnel and equipment are free from contamination when they leave the work site.

### 7.1 PERSONNEL DECONTAMINATION

Personnel involved with activities that involve disturbing contaminated media will follow the decontamination procedures described herein to ensure that material which workers may have contacted in the work zone and/or transition zone does not result in personal exposure and is not spread to clean areas of the Site. This sequence describes the general decontamination procedure. The specific stages can vary depending on the Site, the task, and the protection level, etc.

1. Leave work zone and go to transition zone
2. Remove soil/debris from boots and gloves
3. Remove boots
4. Remove gloves
5. Remove Tyvek suit and discard, if applicable
6. Remove and wash respirator, if applicable
7. Go to support zone

### 7.2 EQUIPMENT DECONTAMINATION

Decontamination procedures for equipment are presented as Section 4.0 of the Quality Assurance Project Plan (QAPP).

### 7.3 DISPOSAL

Disposable clothing will be disposed in accordance with applicable regulations. Liquids (e.g., decontamination water, etc.) or solids (e.g., soil) generated by remedial activities will be disposed in accordance with applicable regulations.

## 8.0 AIR MONITORING

During activities that have the potential to disturb contaminated soil, fill material, or groundwater, air monitoring will be conducted in order to determine airborne particulate and contamination levels. This ensures that respiratory protection is adequate to protect personnel against the chemicals that are encountered and that chemical contaminants are not migrating off-site. Additional air monitoring may be conducted at the discretion of the SSO. Readings will be recorded and be available for review.

The following chart describes the direct reading instrumentation that will be utilized and appropriate action levels.

| Monitoring Device | Action Level | Response/Level of PPE |
|---|---|---|
| PID Volatile Organic Compound Meter | < 1 ppm in breathing zone, sustained 5 minutes | Level D |
| | 1-25 ppm in breathing zone, sustained 5 minutes | Cease work, implement measures to reduce air emissions when the work is performed, etc. If levels can not be brought below 1 ppm in the breathing zone, then upgrade PPE to Level C |
| | 26-250 ppm in breathing zone, sustained 5 minutes | Level B, Stop work, evaluate the use of engineering controls, etc. |
| | >250 ppm in breathing zone | Level A, Stop work, evaluate the use of engineering controls, etc. |
| RTAM Particulate Meter | < 100 $\mu g/m^3$ over an integrated period not to exceed 15 minutes. | Continue working |
| | > 100 $\mu g/m^3$ | Cease work, implement dust suppression, change in way work performed, etc. If levels can not be brought below 150 $\mu g/m^3$, then upgrade PPE to Level C |

### 8.1 PARTICULATE MONITORING

During activities where contaminated materials (e.g., soil, fill, etc.) may be disturbed, air monitoring will include real-time monitoring for particulates using a real-time aerosol monitor (RTAM) particulate meter at the perimeter of the work zone in accordance with the Final DER-10 Technical Guidance for Site Investigation and Remediation dated May 2010. DER-10 uses an action level of 100 µg/m3 (0.10 mg/m3) over background conditions for an integrated period not to exceed 15 minutes. If the action level is

exceeded, or if visible dust is encountered, then work shall be discontinued until corrective actions are implemented. Corrective actions may include dust suppression, change in the way work is performed, and/or upgrade of personal protective equipment.

## 8.2 VOLATILE ORGANIC COMPOUND MONITORING

During activities where contaminated materials may be disturbed, a photoionization detector (PID) will be used to monitor total VOCs in the ambient air. The PID will prove useful as a direct reading instrument to aid in determining if current respiratory protection is adequate or needs to be upgraded. The SSO will take measurements before operations begin in an area to determine the amount of VOCs naturally occurring in the air. This is referred to as a background level. Levels of VOCs will periodically be measured in the air at active work sites, and at the transition zone when levels are detected above background in the work zone.

## 8.3 COMMUNITY AIR MONITORING PLAN

During activities that have the potential to disturb contaminated soil, fill material, or groundwater, this Community Air Monitoring Plan (CAMP) will be implemented. The CAMP includes real-time monitoring for VOCs and particulates (i.e., dust) at the downwind perimeter of each designated work area when activities with the potential to release VOCs or dust are in progress at the Site. This CAMP is based on the NYSDOH Generic CAMP included as Appendix 1A of the NYSDEC document titled *"DER-10, Technical Guidance for Site Investigation and Remediation"* dated May 2010. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences/businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of project activities.

### Exterior Investigations

The most significant nearby receptor for exterior work is the residential housing located along North Union Street to the east of the Site. Due to proximity of the houses, at least one of the CAMP stations will be placed between the area of intrusive activities and the receptor. In addition, one CAMP monitoring station will be placed on the downwind Site perimeter, and the upwind Site perimeter will be periodically monitored to obtain background levels. [Note: The specific locations will be determined based upon wind conditions at the time of fieldwork.] A Site Plan depicting potential exterior CAMP station locations is provided on Figure 2.

### Interior Investigations

During intrusive work within interior locations, VOCs, particulates and oxygen and carbon monoxide levels will be monitored using temporary monitoring stations at the perimeter of the work zone. Stations will be placed at the discretion of the SSO to best

evaluate potential contamination leaving the work zone or building. No exterior CAMP monitoring will be completed concurrent with interior work.

The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air. Reliance on the CAMP should not preclude simple, common sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

**Continuous monitoring** will be conducted during ground intrusive activities involving potentially contaminated soil, fill material or groundwater. Ground intrusive activities include, but are not limited to, test pitting or trenching, advancement/installation of test borings or monitoring wells, etc.

**Periodic monitoring** for VOCs will be conducted during non-intrusive activities involving potentially contaminated soil, fill material or groundwater where deemed appropriate (e.g., during collection of soil samples or groundwater samples, etc.).

### *8.3.1 VOC Monitoring, Response Levels, and Actions*

VOCs must be monitored at the downwind perimeter of the immediate work area (i.e., the work zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- ☐ If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 ppm above background for the 15-minute average, work activities must be temporarily halted and monitoring must be continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- ☐ If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source or vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less (but in no case less than 20 feet), is below 5 ppm over background for the 15-minute average.

- ☐ If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

The 15-minute readings must be recorded and made available for NYSDEC and NYSDOH personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

### *8.3.2 Particulate Monitoring, Response Levels, and Actions*

Particulate concentrations should be monitored continuously at the upwind perimeter of the work zone at temporary particulate monitoring stations. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during work activities.

- ☐ If the downwind PM-10 particulate level is 100 micrograms per cubic meter (µg/m3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 µg/m3 above the upwind level and provided that no visible dust is migrating from the work area.
- ☐ If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 µg/m3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 µg/m3 of the upwind level and in preventing visible dust migration.

Readings will be recorded and made available for review.

## 8.4 CARBON MONOXIDE AND OXYGEN MONITORING PLAN

Carbon monoxide (CO) and oxygen (O) concentrations will be monitored continuously during activities completed indoors which require the use of equipment that produces exhaust fumes. The monitoring will be completed using a RAE QRAE II unit, or similar, set up at temporary monitoring stations at the perimeters of the work zone and/or in proximity of potential receptors. Concentrations of CO greater than 50 ppm will require discontinuing the work, installation of venting systems or implementing of other engineering controls, and continued monitoring. Areas where concentrations of CO are in exceedance of 100 ppm shall be evacuated immediately. OSHA does not have a PEL for O however, minimum acceptable breathing air contains at least 19.5% O. Concentrations of O below the minimum acceptable value for breathing air will require discontinuing the work, installation of venting systems or implementing of other engineering controls, and continued monitoring. Work will continue only when concentrations are within the acceptable ranges.

Readings will be recorded and made available for review.

## 10.0 EMERGENCY CONTINGENCY PLAN

This section presents the emergency contingency plan (ECP) describing the procedures to be performed in the event of an emergency (e.g., fire, spill, tank/drum release, etc.). To provide first-line assistance to field personnel in the case of illness or injury, the following items will be made immediately available on the Site:

- ☐ First-aid kit;
- ☐ Portable emergency eye wash; and
- ☐ Supply of clean water.

### 10.1 EMERGENCY TELEPHONE NUMBERS

The following telephone numbers are listed in case there is an emergency at the Site:

| | |
|---|---|
| Fire/Police Department: | 911 |
| Poison Control Center: | (800) 222-1222 |
| NYSDEC | |
| Region 9: Environmental Remediation | (716) 851-7220 |
| Spill Hotline | (800) 457-7362 |
| NYSDOH | |
| Public Health Duty Officer | (866) 881-2809 |
| CCHD | |
| 24 Hour Hotline | (716) 373-8010 |
| SOL EPOXY | |
| Mark Wendel | (716) 378-8546 |
| DAY ENVIRONMENTAL, INC. | |
| Raymond Kampff | (585) 454-0210 x108 |
| NEAREST HOSPITAL: | Olean General Hospital<br>515 Main Street, Olean, NY 14760<br>(716) 373-2600 (Main)<br>(716) 375-2675 (Emergency Department) |
| Directions to the Hospital: | Head northeast on Franklin Street toward North Union Street for approximately 0.1 miles. Turn right on N. Union Street and proceed approximately 0.8 miles. Continue onto Main Street and travel approximately 0.1 |

miles, then turn left into Olean General Hospital. (Figure 1).

## 10.2 EVACUATION

During activities involving potential disturbance of contaminated soil, fill material, or groundwater, a log of each individual entering and leaving the Site will be kept for emergency accounting practices. Although unlikely, it is possible that a site emergency could require evacuating personnel from the Site. If required, the SSO will give the appropriate signal for site evacuation (i.e., hand signals, alarms, etc.).

All personnel shall exit the Site and shall congregate in an area designated by the SSO. The SSO shall ensure that all personnel are accounted for. If someone is missing, the SSO will alert emergency personnel. The appropriate government agencies will be notified as soon as possible regarding the evacuation, and any necessary measures that may be required to mitigate the reason for the evacuation.

## 10.3 MEDICAL EMERGENCY

In the event of a medical emergency involving illness or injury to one of the on-site personnel, Emergency Medical Services (EMS) and the appropriate government agencies should be notified immediately. The area in which the injury or illness occurred shall not be entered until the cause of the illness or injury is known. The nature of injury or illness shall be assessed. If the victim appears to be critically injured, administer first aid and/or cardio-pulmonary resuscitation (CPR) as needed. If appropriate, instantaneous real-time air monitoring shall be done in accordance with air monitoring outlined in Section 8.0 of this HASP.

## 10.4 CONTAMINATION EMERGENCY

It is unlikely that a contamination emergency will occur; however, if such an emergency does occur, the specific work area shall be shut down and immediately secured. If an emergency rescue is needed, notify Police, Fire Department and EMS units immediately. Advise them of the situation and request and expedient response. The appropriate government agencies shall be notified immediately. The area in which the contamination occurred shall not be entered until the arrival of trained personnel who are properly equipped with the appropriate PPE and monitoring instrumentation as outlined in Section 8.0 of this HASP.

## 10.5 FIRE EMERGENCY

In the event of a fire on-site, all non-essential site personnel shall be evacuated to a safe, secure area. The Fire Department will be notified immediately, and advised of the situation and the identification of any hazardous materials involved. The appropriate government agencies shall be notified as soon as possible.

The four classes of fire along with their constituents are as follows:

Class A: Wood, cloth, paper, rubber, many plastics, and ordinary combustible materials.

Class B: Flammable liquids, gases and greases.

Class C: Energized electrical equipment.

Class D: Combustible metals such as magnesium, titanium, sodium, potassium.

Small fires on-site may be actively extinguished; however, extreme care shall be taken while in this operation. Approaches to the fire shall be done from the upwind side if possible. Distance from on-site personnel to the fire shall be close enough to ensure proper application of the extinguishing material but far enough away to ensure that the personnel are safe. The proper extinguisher shall be utilized for the Class(es) of fire present on the site. If possible, the fuel source shall be cut off or separated from the fire. Care must be taken when performing operations involving the shut-off of valves and manifolds, if present.

Examples of proper extinguishing agent as follows:

Class A: Water
Water with 1% AFFF Foam (Wet Water)
Water with 6% AFFF or Fluorprotein Foam
ABC Dry Chemical

Class B: ABC Dry Chemical
Purple K
Carbon Dioxide
Water with 6% AFFF Foam

Class C: ABC Dry Chemical
Carbon Dioxide

Class D: Metal-X Dry Powder

No attempt shall be made against large fires these shall be handled by the Fire Department.

## 10.6 SPILL OR AIR RELEASE

In the event of a spill or air release of hazardous materials on-site, the specific area of the spill or release shall be shut down and immediately secured. The area in which the spill or release occurred shall not be entered until the cause can be determined and site safety can be evaluated. Non-essential site personnel shall be evacuated to a safe and secure area. The appropriate government agencies shall be notified as soon as possible. The spilled or released material shall be immediately indentified and appropriate containment

measures shall be implemented, if possible. Real-time air monitoring shall be implemented as outlined in Section 8.0 of this HASP. If the materials are unknown, Level B protection is mandatory. If warranted, samples of the materials shall be acquired to facilitate identification.

## 10.7 LOCATING CONTAINERIZED WASTE AND/OR UNDERGROUND STORAGE TANKS

In the event that unanticipated containerized waster (e.g., drums) and/or USTs are located during remedial activities, the work will be stopped in the specific area until site safety can be evaluated and addressed. Non-essential Site personnel shall not work in the immediate area until conditions including possible exposure hazards are addressed. The appropriate government agencies shall be notified as soon as possible. The SSO shall monitor the area as outlined in Section 8.0 of this HASP.

Prior to any handling, unanticipated containers will be visually assessed by the SSO to gain as much information as possible about their contents. As a precautionary measure, personnel shall assume that unlabelled containers and/or tanks contain hazardous materials until their contents are characterized. To the extent possible based upon the nature of the containers encountered, actions may be taken to stabilize the area and prevent migration (e.g., placement of berms, etc.). Subsequent to initial visual assessment and any required stabilization, properly trained personnel will sample, test, remove, and dispose of any containers and/or tanks, and their contents. After visual assessment and air monitoring, if the material remains unknown, Level B protection is mandatory.

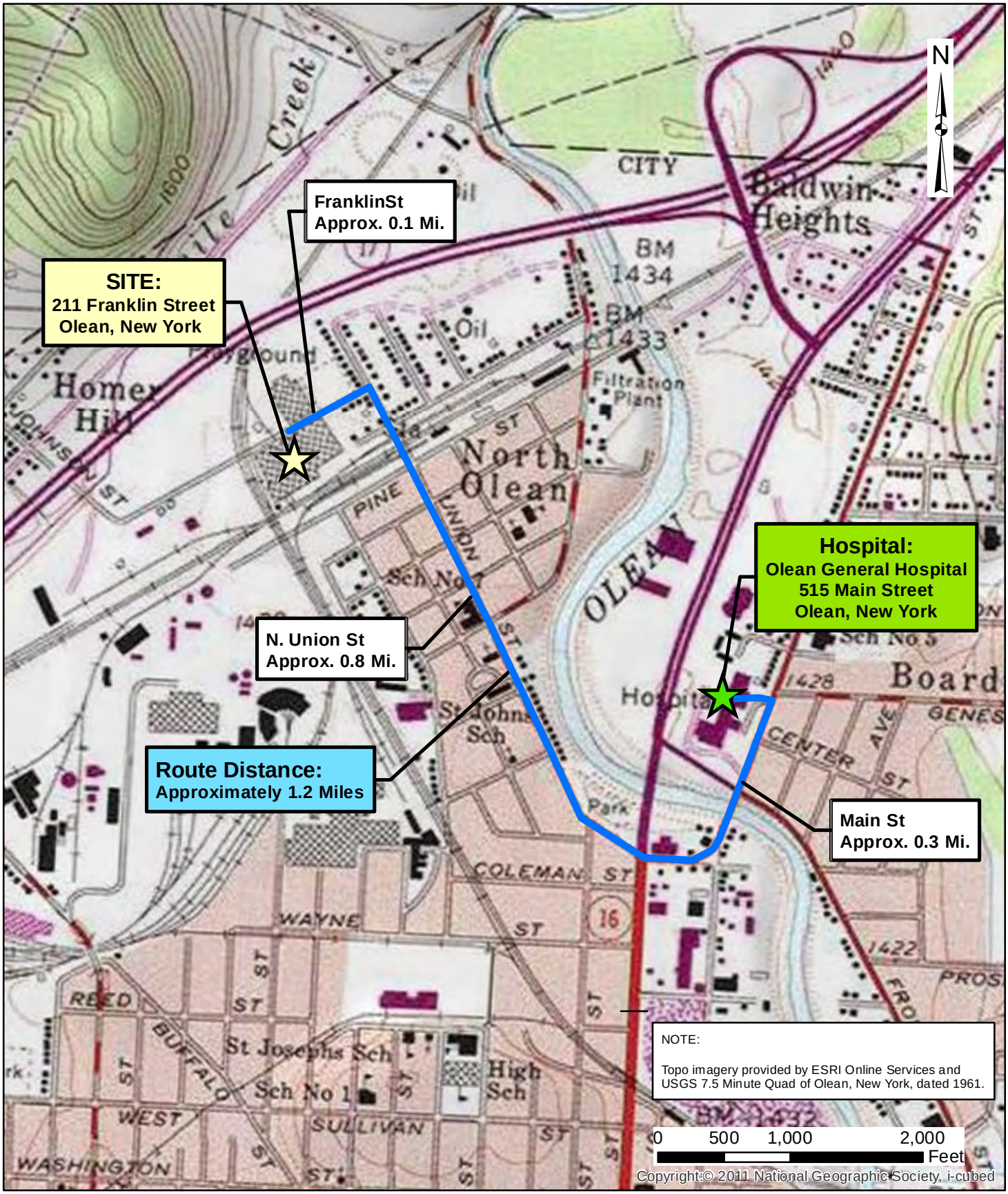
## 11.0 ABBREVIATIONS

| | |
|---|---|
| AFFF | Aqueous Film Forming Foams |
| bgs | Below Ground Surface |
| CAMP | Community Air Monitoring Program |
| CCHD | Cattaraugus County Health Department |
| CFR | Code of Federal Regulations |
| CPR | Cardio-Pulmonary Resuscitation |
| DAY | Day Environmental, Inc. |
| dBA | Decibels on the A-Weighted Scale |
| ECP | Emergency Contingency Plan |
| EMS | Emergency Medical Service |
| ESA | Environmental Site Assessment |
| HASP | Health and Safety Plan |
| IDLH | Immediately Dangerous to Life or Heath |
| $mg/m^3$ | Milligram Per Meter Cubed |
| NIOSH | National Institute for Occupational Safety and Health |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSDOH | New York State Department of Health |
| OSHA | Occupational Safety and Health Administration |
| PCB | Polychlorinated Biphenyl |
| PEL | Permissible Exposure Limit |
| PID | Photoionization Detector |
| PM | Project Manager |
| PM-10 | Particulate Matter Less Than 10 Micrometers In Diameter |
| PPE | Personal Protection Equipment |
| ppm | Parts Per Million |
| PVC | Polyvinyl Chloride |
| QAPP | Quality Assurance Project Plan |
| REC | Recognized Environmental Condition |
| REL | Recommended Exposure Limit |
| RI/RAA | Remedial Investigation/remedial Alternatives Analysis |
| RTAM | Real-Time Aerosol Monitor |
| SCG | Standards, Criteria and Guidance |
| SCO | Soil Cleanup Objective |
| SSO | Site Safety Officer |
| SVOC | Semi-Volatile Organic Compound |
| TIC | Tentatively Identified Compound |
| TAL | Target Analyte List |
| TCL | Target Compound List |
| TPH | Total Petroleum Hydrocarbons |
| TWA | Time-Weighted Average |
| $\mu g/m^3$ | Micrograms Per Meter Cubed |
| VOC | Volatile Organic Compound |

**ATTACHMENT 1**

**Figure 1 – Route for Emergency Services**

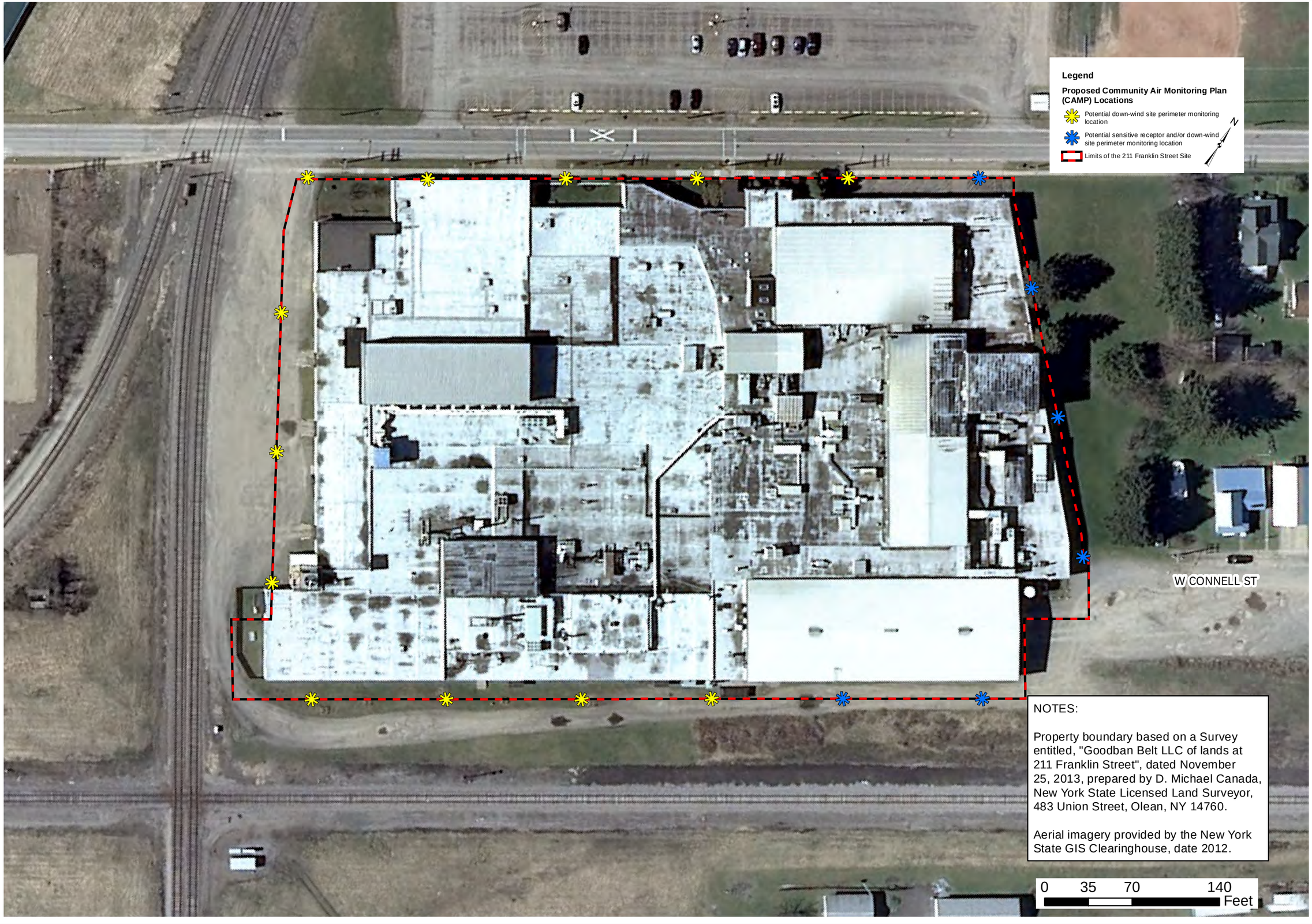
Last Date Saved: 01 Nov 2013 Document Path: \\Smelt-win7pc\gis\Aerial Locus Maps\4884S-13 Solepo - Hospital Map1.mxd




| | | | |
|---|---|---|---|
| Date: 11-1-2013 | day<br>DAY ENVIRONMENTAL, INC.<br>Environmental Consultants<br>Rochester, New York 14606<br>New York, New York 10170 | Project Title: 211 FRANKLIN STREET<br>OLEAN, NEW YORK<br>HEALTH AND SAFETY PLAN | Project No.: 4884S-13 |
| Drawn By: RJM | | Drawing Title: Route to Emergency Services | FIGURE 1 |
| Scale: AS NOTED | | | |

**ATTACHMENT 2**

**Figure 2 – Site Plan Depicting Tentative CAMP Station Locations**




Last Date Saved: 02 Dec 2013 Document Path: \\Smelt-win7pc\GIS\GIS Mapping\4884S-13S\dep\211Franklin\4884S - 25 - CAMP Monitoring Locations.mxd

| DESIGNED BY | DATE |
|---|---|
| RLK | 11-2013 |
| **DRAWN BY** | **DATE DRAWN** |
| CAH | 11-2013 |
| **SCALE** | **DATE ISSUED** |
| AS NOTED | 11-26-2013 |


day
DAY ENVIRONMENTAL, INC.
Environmental Consultants
Rochester, New York 14606
New York, New York 10170


Project Title
211 FRANKLIN STREET
OLEAN, NEW YORK

Drawing Title
HEALTH AND SAFETY PLAN

Proposed Community Air Monitoring Plan Locations

Project No.
4884S-13

FIGURE 2

# APPENDIX B

# NYSDOH INDOOR AIR QUALITY QUESTIONNAIRE COMPLETED FOR APRIL 16, 2015

**NEW YORK STATE DEPARTMENT OF HEALTH**
**INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY**
**CENTER FOR ENVIRONMENTAL HEALTH**

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Charles Hampton Date/Time Prepared April 16, 2015

Preparer's Affiliation Day Environmental, Inc. Phone No. 585-454-0210

Purpose of Investigation Soil Vapor Intrusion Evaluation Study

**1. OCCUPANT:**

**Interviewed: (Y) / N**

Last Name: Wendel First Name: Mark

Address: 211 Franklin Street

County: Cattaraugus

Home Phone: N/A Office Phone: 716-244-2941

Number of Occupants/persons at this location ~50 Age of Occupants N/A

**2. OWNER OR LANDLORD:** (Check if same as occupant ___ )

**Interviewed: Y / N**

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

**3. BUILDING CHARACTERISTICS**

**Type of Building:** (Circle appropriate response)

| | | |
|---|---|---|
| Residential | School | Commercial/Multi-use |
| (Industrial) | Church | Other: _____ |

**If the property is residential, type?** (Circle appropriate response)

| | | |
|---|---|---|
| Ranch | 2-Family | 3-Family |
| Raised Ranch | Split Level | Colonial |
| Cape Cod | Contemporary | Mobile Home |
| Duplex | Apartment House | Townhouses/Condos |
| Modular | Log Home | Other:_____ |

**If multiple units, how many?** N/A

**If the property is commercial, type?**

Business Type(s) Manufacturer of Epoxy Resins

Does it include residences (i.e., multi-use)? Y / (N) If yes, how many? N/A

**Other characteristics:**

Number of floors 2 Building age ~1930's to 1970's

Is the building insulated? (Y) / N How air tight? Tight / (Average) / Not Tight

**4. AIRFLOW**

**Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:**

Airflow between floors

Not assessed, as basement is small proportional to total building footprint.

Airflow near ~~source~~ sample locations

Refer to Figure

Outdoor air infiltration

Outdoor air observed flowing into front office and production areas at open exterior doors on 4-16-15. HVAC system draws make-up air from outdoors. Negative pressure observed on 4-16-15

Infiltration into air ducts

Ventilation system for production areas re-circulates air indoors after passing through a filtration system.

**5. BASEMENT AND CONSTRUCTION CHARACTERISTICS** (Circle all that apply)

| | | | | |
|---|---|---|---|---|
| **a. Above grade construction:** | wood frame | (concrete) | stone | brick |
| **b. Basement type:** | full | crawlspace | (slab) | other _____ |
| **c. Basement floor:** | (concrete) | dirt | stone | other _____ |
| **d. Basement floor:** | (uncovered) | covered | covered with _____ | |
| **e. Concrete floor:** | unsealed | sealed | (sealed with Paint) | |
| **f. Foundation walls:** | (poured) | block | stone | other _____ |
| **g. Foundation walls:** | unsealed | (sealed) | sealed with _____ | |
| **h. The basement is:** | wet | damp | (dry) | moldy |
| **i. The basement is:** | finished | (unfinished) | partially finished | |
| **j. Sump present?** | (Y) / N | | | |
| **k. Water in sump?** | Y / N / (not applicable) | | | |

The piping into the sump was sealed during the IRM work in this area.

**Basement/Lowest level depth below grade:** ~6 (feet)

**Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)**

Refer to Basement/Vault Assessment in Site RI/AA Report for basement characteristics. Numerous floor penetrations noted in ground floor slab.

**6. HEATING, VENTING and AIR CONDITIONING** (Circle all that apply)

**Type of heating system(s) used in this building: (circle all that apply – note primary)**

| | | | |
|---|---|---|---|
| Hot air circulation | Heat pump | Hot water baseboard | |
| Space Heaters | Stream radiation | Radiant floor | |
| Electric baseboard | Wood stove | Outdoor wood boiler | Other Steam Heat ~95% Electrical Duct ~5% |

**The primary type of fuel used is**:

| | | |
|---|---|---|
| (Natural Gas) | Fuel Oil | Kerosene |
| Electric | Propane | Solar |
| Wood | Coal | |

**Domestic hot water tank fueled by:** Natural Gas

**Boiler/furnace located in:** Basement Outdoors (Main Floor) Other_____

**Air conditioning:** (Central Air) Window units Open Windows None

**Are there air distribution ducts present?** (Y) N

**Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.**

Duct work located ~10 ft above the floor in the production areas, and above the drop ceiling in the front office and laboratory areas.

Good condition, were visible. There is a cold air return, and the duct joints appear tight, where observed.

## 7. OCCUPANCY

**Is basement/lowest level occupied?** Full-time Occasionally Seldom (Almost Never)

| **Level** | **General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)** |
|---|---|
| Basement | Vacant |
| 1st Floor | Offices/Production Areas/Maintenance/Warehouse/Laboratories |
| 2nd Floor | Production/Laboratories |
| 3rd Floor | |
| 4th Floor | |

## 8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

**a. Is there an attached garage?** Y / (N)

**b. Does the garage have a separate heating unit?** Y / N / (NA)

**c. Are petroleum-powered machines or vehicles stored in the garage** (e.g., lawnmower, atv, car) (Y) / N / NA
Please specify LP Forklifts

**d. Has the building ever had a fire?** (Y) / N When? 2005

**e. Is a kerosene or unvented gas space heater present?** Y / (N) Where?

**f. Is there a workshop or hobby/craft area?** (Y) / N Where & Type? Maintenance Dept.

**g. Is there smoking in the building?** Y / (N) How frequently?

**h. Have cleaning products been used recently?** (Y) / N When & Type? Daily/Detergents

**i. Have cosmetic products been used recently?** Y / N When & Type?

**j. Has painting/staining been done in the last 6 months?** Y / (N) Where & When? ___

**k. Is there new carpet, drapes or other textiles?** Y / (N) Where & When? ___

**l. Have air fresheners been used recently?** Y / (N) When & Type? ___

**m. Is there a kitchen exhaust fan?** Y / (N) If yes, where vented? ___

**n. Is there a bathroom exhaust fan?** (Y) / N If yes, where vented? Roof

**o. Is there a clothes dryer?** Y / (N) If yes, is it vented outside? Y / N

**p. Has there been a pesticide application?** Y / (N) When & Type? ___

**Are there odors in the building?** (Y) / N
If yes, please describe: Epoxy/Solvent

**Do any of the building occupants use solvents at work?** (Y) / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? Acetone/Heptane/MIBK/Glycol Ether/etc.

If yes, are their clothes washed at work? Y / (N)

**Do any of the building occupants regularly use or work at a dry-cleaning service?** (Circle appropriate response)

(Yes, use dry-cleaning regularly (weekly)) No
Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

**Is there a radon mitigation system for the building/structure?** Y / (N) Date of Installation: ___
**Is the system active or passive?** Active/Passive N/A

**9. WATER AND SEWAGE**

**Water Supply:** (Public Water) Drilled Well Driven Well Dug Well Other: ___

**Sewage Disposal:** (Public Sewer) Septic Tank Leach Field Dry Well Other: ___

**10. RELOCATION INFORMATION (for oil spill residential emergency)**

**a. Provide reasons why relocation is recommended:** ___

**b. Residents choose to:** remain in home relocate to friends/family relocate to hotel/motel

**c. Responsibility for costs associated with reimbursement explained?** Y / N

**d. Relocation package provided and explained to residents?** Y / N

# APPENDIX C

# FIELD LOGS
## FOR
## SUB-SLAB SOIL VAPOR SAMPLES, INDOOR AIR SAMPLES AND OUTDOOR BACKGROUND SAMPLES
## COLLECTED APRIL 16, 2015

day
DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
AN AFFILIATE OF DAY ENGINEERING, P.C.

# Soil Vapor Sampling Log



Project #: 4884S-13

Project Address: 211 Franklin Street

Olean NY

Sample Type: Sub-slab Vapor

Date: Install 4/14/15

DAY Representative: CAH

Canister #: 0262

Slab Thickness: ~ 4"

Sample Location: Area 1

Regulator #: 2989

Probe Depth: ~ 6"

Purge Time: ~ 6 min (420 ml)

Sample Designation: Area 1 SS

Start: 07:56

Backfill Material: Sand

Purge Method: Syringe

Test Duration: 8 hrs, 15 min.

End: 16:11

Surface Seal: Bentonite

## Helium Tracer Testing

Chamber Type / Volume: Plastic bucket / ~ 1 gal

Surface Seal: Friction / weight

Start: 12:35

He Concentration Inside Chamber: Start >90%, End: 41%

He Measurement from Vapor Point: 150 ppm

End: 12:45

## Vapor Sample Collection Data

| Time | Vacuum Gage Reading (inches of Hg) | Notes |
|---|---|---|
| 07:56 | 29 | Open |
| 08:33 | 27.5 | |
| 09:32 | 25.5 | |
| 10:24 | 23.5 | |
| 11:34 | 21 | |
| 12:29 | 19 | |
| 13:26 | 17 | |
| 14:21 | 15 | |
| 15:34 | 12 | |
| 16:11 | 10 | Closed |
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Notes: 1) 3) PID readings are referenced to an isobutylene standard measured using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.

Soil Vapor Sampling Log

1563 LYELL AVENUE
ROCHESTER, NEW YORK 14606
(585) 454-0210
FAX (585) 454-0825

www.dayenvironmental.com

420 LEXINGTON AVENUE, SUITE 300
NEW YORK, NEW YORK 10170
(212) 986-8645
FAX (212) 986-8657

day
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ENVIRONMENTAL CONSULTANTS
AN AFFILIATE OF DAY ENGINEERING, P.C.

# Air Sampling Log



Project #: 4884S-13

Project Address: 211 Franklin Street

Olean NY

Sample Type: Indoor Air

Date: 4/16/2015

DAY Representative: CAH

Canister #: 0271

Sample Location: Area 1

Regulator #: 2960

Sample Designation: Area 1 IA

Start: 07:56

Test Duration: 8 hrs, 16 min.

End: 16:12

| Time | Vacuum Gage Reading (inches of Hg) | Notes |
|---|---|---|
| 07:56 | 28 | Open |
| 08:33 | 27 | |
| 09:32 | 25 | |
| 10:24 | 23 | |
| 11:34 | 20 | |
| 12:29 | 18 | |
| 13:26 | 16 | |
| 14:21 | 14 | |
| 15:34 | 11 | |
| 16:12 | 9.2 | Closed |
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Air Sampling Log

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# Soil Vapor Sampling Log

Project #: 4884S-13

Project Address: 211 Franklin Street

Olean NY

Sample Type: Sub-slab Vapor

Date: Install 4/14/15



DAY Representative: CAH

Canister #: 0254

Slab Thickness: ~ 4"

Sample Location: Area 2

Regulator #: 2887

Probe Depth: ~ 6"

Purge Time: ~ 6 min (420 ml)

Sample Designation: Area 2 SS

Start: 08:00

Backfill Material: Sand

Purge Method: Syringe

Test Duration: 8 hrs, 24 min

End: 16:24

Surface Seal: Bentonite

## Helium Tracer Testing

Chamber Type / Volume: Plastic bucket / ~ 1 gal

Surface Seal: Friction / weight

Start: 12:18

He Concentration Inside Chamber: Start >90%, End: 36%

He Measurement from Vapor Point: 0 ppm

End: 12:28

## Vapor Sample Collection Data

| Time | Vacuum Gage Reading (inches of Hg) | Notes |
|---|---|---|
| 08:00 | 28 | Open |
| 08:34 | 24 | |
| 09:33 | 26 | |
| 10:25 | 25 | |
| 11:35 | 23.5 | |
| 12:30 | 22 | |
| 13:27 | 21 | |
| 14:22 | 20 | |
| 15:37 | 18.5 | |
| 16:24 | 17.5 | Closed |
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Notes: 1) 3) PID readings are referenced to an isobutylene standard measured using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.

Soil Vapor Sampling Log

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# Air Sampling Log



Project #: 4884S-13

Project Address: 211 Franklin Street

Olean NY

Sample Type: Indoor Air

Date: 4/16/2015

DAY Representative: CAH

Canister #: 0252

Sample Location: Area 2

Regulator #: 2964

Sample Designation: Area 2 IA

Start: 08:00

Test Duration: 8 hrs, 22 min.

End: 16:22

| Time | Vacuum Gage Reading (inches of Hg) | Notes |
|---|---|---|
| 08:00 | 28 | Open |
| 08:34 | 27.5 | |
| 09:33 | 25 | |
| 10:25 | 23 | |
| 11:35 | 21 | |
| 12:30 | 19 | |
| 13:27 | 17 | |
| 14:22 | 15 | |
| 15:37 | 12 | |
| 16:22 | 10.5 | Closed |
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Air Sampling Log

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# Soil Vapor Sampling Log



Project #: 4884S-13

Project Address: 211 Franklin Street

Olean NY

Sample Type: Sub-slab Vapor

Date: Install 4/14/15

DAY Representative: CAH

Canister #: 5586

Slab Thickness: ~ 6"

Sample Location: Area 3

Regulator #: 2889

Probe Depth: ~ 8"

Purge Time: ~ 7 min (420 ml)

Sample Designation: Area 3 SS

Start: 07:52

Backfill Material: Sand

Purge Method: Syringe

Test Duration: 8 hrs, 13 min.

End: 16:05

Surface Seal: Bentonite

## Helium Tracer Testing

Chamber Type / Volume: Plastic bucket / ~ 1 gal

Surface Seal: Bentonite

Start: 11:55

He Concentration Inside Chamber: Start >80%, End: 73%

He Measurement from Vapor Point: 0 ppm

End: 12:05

## Vapor Sample Collection Data

| Time | Vacuum Gage Reading (inches of Hg) | Notes |
|---|---|---|
| 07:52 | 28.5 | Open |
| 08:31 | 27 | |
| 09:31 | 25.5 | |
| 10:23 | 24 | |
| 11:32 | 22 | |
| 12:27 | 21 | |
| 13:24 | 19 | |
| 14:18 | 18 | |
| 15:32 | 15 | |
| 16:05 | 14.5 | Closed |
| | | |
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Notes: 1) 3) PID readings are referenced to an isobutylene standard measured using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.

Soil Vapor Sampling Log

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ENVIRONMENTAL CONSULTANTS
AN AFFILIATE OF DAY ENGINEERING, P.C.

# Air Sampling Log



Project #: 4884S-13

Project Address: 211 Franklin Street

Olean NY

Sample Type: Indoor Air

Date: 4/16/2015

DAY Representative: CAH

Canister #: 0647

Sample Location: Area 3

Regulator #: 2858

Sample Designation: Area 3 IA

Start: 07:52

Test Duration: 8 hrs, 13 min.

End: 16:05

| Time | Vacuum Gage Reading (inches of Hg) | Notes |
|---|---|---|
| 07:52 | 29 | Open |
| 08:39 | 27 | |
| 09:31 | 24 | |
| 10:23 | 22 | |
| 11:32 | 18 | |
| 12:27 | 15 | |
| 13:24 | 12 | |
| 14:18 | 9 | |
| 15:32 | 5 | |
| 16:05 | 4 | Closed |
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Air Sampling Log

1563 LYELL AVENUE
ROCHESTER, NEW YORK 14606
(585) 454-0210
FAX (585) 454-0825

www.dayenvironmental.com

420 LEXINGTON AVENUE, SUITE 300
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(212) 986-8645
FAX (212) 986-8657

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DAY ENVIRONMENTAL, INC.
ENVIRONMENTAL CONSULTANTS
AN AFFILIATE OF DAY ENGINEERING, P.C.

# Soil Vapor Sampling Log

Project #: 4884S-13

Project Address: 211 Franklin Street

Olean NY

Sample Type: Sub-slab Vapor

Date: Install 4/14/15



DAY Representative: CAH

Canister #: 1399

Slab Thickness: ~ 7"

Sample Location: Area 4

Regulator #: 0862

Probe Depth: ~ 10"

Purge Time: ~ 6 min (420 ml)

Sample Designation: Area 4 SS

Start: 07:48

Backfill Material: Sand

Purge Method: Syringe

Test Duration: 8 hrs, 13 min.

End: 16:01

Surface Seal: Bentonite

## Helium Tracer Testing

Chamber Type / Volume: Plastic bucket / ~ 1 gal

Surface Seal: Bentonite

Start: 11:20

He Concentration Inside Chamber: Start >90%, End: 68%

He Measurement from Vapor Point: 0 ppm

End: 11:30

## Vapor Sample Collection Data

| Time | Vacuum Gage Reading (inches of Hg) | Notes |
|---|---|---|
| 07:48 | >30 | Open |
| 08:29 | 29.5 | |
| 09:29 | 27 | |
| 10:21 | 24 | |
| 11:31 | 21 | |
| 12:25 | 19 | |
| 13:22 | 16.5 | |
| 14:17 | 14 | |
| 15:29 | 11 | |
| 16:01 | 9.5 | Closed |
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Notes: 1) 3) PID readings are referenced to an isobutylene standard measured using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.

Soil Vapor Sampling Log

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# Air Sampling Log



Project #: 4884S-13

Project Address: 211 Franklin Street

Olean NY

Sample Type: Indoor Air

Date: 4/16/2015

DAY Representative: CAH

Canister #: 0702

Sample Location: Area 4

Regulator #: 2991

Sample Designation: Area 4 IA

Start: 07:49

Test Duration: 8 hrs, 12 min.

End: 16:01

| Time | Vacuum Gage Reading (inches of Hg) | Notes |
|---|---|---|
| 07:49 | 28 | Open |
| 08:29 | 26.5 | |
| 09:29 | 23.5 | |
| 10:21 | 21 | |
| 11:31 | 17 | |
| 12:25 | 14.5 | |
| 13:22 | 12 | |
| 14:17 | 9 | |
| 15:29 | 5 | |
| 16:01 | 4 | Closed |
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# Soil Vapor Sampling Log



Project #: 4884S-13

Project Address: 211 Franklin Street

Olean NY

Sample Type: Sub-slab Vapor

Date: Install 4/14/15

DAY Representative: CAH

Canister #: 0251

Slab Thickness: ~ 9"

Sample Location: Area 5

Regulator #: 2999

Probe Depth: ~ 11"

Purge Time: ~ 7 min (420 ml)

Sample Designation: Area 5 SS

Start: 07:41

Backfill Material: Sand

Purge Method: Syringe

Test Duration: 8 hrs, 5 min.

End: 15:46

Surface Seal: Bentonite

## Helium Tracer Testing

Chamber Type / Volume: Plastic bucket / ~ 1 gal

Surface Seal: Bentonite

Start: 10:42

He Concentration Inside Chamber: Start >90%, End: 74%

He Measurement from Vapor Point: 0 ppm

End: 10:52

## Vapor Sample Collection Data

| Time | Vacuum Gage Reading (inches of Hg) | Notes |
|---|---|---|
| 07:41 | >30 | Open |
| 08:26 | >30 | |
| 09:25 | 28.5 | |
| 10:18 | 27 | |
| 11:22 | 25 | |
| 12:23 | 23 | |
| 13:20 | 20 | |
| 14:10 | 18.5 | |
| 15:24 | 15.0 | |
| 15:46 | 14.5 | Closed |
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Notes: 1) 3) PID readings are referenced to an isobutylene standard measured using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.

Soil Vapor Sampling Log

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# Air Sampling Log



Project #: 4884S-13

Project Address: 211 Franklin Street

Olean NY

Sample Type: Indoor Air

Date: 4/16/2015

DAY Representative: CAH

Canister #: 0265

Sample Location: Area 5

Regulator #: 0056

Sample Designation: Area 5 IA

Start: 07:41

Test Duration: 6 hrs, 29 min

End: 14:10

| Time | Vacuum Gage Reading (inches of Hg) | Notes |
|---|---|---|
| 07:41 | 30 | Open |
| 08:26 | 28 | |
| 09:25 | 20 | |
| 10:18 | 16 | |
| 11:22 | 10 | |
| 12:23 | 7 | |
| 13:20 | 4 | |
| 14:10 | 2 | Closed |
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# Soil Vapor Sampling Log

Project #: 4884S-13

Project Address: 211 Franklin Street

Olean NY

Sample Type: Sub-slab Vapor

Date: Install 4/14/15



DAY Representative: CAH

Canister #: 4562

Slab Thickness: ~ 9"

Sample Location: Area 6

Regulator #: 1304

Probe Depth: ~ 11"

Purge Time: ~ 6 min (420 ml)

Sample Designation: Area 6 SS

Start: 07:44

Backfill Material: Sand

Purge Method: Syringe

Test Duration: 8 hrs, 7 min.

End: 15:51

Surface Seal: Bentonite

## Helium Tracer Testing

Chamber Type / Volume: Plastic bucket / ~ 1 gal

Surface Seal: Bentonite

Start: 09:33

He Concentration Inside Chamber: Start >90%, End: 80.5%

He Measurement from Vapor Point: 0 ppm

End: 09:43

## Vapor Sample Collection Data

| Time | Vacuum Gage Reading (inches of Hg) | Notes |
|---|---|---|
| 07:44 | >30 | Open |
| 08:28 | 29 | |
| 09:26 | 27 | |
| 10:18 | 25 | |
| 11:23 | 22 | |
| 12:24 | 20 | |
| 13:21 | 18 | |
| 14:15 | 15.5 | |
| 15:25 | 13 | |
| 15:51 | 12 | Closed |
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Notes: 1) 3) PID readings are referenced to an isobutylene standard measured using a MiniRae 2000 or PPB RAE equipped with a 10.6 eV lamp.

Soil Vapor Sampling Log

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# Air Sampling Log



Project #: 4884S-13

Project Address: 211 Franklin Street

Olean NY

Sample Type: Indoor Air

Date: 4/16/2015

DAY Representative: CAH

Canister #: 1681

Sample Location: Area 6

Regulator #: 0052

Sample Designation: Area 6 IA

Start: 07:44

Test Duration: 7 hrs, 41 min.

End: 15:25

| Time | Vacuum Gage Reading (inches of Hg) | Notes |
|---|---|---|
| 07:44 | 29 | Open |
| 08:28 | 27 | |
| 09:26 | 24 | |
| 10:18 | 21 | |
| 11:23 | 17 | |
| 12:24 | 13.5 | |
| 13:21 | 10 | |
| 14:15 | 7 | |
| 15:25 | 3.5 | Closed |
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# Air Sampling Log



Project #: 4884S-13

Project Address: 211 Franklin Street

Olean NY

Sample Type: Outdoor Air

Date: 4/16/2015

DAY Representative: CAH

Canister #: 17157

Sample Location: Outdoor Air

Regulator #: 0011

Sample Designation: Outdoor Air

Start: 08:06

Test Duration: 8 hrs, 2 min.

End: 16:08

| Time | Vacuum Gage Reading (inches of Hg) | Notes |
|---|---|---|
| 08:06 | 24 | Open |
| 08:37 | 23 | |
| 10:34 | 20 | |
| 11:43 | 16 | |
| 13:12 | 13 | |
| 16:08 | 7 | Closed |
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# APPENDIX D

## ANALYTICAL LABORATORY REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION FOR SUB-SLAB SOIL VAPOR SAMPLES, INDOOR AIR SAMPLES AND OUTDOOR BACKGROUND SAMPLES COLLECTED APRIL 16, 2015

Report Date:
15-May-15 12:18

☐ Final Report
☐ Re-Issued Report
☑ Revised Report

**SPECTRUM ANALYTICAL, INC.**

# *Laboratory Report*

Day Environmental, Inc.
1563 Lyell Avenue
Rochester, NY 14606
Attn: Charles Hampton

Project: 211 Franklin St - Olean, NY
Project #: 4884S-13

| Laboratory ID | Client Sample ID | Container | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|---|
| SC06447-01 | Area 1 IA | Summa canister 6 liter | Indoor/Ambient Air | 16-Apr-15 16:12 | 21-Apr-15 10:16 |
| SC06447-02 | Area 1 SS | Summa canister 6 liter | Soil Gas | 16-Apr-15 16:11 | 21-Apr-15 10:16 |
| SC06447-03 | Area 2 IA | Summa canister 6 liter | Indoor/Ambient Air | 16-Apr-15 16:22 | 21-Apr-15 10:16 |
| SC06447-04 | Area 2 SS | Summa canister 6 liter | Soil Gas | 16-Apr-15 16:35 | 21-Apr-15 10:16 |
| SC06447-05 | Area 3 IA | Summa canister 6 liter | Indoor/Ambient Air | 16-Apr-15 16:05 | 21-Apr-15 10:16 |
| SC06447-06 | Area 3 SS | Summa canister 6 liter | Soil Gas | 16-Apr-15 16:05 | 21-Apr-15 10:16 |
| SC06447-07 | Area 4 IA | Summa canister 6 liter | Indoor/Ambient Air | 16-Apr-15 16:01 | 21-Apr-15 10:16 |
| SC06447-08 | Area 4 SS | Summa canister 6 liter | Soil Gas | 16-Apr-15 16:01 | 21-Apr-15 10:16 |
| SC06447-09 | Area 5 IA | Summa canister 6 liter | Indoor/Ambient Air | 16-Apr-15 14:10 | 21-Apr-15 10:16 |
| SC06447-10 | Area 5 SS | Summa canister 6 liter | Soil Gas | 16-Apr-15 15:46 | 21-Apr-15 10:16 |
| SC06447-11 | Area 6 IA | Summa canister 6 liter | Indoor/Ambient Air | 16-Apr-15 15:25 | 21-Apr-15 10:16 |
| SC06447-12 | Area 6 SS | Summa canister 6 liter | Soil Gas | 16-Apr-15 15:51 | 21-Apr-15 10:16 |
| SC06447-13 | Outdoor Background | Summa canister 6 liter | Indoor/Ambient Air | 16-Apr-15 16:08 | 21-Apr-15 10:16 |

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00098
USDA # S-51435

Authorized by:

Nicole Leja
Laboratory Director

Spectrum Analytical holds certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 70 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

*Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our 'Quality' web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).*

*Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.*

**CASE NARRATIVE:**

Data has been reported to the MDL. This report includes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the detection limit are reported as "<" (less than) the detection limit in this report.

Samples are received and the pressure is recorded from the gauge on the canister. If a canister does not have a gauge, a vacuum gauge is attached to the valve and pressure is recorded. If the canister is below -10 psig, the can must be pressurized to 0 psig. Tedlar bags do not have the pressure recorded. The can pressure can be located within this report in the sample header information.

If a Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

**Report Revision Case Narrative May 12, 2015**

This report has been revised to include both ppbV and ug/m3 units.

**May 15, 2015 Report Revision Case Narrative:**

This report is being re-issued to report the data to the MDL with J & U flags per client request.

**See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.**

## EPA TO-15

**Calibration:**

1505023

Analyte quantified by quadratic equation type calibration.

1,1,2,2-Tetrachloroethane
1,2,4-Trichlorobenzene
1,3-Dichlorobenzene
Acrylonitrile
Dichlorodifluoromethane (Freon12)
Naphthalene

## EPA TO-15

**Calibration:**

1505023

This affected the following samples:

1509016-BLK1
1509016-BLK2
1509016-BS1
1509016-BSD1
1509016-DUP1
1509087-BLK1
1509087-BS1
1509087-BSD1
1509087-DUP1
Area 1 SS
Area 2 SS
Area 3 SS
Area 4 SS
Area 5 IA
Area 5 SS
Area 6 SS
S504240-ICV1
S504377-CCV1
S504377-CCV2
S504377-CCV3
S504433-CCV1
S504433-CCV2

S504240-ICV1

Analyte percent recovery is outside individual acceptance criteria (70-130).

1,2,4-Trichlorobenzene (69%)
Naphthalene (148%)

This affected the following samples:

1509016-BLK1
1509016-BLK2
1509016-BS1
1509016-BSD1
1509016-DUP1
1509087-BLK1
1509087-BS1
1509087-BSD1
1509087-DUP1
Area 1 SS
Area 2 SS
Area 3 SS
Area 4 SS
Area 5 IA
Area 5 SS
Area 6 SS
S504377-CCV1
S504377-CCV2
S504377-CCV3
S504433-CCV1
S504433-CCV2

**Laboratory Control Samples:**

1509016 BS/BSD

## EPA TO-15

**Laboratory Control Samples:**

1509016 BS/BSD

1,2,4-Trichlorobenzene percent recoveries (53/52) are outside individual acceptance criteria (65-135), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

Area 1 SS
Area 2 SS
Area 3 SS
Area 4 SS
Area 5 IA
Area 5 SS
Area 6 SS

1509087 BS/BSD

1,2,4-Trichlorobenzene percent recoveries (52/86) are outside individual acceptance criteria (65-135), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

Area 4 SS
Area 6 SS

Benzyl chloride percent recoveries (62/80) are outside individual acceptance criteria (65-135), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

Area 4 SS
Area 6 SS

1509087 BSD

1,2,4-Trichlorobenzene RPD 48% (35%) is outside individual acceptance criteria.

1,3-Butadiene RPD 44% (35%) is outside individual acceptance criteria.

Methylene chloride RPD 62% (35%) is outside individual acceptance criteria.

Vinyl chloride RPD 42% (35%) is outside individual acceptance criteria.

**Samples:**

S504377-CCV1

Analyte percent difference is outside individual acceptance criteria (30), but within overall method allowances.

Hexachlorobutadiene (30.9%)

This affected the following samples:

1509016-BLK1
1509016-BLK2
1509016-BS1
1509016-BSD1
1509016-DUP1
Area 1 SS
Area 2 SS
Area 3 SS
Area 4 SS
Area 5 IA
Area 5 SS
Area 6 SS

S504377-CCV2

## EPA TO-15

**Samples:**

S504377-CCV2

Analyte percent difference is outside individual acceptance criteria (30), but within overall method allowances.

Chloromethane (59.7%)

This affected the following samples:

1509016-BLK1
1509016-BLK2
1509016-BS1
1509016-BSD1
1509016-DUP1
Area 1 SS
Area 2 SS
Area 3 SS
Area 4 SS
Area 5 IA
Area 5 SS
Area 6 SS

S504377-CCV3

Analyte percent difference is outside individual acceptance criteria (30), but within overall method allowances.

Methylene chloride (-31.1%)

This affected the following samples:

1509016-BLK1
1509016-BLK2
1509016-BS1
1509016-BSD1
1509016-DUP1
Area 1 SS
Area 2 SS
Area 3 SS
Area 4 SS
Area 5 IA
Area 5 SS
Area 6 SS

S504433-CCV1

Analyte percent difference is outside individual acceptance criteria (30), but within overall method allowances.

1,1,2-Trichlorotrifluoroethane (Freon 113) (-34.4%)

This affected the following samples:

1509087-BLK1
1509087-BS1
1509087-BSD1
1509087-DUP1
Area 4 SS
Area 6 SS

S504433-CCV2

Analyte percent difference is outside individual acceptance criteria (30), but within overall method allowances.

Methylene chloride (-32.6%)

## EPA TO-15

**Samples:**

S504433-CCV2

This affected the following samples:

1509087-BLK1
1509087-BS1
1509087-BSD1
1509087-DUP1
Area 4 SS
Area 6 SS

SC06447-02 *Area 1 SS*

Due to the low volume of sample collected it was necessary to pressurize the Summa can in laboratory prior to analysis which results in elevated reporting limits.

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC06447-04 *Area 2 SS*

Due to the low volume of sample collected it was necessary to pressurize the Summa can in laboratory prior to analysis which results in elevated reporting limits.

SC06447-06 *Area 3 SS*

Due to the low volume of sample collected it was necessary to pressurize the Summa can in laboratory prior to analysis which results in elevated reporting limits.

SC06447-08 *Area 4 SS*

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

cis-1,2-Dichloroethene

SC06447-08RE1 *Area 4 SS*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC06447-12 *Area 6 SS*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Ethanol

SC06447-12RE1 *Area 6 SS*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

S504377-CRL1

Low level calibration check failed, data was accepted due to sample concentrations < MDL.

Naphthalene

S504377-CRL2

## EPA TO-15

S504377-CRL2

Low level calibration check failed, data was accepted due to sample concentrations < MDL.

1,1,2-Trichlorotrifluoroethane (Freon 113)
Naphthalene

S504433-CRL1

Low level calibration check failed, data was accepted due to sample concentrations < MDL.

1,1,2-Trichlorotrifluoroethane (Freon 113)
Naphthalene

Low level calibration check failed, reportable sample concentrations may be biased high.

Methylene chloride

## EPA TO-15 SIM

**Samples:**

SC06447-01 *Area 1 IA*

Due to the low volume of sample collected it was necessary to pressurize the Summa can in laboratory prior to analysis which results in elevated reporting limits.

## EPA TO-15L

**Calibration:**

1504027

Analyte quantified by quadratic equation type calibration.

1,2,4-Trichlorobenzene
1,2,4-Trimethylbenzene
1,2-Dichlorobenzene
1,3,5-Trimethylbenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
2-Butanone (MEK)
2-Hexanone (MBK)
4-Ethyltoluene
4-Isopropyltoluene
Benzyl chloride
Bromomethane
Chloroethane
Chloromethane
cis-1,2-Dichloroethene
Cyclohexane
Ethylbenzene
Hexachlorobutadiene
Hexane
m,p-Xylene
Methyl tert-butyl ether
Methylene chloride
Naphthalene
n-Butylbenzene
o-Xylene
sec-Butylbenzene
Styrene
Tetrahydrofuran

## EPA TO-15L

**Calibration:**

1504027

This affected the following samples:

1508066-BLK1
1508066-BLK2
1508066-BS1
1508066-BSD1
1508169-BLK1
1508169-BLK2
1508169-BS1
1508169-BSD1
1508392-BLK1
1508392-BLK2
1508392-BS1
1508392-BSD1
Area 1 IA
Area 2 IA
Area 3 IA
Area 4 IA
Area 5 IA
Area 6 IA
Outdoor Background
S503128-ICV1
S503822-CCV1
S503822-CCV2
S503822-CCV3
S503889-CCV1
S503889-CCV2
S503889-CCV3
S504011-CCV1
S504011-CCV2
S504011-CCV3

**Blanks:**

1508066-BLK2

This compound is a common laboratory contaminant.

Methylene chloride

1508169-BLK1

This compound is a common laboratory contaminant.

Methylene chloride

1508169-BLK2

This compound is a common laboratory contaminant.

Methylene chloride

1508392-BLK1

This compound is a common laboratory contaminant.

Methylene chloride

1508392-BLK2

This compound is a common laboratory contaminant.

Methylene chloride

## EPA TO-15L

**Laboratory Control Samples:**

1508066-BS1

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Methylene chloride

1508066-BSD1

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Methylene chloride

1508169-BS1

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Methylene chloride

1508169-BSD1

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Methylene chloride

1508392 BS/BSD

Ethanol percent recoveries (81/146) are outside individual acceptance criteria (65-135), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

Area 1 IA

1508392 BSD

Ethanol RPD 57% (35%) is outside individual acceptance criteria.

1508392-BS1

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Methylene chloride

1508392-BSD1

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Methylene chloride

**Samples:**

SC06447-01 *Area 1 IA*

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Methylene chloride

Due to the low volume of sample collected it was necessary to pressurize the Summa can in laboratory prior to analysis which results in elevated reporting limits.

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Ethanol

SC06447-01RE1 *Area 1 IA*

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Methylene chloride

## EPA TO-15L

**Samples:**

SC06447-01RE1 *Area 1 IA*

Due to the low volume of sample collected it was necessary to pressurize the Summa can in laboratory prior to analysis which results in elevated reporting limits.

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC06447-03 *Area 2 IA*

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Methylene chloride

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Ethanol

SC06447-03RE1 *Area 2 IA*

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Methylene chloride

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC06447-05 *Area 3 IA*

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Methylene chloride

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Acetone
Ethanol

SC06447-05RE1 *Area 3 IA*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC06447-07 *Area 4 IA*

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Methylene chloride

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Acetone
Ethanol

SC06447-07RE1 *Area 4 IA*

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Methylene chloride

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC06447-09 *Area 5 IA*

## EPA TO-15L

**Samples:**

SC06447-09 *Area 5 IA*

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Methylene chloride

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Acetone
Ethanol

SC06447-11 *Area 6 IA*

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Methylene chloride

This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.

Acetone
Ethanol

SC06447-11RE1 *Area 6 IA*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC06447-13 *Outdoor Background*

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

Methylene chloride

S503822-CRL1

Low level calibration check failed, data was accepted due to sample concentrations < MDL.

1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Benzyl chloride
Carbon disulfide
Hexachlorobutadiene
Naphthalene
n-Butylbenzene
sec-Butylbenzene

Low level calibration check failed, data was accepted due to sample concentrations > 3X MRL.

2-Butanone (MEK)

Low level calibration check failed, reportable sample concentrations may be biased high.

1,1,1-Trichloroethane
1,2,4-Trimethylbenzene
1,3,5-Trimethylbenzene

S503822-CRL2

## EPA TO-15L

S503822-CRL2

Low level calibration check failed, data was accepted due to sample concentrations < MDL.

1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
2-Hexanone (MBK)
4-Ethyltoluene
4-Isopropyltoluene
Benzyl chloride
Carbon disulfide
Hexachlorobutadiene
Naphthalene
n-Butylbenzene
sec-Butylbenzene
Tetrahydrofuran

Low level calibration check failed, reportable sample concentrations may be biased high.

1,1,1-Trichloroethane
1,2,4-Trimethylbenzene
1,3,5-Trimethylbenzene
o-Xylene
Styrene

S503889-CRL1

Low level calibration check failed, data was accepted due to sample concentrations < MDL.

1,2,4-Trichlorobenzene
1,2,4-Trimethylbenzene
1,2-Dichlorobenzene
1,3,5-Trimethylbenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
2-Hexanone (MBK)
4-Ethyltoluene
Benzyl chloride
Carbon disulfide
Cyclohexane
Hexachlorobutadiene
Methyl tert-butyl ether
Naphthalene
Styrene
Tetrahydrofuran

Low level calibration check failed, reportable sample concentrations may be biased high.

1,1,1-Trichloroethane
2-Butanone (MEK)
4-Isopropyltoluene
n-Butylbenzene

S503889-CRL2

## EPA TO-15L

S503889-CRL2

Low level calibration check failed, data was accepted due to sample concentrations < MDL.

1,2,4-Trichlorobenzene
1,2,4-Trimethylbenzene
1,2-Dichlorobenzene
1,2-Dichloropropane
1,3-Dichlorobenzene
1,4-Dichlorobenzene
2-Hexanone (MBK)
Benzyl chloride
Carbon disulfide
Methyl tert-butyl ether
Naphthalene
Styrene
Tetrahydrofuran

Low level calibration check failed, reportable sample concentrations may be biased high.

1,1,1-Trichloroethane
4-Isopropyltoluene
Cyclohexane
Hexachlorobutadiene
n-Butylbenzene
o-Xylene
sec-Butylbenzene

S504011-CRL1

Low level calibration check failed, data was accepted due to sample concentrations < MDL.

1,2,4-Trichlorobenzene
1,2-Dichlorobenzene
1,3-Dichlorobenzene
2-Hexanone (MBK)
Benzyl chloride
Carbon disulfide
cis-1,2-Dichloroethene
Cyclohexane
Hexachlorobutadiene
Methyl tert-butyl ether
Naphthalene
Styrene
Tetrahydrofuran

Low level calibration check failed, reportable sample concentrations may be biased high.

1,1,1-Trichloroethane
1,2,4-Trimethylbenzene
1,3,5-Trimethylbenzene
1,4-Dichlorobenzene
2-Butanone (MEK)
4-Ethyltoluene
4-Isopropyltoluene
n-Butylbenzene
o-Xylene
sec-Butylbenzene

S504011-CRL2

## EPA TO-15L

S504011-CRL2

Low level calibration check failed, data was accepted due to sample concentrations < MDL.

1,1,1-Trichloroethane
1,2,4-Trichlorobenzene
1,2,4-Trimethylbenzene
1,2-Dichlorobenzene
1,2-Dichloropropane
1,3,5-Trimethylbenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
2-Hexanone (MBK)
4-Ethyltoluene
Benzyl chloride
Carbon disulfide
cis-1,2-Dichloroethene
Cyclohexane
Hexachlorobutadiene
Methyl tert-butyl ether
Naphthalene
Styrene
Tetrahydrofuran

Low level calibration check failed, reportable sample concentrations may be biased high.

4-Isopropyltoluene
m,p-Xylene
n-Butylbenzene
o-Xylene
sec-Butylbenzene

## Sample Acceptance Check Form

| | |
|---|---|
| Client: | Day Environmental, Inc. |
| Project: | 211 Franklin St - Olean, NY / 4884S-13 |
| Work Order: | SC06447 |
| Sample(s) received on: | 4/21/2015 |

***The following outlines the condition of samples for the attached Chain of Custody upon receipt.***

| | Yes | No | N/A |
|---|---|---|---|
| Were custody seals present? | ☐ | ☑ | ☐ |
| Were custody seals intact? | ☐ | ☐ | ☑ |
| Were samples received at a temperature of ≤ 6°C? | ☐ | ☐ | ☑ |
| Were samples cooled on ice upon transfer to laboratory representative? | ☐ | ☐ | ☑ |
| Were samples refrigerated upon transfer to laboratory representative? | ☐ | ☐ | ☑ |
| Were sample containers received intact? | ☑ | ☐ | ☐ |
| Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)? | ☑ | ☐ | ☐ |
| Were samples accompanied by a Chain of Custody document? | ☑ | ☐ | ☐ |
| Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample? | ☑ | ☐ | ☐ |
| Did sample container labels agree with Chain of Custody document? | ☑ | ☐ | ☐ |
| Were samples received within method-specific holding times? | ☑ | ☐ | ☐ |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 1 IA**<br>SC06447-01 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:12 | 21-Apr-15 |

**Air Quality Analyses**

Volatile Organics in Air Low Level — ppbv — Prepared 29-Apr-15 — Dilution: 3.48 — AirP — Can pressure: -11 — Can ID: 0271

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 115-07-1 | Propene | < 0.334 | 0.348 | < 0.57 | 0.60 | U, D | EPA TO-15L | 29-Apr-15 | BRF | 1508169 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | **0.905** | 0.348 | **4.48** | 1.72 | D | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.212 | 0.348 | < 0.44 | 0.72 | U, D | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 0.334 | 0.348 | < 2.33 | 2.43 | U, D | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 0.334 | 0.348 | < 0.85 | 0.89 | U, D | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 0.181 | 0.348 | < 0.40 | 0.77 | U, D | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 0.226 | 0.348 | < 0.88 | 1.35 | U, D | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 0.292 | 0.348 | < 0.77 | 0.92 | U, D | " | " | " | " | X |
| 67-64-1 | Acetone | **39.3** | 1.74 | **93.39** | 4.13 | D | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **13.2** | 0.348 | **74.18** | 1.96 | D | " | " | " | " | X |
| 64-17-5 | Ethanol | **90.5** | 1.74 | **170.64** | 3.28 | E, D | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 0.251 | 0.348 | < 0.54 | 0.75 | U, D | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.331 | 0.348 | < 1.31 | 1.38 | U, D | " | " | " | " | X |
| 75-09-2 | Methylene chloride | **3.13** | 0.348 | **10.87** | 1.21 | D, B | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | < 0.299 | 0.348 | < 2.29 | 2.67 | U, D | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | < 0.553 | 1.74 | < 1.72 | 5.42 | U, D | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.320 | 0.348 | < 1.27 | 1.38 | U, D | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.244 | 0.348 | < 0.99 | 1.41 | U, D | " | " | " | " | X |
| 1634-04-4 | Methyl tert-butyl ether | < 0.247 | 0.348 | < 0.89 | 1.26 | U, D | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | **3.97** | 1.74 | **9.74** | 4.27 | D | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | < 0.315 | 0.348 | < 0.93 | 1.03 | U, D | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | < 0.345 | 0.348 | < 1.37 | 1.38 | U, D | " | " | " | " | X |
| 110-54-3 | Hexane | < 0.435 | 1.74 | < 1.53 | 6.13 | U, D | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | < 0.320 | 0.348 | < 1.15 | 1.25 | U, D | " | " | " | " | |
| 67-66-3 | Chloroform | < 0.296 | 0.348 | < 1.44 | 1.69 | U, D | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 0.280 | 0.348 | < 0.83 | 1.03 | U, D | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.195 | 0.348 | < 0.79 | 1.41 | U, D | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | **0.348** | 0.348 | **1.90** | 1.90 | D | " | " | " | " | X |
| 71-43-2 | Benzene | **0.661** | 0.348 | **2.11** | 1.11 | D | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | < 0.175 | 0.348 | < 1.10 | 2.19 | U, D | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 0.275 | 0.348 | < 0.95 | 1.20 | U, D | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 0.331 | 0.348 | < 1.53 | 1.61 | U, D | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 0.282 | 0.348 | < 1.89 | 2.33 | U, D | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 0.324 | 0.348 | < 1.74 | 1.87 | U, D | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 0.971 | 1.74 | < 3.49 | 6.26 | U, D | " | " | " | " | X |
| 142-82-5 | n-Heptane | **0.626** | 0.348 | **2.57** | 1.43 | D | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | < 0.292 | 0.348 | < 1.20 | 1.43 | U, D | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.237 | 0.348 | < 1.08 | 1.58 | U, D | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.314 | 0.348 | < 1.43 | 1.58 | U, D | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.240 | 0.348 | < 1.31 | 1.90 | U, D | " | " | " | " | X |
| 108-88-3 | Toluene | **1.36** | 0.348 | **5.12** | 1.31 | D | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 0.338 | 0.348 | < 1.39 | 1.43 | U, D | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.254 | 0.348 | < 2.16 | 2.96 | U, D | " | " | " | " | X |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 0.292 | 0.348 | < 2.24 | 2.67 | U, D | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 1 IA**<br>SC06447-01 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:12 | 21-Apr-15 |

| *CAS No.* | *Analyte(s)* | *Result/Units* | **RDL* | *Result ug/m³* | **RDL* | *Flag* | *Method Ref.* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air Low Level | | ppbv | Prepared 29-Apr-15<br>Dilution: 3.48 | | | AirP | Can pressure: -11<br>Can ID: 0271 | | | | |
| 127-18-4 | Tetrachloroethene | < 0.281 | 0.348 | < 1.91 | 2.36 | U, D | EPA TO-15L | 29-Apr-15 | BRF | 1508169 | X |
| 108-90-7 | Chlorobenzene | < 0.216 | 0.348 | < 0.99 | 1.60 | U, D | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 0.292 | 0.348 | < 2.01 | 2.39 | U, D | " | " | " | " | |
| 100-41-4 | Ethylbenzene | **0.522** | 0.348 | **2.26** | 1.51 | D | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | **1.29** | 0.696 | **5.59** | 3.02 | D | " | " | " | " | X |
| 75-25-2 | Bromoform | < 0.233 | 0.348 | < 2.41 | 3.60 | U, D | " | " | " | " | X |
| 100-42-5 | Styrene | < 0.240 | 0.348 | < 1.02 | 1.48 | U, D | " | " | " | " | X |
| 95-47-6 | o-Xylene | **0.487** | 0.348 | **2.11** | 1.51 | D | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 0.101 | 0.348 | < 0.69 | 2.39 | U, D | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 0.132 | 0.348 | < 0.65 | 1.71 | U, D | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 0.282 | 0.348 | < 1.39 | 1.71 | U, D | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.132 | 0.348 | < 0.65 | 1.71 | U, D | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | < 0.292 | 0.348 | < 1.44 | 1.71 | U, D | " | " | " | " | X |
| 91-20-3 | Naphthalene | **0.661** | 1.74 | **3.46** | 9.11 | J, D | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.280 | 0.348 | < 1.68 | 2.09 | U, D | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 0.258 | 0.348 | < 1.33 | 1.79 | U, D | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.191 | 0.348 | < 1.15 | 2.09 | U, D | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | **0.418** | 0.348 | **2.29** | 1.91 | D | " | " | " | " | |
| 99-87-6 | 4-Isopropyltoluene | **0.452** | 0.348 | **2.43** | 1.87 | D | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.264 | 0.348 | < 1.59 | 2.09 | U, D | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | **0.522** | 0.348 | **2.87** | 1.91 | D | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.219 | 0.348 | < 1.63 | 2.58 | U, D | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.233 | 0.348 | < 2.48 | 3.71 | U, D | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *99* | | *80-120 %* | | | " | " | " | " | |
| Re-analysis of Volatile Organics in Air Low Level | | | Dilution: 6.96 | | | AirP, GS1 | | | | | |
| 115-07-1 | Propene | < 0.668 | 0.696 | < 1.15 | 1.20 | U, D | EPA TO-15L | 01-May-15 | BRF | 1508392 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | **1.11** | 0.696 | **5.49** | 3.44 | D | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.425 | 0.696 | < 0.88 | 1.44 | U, D | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 0.668 | 0.696 | < 4.67 | 4.86 | U, D | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 0.668 | 0.696 | < 1.71 | 1.78 | U, D | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 0.362 | 0.696 | < 0.80 | 1.54 | U, D | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 0.452 | 0.696 | < 1.75 | 2.70 | U, D | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 0.585 | 0.696 | < 1.54 | 1.84 | U, D | " | " | " | " | X |
| 67-64-1 | Acetone | **46.6** | 3.48 | **110.73** | 8.27 | D | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **15.2** | 0.696 | **85.42** | 3.91 | D | " | " | " | " | X |
| 64-17-5 | Ethanol | **94.8** | 3.48 | **178.74** | 6.56 | D | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 0.501 | 0.696 | < 1.09 | 1.51 | U, D | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.661 | 0.696 | < 2.62 | 2.76 | U, D | " | " | " | " | X |
| 75-09-2 | Methylene chloride | **3.90** | 0.696 | **13.54** | 2.42 | D, B | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | < 0.599 | 0.696 | < 4.59 | 5.33 | U, D | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | < 1.11 | 3.48 | < 3.45 | 10.83 | U, D | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.640 | 0.696 | < 2.54 | 2.76 | U, D | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 1 IA**<br>SC06447-01 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:12 | 21-Apr-15 |

| *CAS No.* | *Analyte(s)* | *Result/Units* | **RDL* | *Result ug/m³* | **RDL* | *Flag* | *Method Ref.* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air Low Level | | ppbv | Prepared 30-Apr-15<br>Dilution: 6.96 | | | AirP, GS1 | Can pressure: -11 | | | | |
| 75-34-3 | 1,1-Dichloroethane | < 0.489 | 0.696 | < 1.98 | 2.82 | U, D | EPA TO-15L | 01-May-15 | BRF | 1508392 | X |
| 1634-04-4 | Methyl tert-butyl ether | < 0.494 | 0.696 | < 1.78 | 2.51 | U, D | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | **4.25** | 3.48 | **10.43** | 8.54 | D | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | < 0.629 | 0.696 | < 1.85 | 2.05 | U, D | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | < 0.689 | 0.696 | < 2.73 | 2.76 | U, D | " | " | " | " | X |
| 110-54-3 | Hexane | < 0.870 | 3.48 | < 3.07 | 12.27 | U, D | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | < 0.640 | 0.696 | < 2.31 | 2.51 | U, D | " | " | " | " | |
| 67-66-3 | Chloroform | < 0.592 | 0.696 | < 2.88 | 3.39 | U, D | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 0.560 | 0.696 | < 1.65 | 2.05 | U, D | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.390 | 0.696 | < 1.58 | 2.82 | U, D | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | < 0.354 | 0.696 | < 1.93 | 3.80 | U, D | " | " | " | " | X |
| 71-43-2 | Benzene | **0.696** | 0.696 | **2.22** | 2.22 | D | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | < 0.351 | 0.696 | < 2.21 | 4.38 | U, D | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 0.550 | 0.696 | < 1.89 | 2.40 | U, D | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 0.661 | 0.696 | < 3.05 | 3.22 | U, D | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 0.564 | 0.696 | < 3.78 | 4.66 | U, D | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 0.647 | 0.696 | < 3.48 | 3.74 | U, D | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 1.94 | 3.48 | < 6.98 | 12.53 | U, D | " | " | " | " | X |
| 142-82-5 | n-Heptane | < 0.640 | 0.696 | < 2.62 | 2.85 | U, D | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | < 0.585 | 0.696 | < 2.40 | 2.85 | U, D | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.473 | 0.696 | < 2.15 | 3.16 | U, D | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.628 | 0.696 | < 2.85 | 3.16 | U, D | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.480 | 0.696 | < 2.62 | 3.80 | U, D | " | " | " | " | X |
| 108-88-3 | Toluene | **1.25** | 0.696 | **4.70** | 2.62 | D | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 0.675 | 0.696 | < 2.77 | 2.85 | U, D | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.508 | 0.696 | < 4.33 | 5.93 | U, D | " | " | " | " | X |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 0.585 | 0.696 | < 4.50 | 5.35 | U, D | " | " | " | " | |
| 127-18-4 | Tetrachloroethene | < 0.562 | 0.696 | < 3.81 | 4.72 | U, D | " | " | " | " | X |
| 108-90-7 | Chlorobenzene | < 0.432 | 0.696 | < 1.99 | 3.21 | U, D | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 0.585 | 0.696 | < 4.02 | 4.78 | U, D | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 0.599 | 0.696 | < 2.60 | 3.02 | U, D | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | **1.67** | 1.39 | **7.24** | 6.03 | D | " | " | " | " | X |
| 75-25-2 | Bromoform | < 0.466 | 0.696 | < 4.82 | 7.19 | U, D | " | " | " | " | X |
| 100-42-5 | Styrene | < 0.480 | 0.696 | < 2.04 | 2.96 | U, D | " | " | " | " | X |
| 95-47-6 | o-Xylene | **0.766** | 0.696 | **3.32** | 3.02 | D | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 0.202 | 0.696 | < 1.39 | 4.78 | U, D | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 0.264 | 0.696 | < 1.30 | 3.42 | U, D | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 0.564 | 0.696 | < 2.77 | 3.42 | U, D | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.264 | 0.696 | < 1.30 | 3.42 | U, D | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | < 0.585 | 0.696 | < 2.88 | 3.42 | U, D | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 0.675 | 3.48 | < 3.53 | 18.22 | U, D | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.560 | 0.696 | < 3.37 | 4.18 | U, D | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 0.515 | 0.696 | < 2.65 | 3.59 | U, D | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.383 | 0.696 | < 2.30 | 4.18 | U, D | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 1 IA**<br>SC06447-01 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:12 | 21-Apr-15 |

| *CAS No.* | *Analyte(s)* | *Result/Units* | **RDL* | *Result ug/m³* | **RDL* | *Flag* | *Method Ref.* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air Low Level | | ppbv | Prepared 30-Apr-15<br>Dilution: 6.96 | | | AirP, GS1 | Can pressure: -11 | | | | |
| 135-98-8 | sec-Butylbenzene | < 0.438 | 0.696 | < 2.40 | 3.82 | U, D | EPA TO-15L | 01-May-15 | BRF | 1508392 | |
| 99-87-6 | 4-Isopropyltoluene | < 0.452 | 0.696 | < 2.43 | 3.73 | U, D | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.529 | 0.696 | < 3.18 | 4.18 | U, D | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 0.585 | 0.696 | < 3.21 | 3.82 | U, D | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.438 | 0.696 | < 3.25 | 5.17 | U, D | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.466 | 0.696 | < 4.97 | 7.42 | U, D | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *92* | | *80-120 %* | | | " | " | " | " | |
| Chlorinated SIM | | ppbv | Prepared 29-Apr-15<br>Dilution: 3.48 | | | AirP | Can pressure: -11<br>Can ID: 0271 | | | | |
| 75-01-4 | Vinyl chloride | < 0.0630 | 0.139 | < 0.16 | 0.36 | U, D | EPA TO-15 SIM | 29-Apr-15 | BRF | 1508169 | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.0860 | 0.139 | < 0.34 | 0.55 | U, D | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.0825 | 0.139 | < 0.33 | 0.56 | U, D | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | **0.139** | 0.139 | **0.87** | 0.87 | D | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 0.0411 | 0.139 | < 0.22 | 0.75 | U, D | " | " | " | " | X |
| 127-18-4 | Tetrachloroethene | < 0.0411 | 0.139 | < 0.28 | 0.94 | U, D | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *99* | | *80-120 %* | | | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 1 SS**<br>SC06447-02 | 4884S-13 | Soil Gas | 16-Apr-15 16:11 | 21-Apr-15 |

**Air Quality Analyses**

Volatile Organics in Air — ppbv — Prepared 08-May-15 — Dilution: 46.4 — AirP, GS1 — Can pressure: -12 — Can ID: 0262

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 115-07-1 | Propene | < 19.0 | 23.2 | < 32.70 | 39.93 | U, D | EPA TO-15 | 08-May-15 | BRF | 1509016 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | < 21.2 | 23.2 | < 104.83 | 114.72 | U, D | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 14.2 | 23.2 | < 29.33 | 47.92 | U, D | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 22.8 | 23.2 | < 159.37 | 162.16 | U, D | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 17.9 | 23.2 | < 45.76 | 59.30 | U, D | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 14.6 | 23.2 | < 32.25 | 51.24 | U, D | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 15.4 | 23.2 | < 59.77 | 90.05 | U, D | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 19.8 | 23.2 | < 52.23 | 61.20 | U, D | " | " | " | " | X |
| 67-64-1 | Acetone | < 16.7 | 23.2 | < 39.68 | 55.13 | U, D | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | < 16.2 | 23.2 | < 91.04 | 130.38 | U, D | " | " | " | " | X |
| 64-17-5 | Ethanol | < 21.7 | 23.2 | < 40.91 | 43.74 | U, D | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 23.2 | 23.2 | < 50.29 | 50.29 | U, D | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 18.5 | 23.2 | < 73.39 | 92.04 | U, D | " | " | " | " | X |
| 75-09-2 | Methylene chloride | < 18.9 | 23.2 | < 65.63 | 80.56 | U, D | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | < 17.5 | 23.2 | < 134.13 | 177.82 | U, D | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | < 21.9 | 23.2 | < 68.16 | 72.21 | U, D | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 17.2 | 23.2 | < 68.20 | 91.99 | U, D | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 16.6 | 23.2 | < 67.21 | 93.94 | U, D | " | " | " | " | X |
| 1634-04-4 | Methyl tert-butyl ether | < 14.4 | 23.2 | < 51.95 | 83.69 | U, D | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | < 22.2 | 23.2 | < 54.48 | 56.93 | U, D | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | < 20.2 | 23.2 | < 59.57 | 68.41 | U, D | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | **2000** | 23.2 | **7930.47** | 91.99 | D | " | " | " | " | X |
| 110-54-3 | Hexane | < 14.0 | 23.2 | < 49.36 | 81.79 | U, D | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | < 20.5 | 23.2 | < 73.87 | 83.60 | U, D | " | " | " | " | |
| 67-66-3 | Chloroform | < 18.7 | 23.2 | < 91.01 | 112.92 | U, D | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 22.8 | 23.2 | < 67.23 | 68.41 | U, D | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 22.1 | 23.2 | < 89.48 | 93.94 | U, D | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | < 11.6 | 23.2 | < 63.29 | 126.58 | U, D | " | " | " | " | X |
| 71-43-2 | Benzene | < 18.5 | 23.2 | < 59.02 | 74.01 | U, D | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | < 16.1 | 23.2 | < 101.28 | 145.94 | U, D | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 19.7 | 23.2 | < 67.81 | 79.86 | U, D | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 22.7 | 23.2 | < 104.91 | 107.22 | U, D | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 14.4 | 23.2 | < 96.47 | 155.43 | U, D | " | " | " | " | X |
| 79-01-6 | Trichloroethene | **25.5** | 23.2 | **137.04** | 124.68 | D | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 20.6 | 23.2 | < 74.14 | 83.50 | U, D | " | " | " | " | X |
| 142-82-5 | n-Heptane | < 18.2 | 23.2 | < 74.59 | 95.08 | U, D | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | < 12.9 | 23.2 | < 52.87 | 95.08 | U, D | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 17.4 | 23.2 | < 78.99 | 105.33 | U, D | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 15.0 | 23.2 | < 68.10 | 105.33 | U, D | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 16.3 | 23.2 | < 88.93 | 126.58 | U, D | " | " | " | " | X |
| 108-88-3 | Toluene | < 16.9 | 23.2 | < 63.59 | 87.30 | U, D | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 21.2 | 23.2 | < 86.88 | 95.08 | U, D | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 17.8 | 23.2 | < 151.65 | 197.65 | U, D | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 1 SS**<br>SC06447-02 | 4884S-13 | Soil Gas | 16-Apr-15 16:11 | 21-Apr-15 |

| *CAS No.* | *Analyte(s)* | *Result/Units* | **RDL* | *Result ug/m³* | **RDL* | *Flag* | *Method Ref.* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air | | ppbv | Prepared 08-May-15<br>Dilution: 46.4 | | | AirP, GS1 | Can pressure: -12<br>Can ID: 0262 | | | | |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 19.6 | 23.2 | < 150.63 | 178.29 | U, D | EPA TO-15 | 08-May-15 | BRF | 1509016 | |
| 127-18-4 | Tetrachloroethene | < 15.8 | 23.2 | < 107.14 | 157.32 | U, D | " | " | " | " | X |
| 108-90-7 | Chlorobenzene | < 20.0 | 23.2 | < 92.11 | 106.84 | U, D | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 19.1 | 23.2 | < 131.24 | 159.41 | U, D | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 20.9 | 23.2 | < 90.61 | 100.58 | U, D | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | < 37.4 | 46.4 | < 162.14 | 201.16 | U, D | " | " | " | " | X |
| 75-25-2 | Bromoform | < 14.4 | 23.2 | < 148.83 | 239.78 | U, D | " | " | " | " | X |
| 100-42-5 | Styrene | < 15.7 | 23.2 | < 66.78 | 98.68 | U, D | " | " | " | " | X |
| 95-47-6 | o-Xylene | < 18.6 | 23.2 | < 80.64 | 100.58 | U, D | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 18.0 | 23.2 | < 123.61 | 159.32 | U, D | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 17.5 | 23.2 | < 86.03 | 114.05 | U, D | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 15.7 | 23.2 | < 77.18 | 114.05 | U, D | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 13.4 | 23.2 | < 65.88 | 114.05 | U, D | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | < 18.1 | 23.2 | < 88.98 | 114.05 | U, D | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 17.0 | 23.2 | < 89.00 | 121.46 | U, D | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 15.2 | 23.2 | < 91.39 | 139.48 | U, D | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 20.8 | 23.2 | < 107.19 | 119.56 | U, D | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 15.6 | 23.2 | < 93.79 | 139.48 | U, D | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 15.6 | 23.2 | < 85.62 | 127.34 | U, D | " | " | " | " | |
| 99-87-6 | 4-Isopropyltoluene | < 18.9 | 23.2 | < 101.42 | 124.49 | U, D | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 14.0 | 23.2 | < 84.17 | 139.48 | U, D | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 17.3 | 23.2 | < 94.96 | 127.34 | U, D | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 12.7 | 23.2 | < 94.28 | 172.22 | U, D | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 13.1 | 23.2 | < 139.68 | 247.37 | U, D | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *101* | | *80-120 %* | | | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 2 IA**<br>SC06447-03 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:22 | 21-Apr-15 |

**Air Quality Analyses**

Volatile Organics in Air Low Level — ppbv — Prepared 27-Apr-15 — Dilution: 1 — Can pressure: -12 — Can ID: 0252

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 115-07-1 | Propene | < 0.0960 | 0.100 | < 0.17 | 0.17 | U | EPA TO-15L | 27-Apr-15 | BRF | 1508066 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | **0.570** | 0.100 | **2.82** | 0.49 | | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.0610 | 0.100 | < 0.13 | 0.21 | U | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 0.0960 | 0.100 | < 0.67 | 0.70 | U | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 0.0960 | 0.100 | < 0.25 | 0.26 | U | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 0.0520 | 0.100 | < 0.11 | 0.22 | U | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 0.0650 | 0.100 | < 0.25 | 0.39 | U | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 0.0840 | 0.100 | < 0.22 | 0.26 | U | " | " | " | " | X |
| 67-64-1 | Acetone | **12.3** | 0.500 | **29.23** | 1.19 | | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **1.86** | 0.100 | **10.45** | 0.56 | | " | " | " | " | X |
| 64-17-5 | Ethanol | **38.9** | 0.500 | **73.35** | 0.94 | E | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 0.0720 | 0.100 | < 0.16 | 0.22 | U | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.0950 | 0.100 | < 0.38 | 0.40 | U | " | " | " | " | X |
| 75-09-2 | Methylene chloride | **0.910** | 0.100 | **3.16** | 0.35 | B | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | **0.110** | 0.100 | **0.84** | 0.77 | | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | **0.160** | 0.500 | **0.50** | 1.56 | J | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.0920 | 0.100 | < 0.36 | 0.40 | U | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.0702 | 0.100 | < 0.28 | 0.40 | U | " | " | " | " | X |
| 1634-04-4 | Methyl tert-butyl ether | < 0.0710 | 0.100 | < 0.26 | 0.36 | U | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | **3.35** | 0.500 | **8.22** | 1.23 | | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | **0.620** | 0.100 | **1.83** | 0.29 | | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | < 0.0990 | 0.100 | < 0.39 | 0.40 | U | " | " | " | " | X |
| 110-54-3 | Hexane | **3.12** | 0.500 | **11.00** | 1.76 | | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | **3.60** | 0.100 | **12.97** | 0.36 | | " | " | " | " | |
| 67-66-3 | Chloroform | **0.0900** | 0.100 | **0.44** | 0.49 | J | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 0.0805 | 0.100 | < 0.24 | 0.29 | U | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.0560 | 0.100 | < 0.23 | 0.40 | U | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | **0.100** | 0.100 | **0.55** | 0.55 | | " | " | " | " | X |
| 71-43-2 | Benzene | **0.230** | 0.100 | **0.73** | 0.32 | | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | **0.100** | 0.100 | **0.63** | 0.63 | | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 0.0790 | 0.100 | < 0.27 | 0.34 | U | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 0.0950 | 0.100 | < 0.44 | 0.46 | U | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 0.0811 | 0.100 | < 0.54 | 0.67 | U | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 0.0930 | 0.100 | < 0.50 | 0.54 | U | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 0.279 | 0.500 | < 1.00 | 1.80 | U | " | " | " | " | X |
| 142-82-5 | n-Heptane | < 0.0920 | 0.100 | < 0.38 | 0.41 | U | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | **0.150** | 0.100 | **0.61** | 0.41 | | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.0680 | 0.100 | < 0.31 | 0.45 | U | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.0902 | 0.100 | < 0.41 | 0.45 | U | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.0690 | 0.100 | < 0.38 | 0.55 | U | " | " | " | " | X |
| 108-88-3 | Toluene | **0.300** | 0.100 | **1.13** | 0.38 | | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 0.0970 | 0.100 | < 0.40 | 0.41 | U | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.0730 | 0.100 | < 0.62 | 0.85 | U | " | " | " | " | X |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 0.0840 | 0.100 | < 0.65 | 0.77 | U | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 2 IA**<br>SC06447-03 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:22 | 21-Apr-15 |

**Air Quality Analyses**

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air Low Level | | ppbv | Prepared 27-Apr-15<br>Dilution: 1 | | | | Can pressure: -12<br>Can ID: 0252 | | | | |
| 127-18-4 | Tetrachloroethene | < 0.0808 | 0.100 | < 0.55 | 0.68 | U | EPA TO-15L | 27-Apr-15 | BRF | 1508066 | X |
| 108-90-7 | Chlorobenzene | < 0.0620 | 0.100 | < 0.29 | 0.46 | U | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 0.0840 | 0.100 | < 0.58 | 0.69 | U | " | " | " | " | |
| 100-41-4 | Ethylbenzene | **0.100** | 0.100 | **0.43** | 0.43 | | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | **0.240** | 0.200 | **1.04** | 0.87 | | " | " | " | " | X |
| 75-25-2 | Bromoform | < 0.0670 | 0.100 | < 0.69 | 1.03 | U | " | " | " | " | X |
| 100-42-5 | Styrene | < 0.0690 | 0.100 | < 0.29 | 0.43 | U | " | " | " | " | X |
| 95-47-6 | o-Xylene | < 0.0920 | 0.100 | < 0.40 | 0.43 | U | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 0.0290 | 0.100 | < 0.20 | 0.69 | U | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 0.0380 | 0.100 | < 0.19 | 0.49 | U | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 0.0810 | 0.100 | < 0.40 | 0.49 | U | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.0380 | 0.100 | < 0.19 | 0.49 | U | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | < 0.0840 | 0.100 | < 0.41 | 0.49 | U | " | " | " | " | X |
| 91-20-3 | Naphthalene | **0.110** | 0.500 | **0.58** | 2.62 | J | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.0805 | 0.100 | < 0.48 | 0.60 | U | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 0.0740 | 0.100 | < 0.38 | 0.52 | U | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.0550 | 0.100 | < 0.33 | 0.60 | U | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 0.0630 | 0.100 | < 0.35 | 0.55 | U | " | " | " | " | |
| 99-87-6 | 4-Isopropyltoluene | < 0.0650 | 0.100 | < 0.35 | 0.54 | U | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.0760 | 0.100 | < 0.46 | 0.60 | U | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 0.0840 | 0.100 | < 0.46 | 0.55 | U | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.0630 | 0.100 | < 0.47 | 0.74 | U | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.0670 | 0.100 | < 0.71 | 1.07 | U | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *92* | | *80-120 %* | | | " | " | " | " | |
| Re-analysis of Volatile Organics in Air Low Level | | | Dilution: 2 | | | GS1 | | | | | |
| 115-07-1 | Propene | < 0.192 | 0.200 | < 0.33 | 0.34 | U, D | EPA TO-15L | 29-Apr-15 | BRF | 1508169 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | **0.700** | 0.200 | **3.46** | 0.99 | D | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.122 | 0.200 | < 0.25 | 0.41 | U, D | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 0.192 | 0.200 | < 1.34 | 1.40 | U, D | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 0.192 | 0.200 | < 0.49 | 0.51 | U, D | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 0.104 | 0.200 | < 0.23 | 0.44 | U, D | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 0.130 | 0.200 | < 0.50 | 0.78 | U, D | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 0.168 | 0.200 | < 0.44 | 0.53 | U, D | " | " | " | " | X |
| 67-64-1 | Acetone | **17.2** | 1.00 | **40.87** | 2.38 | D | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **3.48** | 0.200 | **19.56** | 1.12 | D | " | " | " | " | X |
| 64-17-5 | Ethanol | **23.9** | 1.00 | **45.06** | 1.89 | D | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 0.144 | 0.200 | < 0.31 | 0.43 | U, D | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.190 | 0.200 | < 0.75 | 0.79 | U, D | " | " | " | " | X |
| 75-09-2 | Methylene chloride | **1.94** | 0.200 | **6.74** | 0.69 | D, B | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | < 0.172 | 0.200 | < 1.32 | 1.53 | U, D | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | < 0.318 | 1.00 | < 0.99 | 3.11 | U, D | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.184 | 0.200 | < 0.73 | 0.79 | U, D | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.140 | 0.200 | < 0.57 | 0.81 | U, D | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 2 IA**<br>SC06447-03 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:22 | 21-Apr-15 |

**Air Quality Analyses**

Volatile Organics in Air Low Level — ppbv — Prepared 29-Apr-15 — Dilution: 2 — GS1 — Can pressure: -12

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1634-04-4 | Methyl tert-butyl ether | < 0.142 | 0.200 | < 0.51 | 0.72 | U, D | EPA TO-15L | 29-Apr-15 | BRF | 1508169 | X |
| 67-63-0 | Isopropyl alcohol | **5.72** | 1.00 | **14.04** | 2.45 | D | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | **1.00** | 0.200 | **2.95** | 0.59 | D | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | < 0.198 | 0.200 | < 0.79 | 0.79 | U, D | " | " | " | " | X |
| 110-54-3 | Hexane | **3.16** | 1.00 | **11.14** | 3.53 | D | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | **4.36** | 0.200 | **15.71** | 0.72 | D | " | " | " | " | |
| 67-66-3 | Chloroform | < 0.170 | 0.200 | < 0.83 | 0.97 | U, D | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 0.161 | 0.200 | < 0.47 | 0.59 | U, D | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.112 | 0.200 | < 0.45 | 0.81 | U, D | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | < 0.102 | 0.200 | < 0.56 | 1.09 | U, D | " | " | " | " | X |
| 71-43-2 | Benzene | **0.260** | 0.200 | **0.83** | 0.64 | D | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | < 0.101 | 0.200 | < 0.64 | 1.26 | U, D | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 0.158 | 0.200 | < 0.54 | 0.69 | U, D | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 0.190 | 0.200 | < 0.88 | 0.92 | U, D | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 0.162 | 0.200 | < 1.09 | 1.34 | U, D | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 0.186 | 0.200 | < 1.00 | 1.07 | U, D | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 0.558 | 1.00 | < 2.01 | 3.60 | U, D | " | " | " | " | X |
| 142-82-5 | n-Heptane | < 0.184 | 0.200 | < 0.75 | 0.82 | U, D | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | < 0.168 | 0.200 | < 0.69 | 0.82 | U, D | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.136 | 0.200 | < 0.62 | 0.91 | U, D | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.180 | 0.200 | < 0.82 | 0.91 | U, D | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.138 | 0.200 | < 0.75 | 1.09 | U, D | " | " | " | " | X |
| 108-88-3 | Toluene | **0.420** | 0.200 | **1.58** | 0.75 | D | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 0.194 | 0.200 | < 0.80 | 0.82 | U, D | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.146 | 0.200 | < 1.24 | 1.70 | U, D | " | " | " | " | X |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 0.168 | 0.200 | < 1.29 | 1.54 | U, D | " | " | " | " | |
| 127-18-4 | Tetrachloroethene | < 0.162 | 0.200 | < 1.10 | 1.36 | U, D | " | " | " | " | X |
| 108-90-7 | Chlorobenzene | < 0.124 | 0.200 | < 0.57 | 0.92 | U, D | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 0.168 | 0.200 | < 1.15 | 1.37 | U, D | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 0.172 | 0.200 | < 0.75 | 0.87 | U, D | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | < 0.366 | 0.400 | < 1.59 | 1.73 | U, D | " | " | " | " | X |
| 75-25-2 | Bromoform | < 0.134 | 0.200 | < 1.38 | 2.07 | U, D | " | " | " | " | X |
| 100-42-5 | Styrene | < 0.138 | 0.200 | < 0.59 | 0.85 | U, D | " | " | " | " | X |
| 95-47-6 | o-Xylene | < 0.184 | 0.200 | < 0.80 | 0.87 | U, D | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 0.0580 | 0.200 | < 0.40 | 1.37 | U, D | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 0.0760 | 0.200 | < 0.37 | 0.98 | U, D | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 0.162 | 0.200 | < 0.80 | 0.98 | U, D | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.0760 | 0.200 | < 0.37 | 0.98 | U, D | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | < 0.168 | 0.200 | < 0.83 | 0.98 | U, D | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 0.194 | 1.00 | < 1.02 | 5.24 | U, D | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.161 | 0.200 | < 0.97 | 1.20 | U, D | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 0.148 | 0.200 | < 0.76 | 1.03 | U, D | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.110 | 0.200 | < 0.66 | 1.20 | U, D | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 0.126 | 0.200 | < 0.69 | 1.10 | U, D | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 2 IA**<br>SC06447-03 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:22 | 21-Apr-15 |

| *CAS No.* | *Analyte(s)* | *Result/Units* | **RDL* | *Result ug/m³* | **RDL* | *Flag* | *Method Ref.* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air Low Level | | ppbv | Prepared 29-Apr-15<br>Dilution: 2 | | | GS1 | Can pressure: -12 | | | | |
| 99-87-6 | 4-Isopropyltoluene | < 0.130 | 0.200 | < 0.70 | 1.07 | U, D | EPA TO-15L | 29-Apr-15 | BRF | 1508169 | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.152 | 0.200 | < 0.91 | 1.20 | U, D | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 0.168 | 0.200 | < 0.92 | 1.10 | U, D | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.126 | 0.200 | < 0.94 | 1.48 | U, D | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.134 | 0.200 | < 1.43 | 2.13 | U, D | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *90* | | *80-120 %* | | | " | " | " | " | |
| Chlorinated SIM | | ppbv | Prepared 27-Apr-15<br>Dilution: 1 | | | | Can pressure: -12<br>Can ID: 0252 | | | | |
| 75-01-4 | Vinyl chloride | < 0.0181 | 0.0400 | < 0.05 | 0.10 | U | EPA TO-15 SIM | 27-Apr-15 | BRF | 1508066 | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.0247 | 0.0400 | < 0.10 | 0.16 | U | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.0237 | 0.0400 | < 0.10 | 0.16 | U | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | **0.100** | 0.0400 | **0.63** | 0.25 | | " | " | " | " | X |
| 79-01-6 | Trichloroethene | **0.0600** | 0.0400 | **0.32** | 0.21 | | " | " | " | " | X |
| 127-18-4 | Tetrachloroethene | < 0.0118 | 0.0400 | < 0.08 | 0.27 | U | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *92* | | *80-120 %* | | | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 2 SS**<br>SC06447-04 | 4884S-13 | Soil Gas | 16-Apr-15 16:35 | 21-Apr-15 |

**Air Quality Analyses**

Volatile Organics in Air — ppbv — Prepared 08-May-15 — Dilution: 4.35 — AirP — Can pressure: -19 — Can ID: 0254

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 115-07-1 | Propene | < 1.78 | 2.18 | < 3.06 | 3.75 | U, D | EPA TO-15 | 08-May-15 | BRF | 1509016 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | < 1.99 | 2.18 | < 9.84 | 10.78 | U, D | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 1.33 | 2.18 | < 2.75 | 4.50 | U, D | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 2.14 | 2.18 | < 14.96 | 15.24 | U, D | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 1.67 | 2.18 | < 4.27 | 5.57 | U, D | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 1.37 | 2.18 | < 3.03 | 4.81 | U, D | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 1.44 | 2.18 | < 5.59 | 8.46 | U, D | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 1.86 | 2.18 | < 4.91 | 5.75 | U, D | " | " | " | " | X |
| 67-64-1 | Acetone | **60.5** | 2.18 | **143.76** | 5.18 | D | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **3.61** | 2.18 | **20.29** | 12.25 | D | " | " | " | " | X |
| 64-17-5 | Ethanol | **16.7** | 2.18 | **31.49** | 4.11 | D | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 2.17 | 2.18 | < 4.70 | 4.73 | U, D | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 1.73 | 2.18 | < 6.86 | 8.65 | U, D | " | " | " | " | X |
| 75-09-2 | Methylene chloride | **3.00** | 2.18 | **10.42** | 7.57 | D | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | < 1.64 | 2.18 | < 12.57 | 16.71 | U, D | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | **2.13** | 2.18 | **6.63** | 6.79 | J, D | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 1.61 | 2.18 | < 6.38 | 8.64 | U, D | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 1.55 | 2.18 | < 6.28 | 8.83 | U, D | " | " | " | " | X |
| 1634-04-4 | Methyl tert-butyl ether | < 1.35 | 2.18 | < 4.87 | 7.86 | U, D | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | < 2.08 | 2.18 | < 5.10 | 5.35 | U, D | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | < 1.89 | 2.18 | < 5.57 | 6.43 | U, D | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | < 1.65 | 2.18 | < 6.54 | 8.64 | U, D | " | " | " | " | X |
| 110-54-3 | Hexane | **1.48** | 2.18 | **5.22** | 7.69 | J, D | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | < 1.92 | 2.18 | < 6.92 | 7.86 | U, D | " | " | " | " | |
| 67-66-3 | Chloroform | < 1.76 | 2.18 | < 8.57 | 10.61 | U, D | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 2.14 | 2.18 | < 6.31 | 6.43 | U, D | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 2.07 | 2.18 | < 8.38 | 8.83 | U, D | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | **1.09** | 2.18 | **5.95** | 11.89 | J, D | " | " | " | " | X |
| 71-43-2 | Benzene | < 1.73 | 2.18 | < 5.52 | 6.95 | U, D | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | < 1.51 | 2.18 | < 9.50 | 13.71 | U, D | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 1.85 | 2.18 | < 6.37 | 7.50 | U, D | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 2.13 | 2.18 | < 9.84 | 10.08 | U, D | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 1.35 | 2.18 | < 9.04 | 14.60 | U, D | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 1.77 | 2.18 | < 9.51 | 11.72 | U, D | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 1.93 | 2.18 | < 6.95 | 7.85 | U, D | " | " | " | " | X |
| 142-82-5 | n-Heptane | < 1.71 | 2.18 | < 7.01 | 8.93 | U, D | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | < 1.21 | 2.18 | < 4.96 | 8.93 | U, D | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 1.63 | 2.18 | < 7.40 | 9.90 | U, D | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 1.41 | 2.18 | < 6.40 | 9.90 | U, D | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 1.53 | 2.18 | < 8.35 | 11.89 | U, D | " | " | " | " | X |
| 108-88-3 | Toluene | **2.91** | 2.18 | **10.95** | 8.20 | D | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 1.98 | 2.18 | < 8.11 | 8.93 | U, D | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 1.67 | 2.18 | < 14.23 | 18.57 | U, D | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 2 SS**<br>SC06447-04 | 4884S-13 | Soil Gas | 16-Apr-15 16:35 | 21-Apr-15 |

| *CAS No.* | *Analyte(s)* | *Result/Units* | **RDL* | *Result ug/m³* | **RDL* | *Flag* | *Method Ref.* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air | | ppbv | Prepared 08-May-15<br>Dilution: 4.35 | | | AirP | Can pressure: -19<br>Can ID: 0254 | | | | |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 1.84 | 2.18 | < 14.14 | 16.75 | U, D | EPA TO-15 | 08-May-15 | BRF | 1509016 | |
| 127-18-4 | Tetrachloroethene | **5.61** | 2.18 | **38.04** | 14.78 | D | " | " | " | " | X |
| 108-90-7 | Chlorobenzene | < 1.87 | 2.18 | < 8.61 | 10.04 | U, D | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 1.79 | 2.18 | < 12.30 | 14.98 | U, D | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 1.96 | 2.18 | < 8.50 | 9.45 | U, D | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | < 3.51 | 4.35 | < 15.22 | 18.86 | U, D | " | " | " | " | X |
| 75-25-2 | Bromoform | < 1.35 | 2.18 | < 13.95 | 22.53 | U, D | " | " | " | " | X |
| 100-42-5 | Styrene | < 1.47 | 2.18 | < 6.25 | 9.27 | U, D | " | " | " | " | X |
| 95-47-6 | o-Xylene | < 1.74 | 2.18 | < 7.54 | 9.45 | U, D | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 1.68 | 2.18 | < 11.54 | 14.97 | U, D | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 1.64 | 2.18 | < 8.06 | 10.72 | U, D | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 1.47 | 2.18 | < 7.23 | 10.72 | U, D | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 1.25 | 2.18 | < 6.15 | 10.72 | U, D | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | **4.00** | 2.18 | **19.66** | 10.72 | D | " | " | " | " | X |
| 91-20-3 | Naphthalene | **4.35** | 2.18 | **22.77** | 11.41 | D | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 1.42 | 2.18 | < 8.54 | 13.11 | U, D | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 1.95 | 2.18 | < 10.05 | 11.23 | U, D | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 1.47 | 2.18 | < 8.84 | 13.11 | U, D | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 1.46 | 2.18 | < 8.01 | 11.97 | U, D | " | " | " | " | |
| 99-87-6 | 4-Isopropyltoluene | < 1.77 | 2.18 | < 9.50 | 11.70 | U, D | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 1.31 | 2.18 | < 7.88 | 13.11 | U, D | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 1.62 | 2.18 | < 8.89 | 11.97 | U, D | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 1.19 | 2.18 | < 8.83 | 16.18 | U, D | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 1.23 | 2.18 | < 13.11 | 23.24 | U, D | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *99* | | *80-120 %* | | | " | " | " | " | |

*This laboratory report is not valid without an authorized signature on the cover page.*

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 3 IA**<br>SC06447-05 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:05 | 21-Apr-15 |

**Air Quality Analyses**

Volatile Organics in Air Low Level — ppbv — Prepared 27-Apr-15 — Dilution: 1 — Can pressure: -4 — Can ID: 0647

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 115-07-1 | Propene | < 0.0960 | 0.100 | < 0.17 | 0.17 | U | EPA TO-15L | 27-Apr-15 | BRF | 1508066 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | **0.530** | 0.100 | **2.62** | 0.49 | | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.0610 | 0.100 | < 0.13 | 0.21 | U | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 0.0960 | 0.100 | < 0.67 | 0.70 | U | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 0.0960 | 0.100 | < 0.25 | 0.26 | U | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 0.0520 | 0.100 | < 0.11 | 0.22 | U | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 0.0650 | 0.100 | < 0.25 | 0.39 | U | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 0.0840 | 0.100 | < 0.22 | 0.26 | U | " | " | " | " | X |
| 67-64-1 | Acetone | **148** | 0.500 | **351.69** | 1.19 | E | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **3.75** | 0.100 | **21.07** | 0.56 | | " | " | " | " | X |
| 64-17-5 | Ethanol | **52.6** | 0.500 | **99.18** | 0.94 | E | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 0.0720 | 0.100 | < 0.16 | 0.22 | U | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.0950 | 0.100 | < 0.38 | 0.40 | U | " | " | " | " | X |
| 75-09-2 | Methylene chloride | **1.09** | 0.100 | **3.78** | 0.35 | B | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | < 0.0860 | 0.100 | < 0.66 | 0.77 | U | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | **0.160** | 0.500 | **0.50** | 1.56 | J | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.0920 | 0.100 | < 0.36 | 0.40 | U | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.0702 | 0.100 | < 0.28 | 0.40 | U | " | " | " | " | X |
| 1634-04-4 | Methyl tert-butyl ether | < 0.0710 | 0.100 | < 0.26 | 0.36 | U | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | **5.24** | 0.500 | **12.86** | 1.23 | | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | **1.69** | 0.100 | **4.98** | 0.29 | | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | **0.600** | 0.100 | **2.38** | 0.40 | | " | " | " | " | X |
| 110-54-3 | Hexane | **1.98** | 0.500 | **6.98** | 1.76 | | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | **6.62** | 0.100 | **23.85** | 0.36 | | " | " | " | " | |
| 67-66-3 | Chloroform | < 0.0850 | 0.100 | < 0.41 | 0.49 | U | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 0.0805 | 0.100 | < 0.24 | 0.29 | U | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.0560 | 0.100 | < 0.23 | 0.40 | U | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | **0.180** | 0.100 | **0.98** | 0.55 | | " | " | " | " | X |
| 71-43-2 | Benzene | **3.89** | 0.100 | **12.41** | 0.32 | | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | **0.110** | 0.100 | **0.69** | 0.63 | | " | " | " | " | X |
| 110-82-7 | Cyclohexane | **0.240** | 0.100 | **0.83** | 0.34 | | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 0.0950 | 0.100 | < 0.44 | 0.46 | U | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 0.0811 | 0.100 | < 0.54 | 0.67 | U | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 0.0930 | 0.100 | < 0.50 | 0.54 | U | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 0.279 | 0.500 | < 1.00 | 1.80 | U | " | " | " | " | X |
| 142-82-5 | n-Heptane | **2.97** | 0.100 | **12.17** | 0.41 | | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | **0.370** | 0.100 | **1.52** | 0.41 | | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.0680 | 0.100 | < 0.31 | 0.45 | U | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.0902 | 0.100 | < 0.41 | 0.45 | U | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.0690 | 0.100 | < 0.38 | 0.55 | U | " | " | " | " | X |
| 108-88-3 | Toluene | **1.86** | 0.100 | **7.00** | 0.38 | | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 0.0970 | 0.100 | < 0.40 | 0.41 | U | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.0730 | 0.100 | < 0.62 | 0.85 | U | " | " | " | " | X |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 0.0840 | 0.100 | < 0.65 | 0.77 | U | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 3 IA**<br>SC06447-05 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:05 | 21-Apr-15 |

| *CAS No.* | *Analyte(s)* | *Result/Units* | **RDL* | *Result ug/m³* | **RDL* | *Flag* | *Method Ref.* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air Low Level | | ppbv | Prepared 27-Apr-15<br>Dilution: 1 | | | | | Can pressure: -4<br>Can ID: 0647 | | | |
| 127-18-4 | Tetrachloroethene | < 0.0808 | 0.100 | < 0.55 | 0.68 | U | EPA TO-15L | 27-Apr-15 | BRF | 1508066 | X |
| 108-90-7 | Chlorobenzene | < 0.0620 | 0.100 | < 0.29 | 0.46 | U | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 0.0840 | 0.100 | < 0.58 | 0.69 | U | " | " | " | " | |
| 100-41-4 | Ethylbenzene | **0.190** | 0.100 | **0.82** | 0.43 | | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | **0.450** | 0.200 | **1.95** | 0.87 | | " | " | " | " | X |
| 75-25-2 | Bromoform | < 0.0670 | 0.100 | < 0.69 | 1.03 | U | " | " | " | " | X |
| 100-42-5 | Styrene | < 0.0690 | 0.100 | < 0.29 | 0.43 | U | " | " | " | " | X |
| 95-47-6 | o-Xylene | **0.170** | 0.100 | **0.74** | 0.43 | | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 0.0290 | 0.100 | < 0.20 | 0.69 | U | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 0.0380 | 0.100 | < 0.19 | 0.49 | U | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | **0.110** | 0.100 | **0.54** | 0.49 | | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.0380 | 0.100 | < 0.19 | 0.49 | U | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | **0.170** | 0.100 | **0.84** | 0.49 | | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 0.0970 | 0.500 | < 0.51 | 2.62 | U | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.0805 | 0.100 | < 0.48 | 0.60 | U | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 0.0740 | 0.100 | < 0.38 | 0.52 | U | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.0550 | 0.100 | < 0.33 | 0.60 | U | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 0.0630 | 0.100 | < 0.35 | 0.55 | U | " | " | " | " | |
| 99-87-6 | 4-Isopropyltoluene | < 0.0650 | 0.100 | < 0.35 | 0.54 | U | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.0760 | 0.100 | < 0.46 | 0.60 | U | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 0.0840 | 0.100 | < 0.46 | 0.55 | U | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.0630 | 0.100 | < 0.47 | 0.74 | U | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.0670 | 0.100 | < 0.71 | 1.07 | U | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *94* | | *80-120 %* | | | " | " | " | " | |
| Re-analysis of Volatile Organics in Air Low Level | | | Dilution: 10 | | | GS1 | | | | | |
| 115-07-1 | Propene | < 0.960 | 1.00 | < 1.65 | 1.72 | U, D | EPA TO-15L | 29-Apr-15 | BRF | 1508169 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | < 0.990 | 1.00 | < 4.90 | 4.94 | U, D | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.610 | 1.00 | < 1.26 | 2.07 | U, D | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 0.960 | 1.00 | < 6.71 | 6.99 | U, D | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 0.960 | 1.00 | < 2.45 | 2.56 | U, D | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 0.520 | 1.00 | < 1.15 | 2.21 | U, D | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 0.650 | 1.00 | < 2.52 | 3.88 | U, D | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 0.840 | 1.00 | < 2.22 | 2.64 | U, D | " | " | " | " | X |
| 67-64-1 | Acetone | **141** | 5.00 | **335.06** | 11.88 | D | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **3.40** | 1.00 | **19.11** | 5.62 | D | " | " | " | " | X |
| 64-17-5 | Ethanol | **46.4** | 5.00 | **87.49** | 9.43 | D | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 0.720 | 1.00 | < 1.56 | 2.17 | U, D | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.950 | 1.00 | < 3.77 | 3.97 | U, D | " | " | " | " | X |
| 75-09-2 | Methylene chloride | < 0.860 | 1.00 | < 2.99 | 3.47 | U, D | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | < 0.860 | 1.00 | < 6.59 | 7.66 | U, D | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | < 1.59 | 5.00 | < 4.95 | 15.56 | U, D | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.920 | 1.00 | < 3.65 | 3.97 | U, D | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.702 | 1.00 | < 2.84 | 4.05 | U, D | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 3 IA**<br>SC06447-05 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:05 | 21-Apr-15 |

**Air Quality Analyses**

Volatile Organics in Air Low Level — ppbv — Prepared 29-Apr-15 — Dilution: 10 — GS1 — Can pressure: -4

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1634-04-4 | Methyl tert-butyl ether | < 0.710 | 1.00 | < 2.56 | 3.61 | U, D | EPA TO-15L | 29-Apr-15 | BRF | 1508169 | X |
| 67-63-0 | Isopropyl alcohol | **4.40** | 5.00 | **10.80** | 12.27 | J, D | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | < 0.904 | 1.00 | < 2.67 | 2.95 | U, D | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | < 0.990 | 1.00 | < 3.93 | 3.97 | U, D | " | " | " | " | X |
| 110-54-3 | Hexane | < 1.25 | 5.00 | < 4.41 | 17.63 | U, D | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | **4.20** | 1.00 | **15.13** | 3.60 | D | " | " | " | " | |
| 67-66-3 | Chloroform | < 0.850 | 1.00 | < 4.14 | 4.87 | U, D | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 0.805 | 1.00 | < 2.37 | 2.95 | U, D | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.560 | 1.00 | < 2.27 | 4.05 | U, D | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | < 0.508 | 1.00 | < 2.77 | 5.46 | U, D | " | " | " | " | X |
| 71-43-2 | Benzene | **2.10** | 1.00 | **6.70** | 3.19 | D | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | < 0.504 | 1.00 | < 3.17 | 6.29 | U, D | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 0.790 | 1.00 | < 2.72 | 3.44 | U, D | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 0.950 | 1.00 | < 4.39 | 4.62 | U, D | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 0.811 | 1.00 | < 5.43 | 6.70 | U, D | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 0.930 | 1.00 | < 5.00 | 5.37 | U, D | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 2.79 | 5.00 | < 10.04 | 18.00 | U, D | " | " | " | " | X |
| 142-82-5 | n-Heptane | **1.80** | 1.00 | **7.38** | 4.10 | D | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | < 0.840 | 1.00 | < 3.44 | 4.10 | U, D | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.680 | 1.00 | < 3.09 | 4.54 | U, D | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.902 | 1.00 | < 4.09 | 4.54 | U, D | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.690 | 1.00 | < 3.76 | 5.46 | U, D | " | " | " | " | X |
| 108-88-3 | Toluene | **1.10** | 1.00 | **4.14** | 3.76 | D | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 0.970 | 1.00 | < 3.98 | 4.10 | U, D | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.730 | 1.00 | < 6.22 | 8.52 | U, D | " | " | " | " | X |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 0.840 | 1.00 | < 6.46 | 7.69 | U, D | " | " | " | " | |
| 127-18-4 | Tetrachloroethene | < 0.808 | 1.00 | < 5.48 | 6.78 | U, D | " | " | " | " | X |
| 108-90-7 | Chlorobenzene | < 0.620 | 1.00 | < 2.86 | 4.61 | U, D | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 0.840 | 1.00 | < 5.77 | 6.87 | U, D | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 0.860 | 1.00 | < 3.73 | 4.34 | U, D | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | < 1.83 | 2.00 | < 7.93 | 8.67 | U, D | " | " | " | " | X |
| 75-25-2 | Bromoform | < 0.670 | 1.00 | < 6.92 | 10.34 | U, D | " | " | " | " | X |
| 100-42-5 | Styrene | < 0.690 | 1.00 | < 2.93 | 4.25 | U, D | " | " | " | " | X |
| 95-47-6 | o-Xylene | < 0.920 | 1.00 | < 3.99 | 4.34 | U, D | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 0.290 | 1.00 | < 1.99 | 6.87 | U, D | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 0.380 | 1.00 | < 1.87 | 4.92 | U, D | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 0.810 | 1.00 | < 3.98 | 4.92 | U, D | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.380 | 1.00 | < 1.87 | 4.92 | U, D | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | < 0.840 | 1.00 | < 4.13 | 4.92 | U, D | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 0.970 | 5.00 | < 5.08 | 26.18 | U, D | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.805 | 1.00 | < 4.84 | 6.01 | U, D | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 0.740 | 1.00 | < 3.81 | 5.15 | U, D | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.550 | 1.00 | < 3.31 | 6.01 | U, D | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 0.630 | 1.00 | < 3.46 | 5.49 | U, D | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 3 IA** SC06447-05 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:05 | 21-Apr-15 |

| *CAS No.* | *Analyte(s)* | *Result/Units* | **RDL* | *Result ug/m³* | **RDL* | *Flag* | *Method Ref.* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air Low Level | | ppbv | Prepared 29-Apr-15 Dilution: 10 | | | GS1 | Can pressure: -4 | | | | |
| 99-87-6 | 4-Isopropyltoluene | < 0.650 | 1.00 | < 3.49 | 5.37 | U, D | EPA TO-15L | 29-Apr-15 | BRF | 1508169 | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.760 | 1.00 | < 4.57 | 6.01 | U, D | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 0.840 | 1.00 | < 4.61 | 5.49 | U, D | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.630 | 1.00 | < 4.68 | 7.42 | U, D | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.670 | 1.00 | < 7.14 | 10.66 | U, D | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *92* | | *80-120 %* | | | " | " | " | " | |
| Chlorinated SIM | | ppbv | Prepared 27-Apr-15 Dilution: 1 | | | | Can pressure: -4 Can ID: 0647 | | | | |
| 75-01-4 | Vinyl chloride | < 0.0181 | 0.0400 | < 0.05 | 0.10 | U | EPA TO-15 SIM | 27-Apr-15 | BRF | 1508066 | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.0247 | 0.0400 | < 0.10 | 0.16 | U | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.0237 | 0.0400 | < 0.10 | 0.16 | U | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | **0.110** | 0.0400 | **0.69** | 0.25 | | " | " | " | " | X |
| 79-01-6 | Trichloroethene | **0.0600** | 0.0400 | **0.32** | 0.21 | | " | " | " | " | X |
| 127-18-4 | Tetrachloroethene | **0.0200** | 0.0400 | **0.14** | 0.27 | J | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *94* | | *80-120 %* | | | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 3 SS**<br>SC06447-06 | 4884S-13 | Soil Gas | 16-Apr-15 16:05 | 21-Apr-15 |

**Air Quality Analyses**

Volatile Organics in Air — ppbv — Prepared 08-May-15, Dilution: 3.22 — AirP — Can pressure: -15, Can ID: 5586

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 115-07-1 | Propene | < 1.32 | 1.61 | < 2.27 | 2.77 | U, D | EPA TO-15 | 08-May-15 | BRF | 1509016 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | < 1.47 | 1.61 | < 7.27 | 7.96 | U, D | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.985 | 1.61 | < 2.03 | 3.33 | U, D | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 1.58 | 1.61 | < 11.04 | 11.25 | U, D | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 1.24 | 1.61 | < 3.17 | 4.12 | U, D | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 1.01 | 1.61 | < 2.23 | 3.56 | U, D | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 1.07 | 1.61 | < 4.15 | 6.25 | U, D | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 1.37 | 1.61 | < 3.61 | 4.25 | U, D | " | " | " | " | X |
| 67-64-1 | Acetone | **18.9** | 1.61 | **44.91** | 3.83 | D | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **11.9** | 1.61 | **66.87** | 9.05 | D | " | " | " | " | X |
| 64-17-5 | Ethanol | **11.8** | 1.61 | **22.25** | 3.04 | D | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 1.61 | 1.61 | < 3.49 | 3.49 | U, D | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 1.28 | 1.61 | < 5.08 | 6.39 | U, D | " | " | " | " | X |
| 75-09-2 | Methylene chloride | **1.80** | 1.61 | **6.25** | 5.59 | D | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | < 1.22 | 1.61 | < 9.35 | 12.34 | U, D | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | < 1.52 | 1.61 | < 4.73 | 5.01 | U, D | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 1.19 | 1.61 | < 4.72 | 6.38 | U, D | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 1.15 | 1.61 | < 4.66 | 6.52 | U, D | " | " | " | " | X |
| 1634-04-4 | Methyl tert-butyl ether | < 1.00 | 1.61 | < 3.61 | 5.81 | U, D | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | **13.3** | 1.61 | **32.64** | 3.95 | D | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | < 1.40 | 1.61 | < 4.13 | 4.75 | U, D | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | **2.09** | 1.61 | **8.29** | 6.38 | D | " | " | " | " | X |
| 110-54-3 | Hexane | < 0.972 | 1.61 | < 3.43 | 5.68 | U, D | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | < 1.42 | 1.61 | < 5.12 | 5.80 | U, D | " | " | " | " | |
| 67-66-3 | Chloroform | < 1.30 | 1.61 | < 6.33 | 7.84 | U, D | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 1.58 | 1.61 | < 4.66 | 4.75 | U, D | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 1.54 | 1.61 | < 6.24 | 6.52 | U, D | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | < 0.802 | 1.61 | < 4.38 | 8.78 | U, D | " | " | " | " | X |
| 71-43-2 | Benzene | < 1.28 | 1.61 | < 4.08 | 5.14 | U, D | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | < 1.12 | 1.61 | < 7.05 | 10.13 | U, D | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 1.37 | 1.61 | < 4.72 | 5.54 | U, D | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 1.58 | 1.61 | < 7.30 | 7.44 | U, D | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 1.00 | 1.61 | < 6.70 | 10.79 | U, D | " | " | " | " | X |
| 79-01-6 | Trichloroethene | **10.7** | 1.61 | **57.50** | 8.65 | D | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 1.43 | 1.61 | < 5.15 | 5.79 | U, D | " | " | " | " | X |
| 142-82-5 | n-Heptane | < 1.26 | 1.61 | < 5.16 | 6.60 | U, D | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | < 0.898 | 1.61 | < 3.68 | 6.60 | U, D | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 1.21 | 1.61 | < 5.49 | 7.31 | U, D | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 1.04 | 1.61 | < 4.72 | 7.31 | U, D | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 1.13 | 1.61 | < 6.17 | 8.78 | U, D | " | " | " | " | X |
| 108-88-3 | Toluene | **10.0** | 1.61 | **37.63** | 6.06 | D | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 1.47 | 1.61 | < 6.02 | 6.60 | U, D | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 1.24 | 1.61 | < 10.56 | 13.72 | U, D | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 3 SS**<br>SC06447-06 | 4884S-13 | Soil Gas | 16-Apr-15 16:05 | 21-Apr-15 |

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air | | ppbv | Prepared 08-May-15<br>Dilution: 3.22 | | | AirP | Can pressure: -15<br>Can ID: 5586 | | | | |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 1.36 | 1.61 | < 10.45 | 12.37 | U, D | EPA TO-15 | 08-May-15 | BRF | 1509016 | |
| 127-18-4 | Tetrachloroethene | **1.71** | 1.61 | **11.60** | 10.92 | D | " | " | " | " | X |
| 108-90-7 | Chlorobenzene | < 1.38 | 1.61 | < 6.36 | 7.41 | U, D | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 1.33 | 1.61 | < 9.14 | 11.06 | U, D | " | " | " | " | |
| 100-41-4 | Ethylbenzene | **109** | 1.61 | **472.56** | 6.98 | D | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | **238** | 3.22 | **1031.82** | 13.96 | D | " | " | " | " | X |
| 75-25-2 | Bromoform | < 1.00 | 1.61 | < 10.34 | 16.64 | U, D | " | " | " | " | X |
| 100-42-5 | Styrene | < 1.09 | 1.61 | < 4.64 | 6.85 | U, D | " | " | " | " | X |
| 95-47-6 | o-Xylene | **89.9** | 1.61 | **389.75** | 6.98 | D | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 1.25 | 1.61 | < 8.58 | 11.06 | U, D | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 1.21 | 1.61 | < 5.95 | 7.92 | U, D | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 1.09 | 1.61 | < 5.36 | 7.92 | U, D | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.927 | 1.61 | < 4.56 | 7.92 | U, D | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | **1.74** | 1.61 | **8.55** | 7.92 | D | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 1.18 | 1.61 | < 6.18 | 8.43 | U, D | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 1.05 | 1.61 | < 6.31 | 9.68 | U, D | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 1.44 | 1.61 | < 7.42 | 8.30 | U, D | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 1.09 | 1.61 | < 6.55 | 9.68 | U, D | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 1.08 | 1.61 | < 5.93 | 8.84 | U, D | " | " | " | " | |
| 99-87-6 | 4-Isopropyltoluene | < 1.31 | 1.61 | < 7.03 | 8.64 | U, D | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.969 | 1.61 | < 5.83 | 9.68 | U, D | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 1.20 | 1.61 | < 6.59 | 8.84 | U, D | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.879 | 1.61 | < 6.53 | 11.95 | U, D | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.911 | 1.61 | < 9.71 | 17.17 | U, D | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *98* | | *80-120 %* | | | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 4 IA**<br>SC06447-07 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:01 | 21-Apr-15 |

**Air Quality Analyses**

Volatile Organics in Air Low Level — ppbv — Prepared 27-Apr-15 — Dilution: 1 — Can pressure: -3 — Can ID: 0702

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 115-07-1 | Propene | < 0.0960 | 0.100 | < 0.17 | 0.17 | U | EPA TO-15L | 28-Apr-15 | BRF | 1508066 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | **0.560** | 0.100 | **2.77** | 0.49 | | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.0610 | 0.100 | < 0.13 | 0.21 | U | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 0.0960 | 0.100 | < 0.67 | 0.70 | U | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 0.0960 | 0.100 | < 0.25 | 0.26 | U | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 0.0520 | 0.100 | < 0.11 | 0.22 | U | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 0.0650 | 0.100 | < 0.25 | 0.39 | U | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 0.0840 | 0.100 | < 0.22 | 0.26 | U | " | " | " | " | X |
| 67-64-1 | Acetone | **133** | 0.500 | **316.04** | 1.19 | E | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **3.80** | 0.100 | **21.35** | 0.56 | | " | " | " | " | X |
| 64-17-5 | Ethanol | **47.2** | 0.500 | **88.99** | 0.94 | E | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 0.0720 | 0.100 | < 0.16 | 0.22 | U | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.0950 | 0.100 | < 0.38 | 0.40 | U | " | " | " | " | X |
| 75-09-2 | Methylene chloride | **1.71** | 0.100 | **5.94** | 0.35 | B | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | **0.110** | 0.100 | **0.84** | 0.77 | | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | **0.170** | 0.500 | **0.53** | 1.56 | J | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.0920 | 0.100 | < 0.36 | 0.40 | U | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.0702 | 0.100 | < 0.28 | 0.40 | U | " | " | " | " | X |
| 1634-04-4 | Methyl tert-butyl ether | < 0.0710 | 0.100 | < 0.26 | 0.36 | U | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | **6.17** | 0.500 | **15.14** | 1.23 | | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | **2.21** | 0.100 | **6.52** | 0.29 | | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | < 0.0990 | 0.100 | < 0.39 | 0.40 | U | " | " | " | " | X |
| 110-54-3 | Hexane | **3.04** | 0.500 | **10.72** | 1.76 | | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | < 0.0920 | 0.100 | < 0.33 | 0.36 | U | " | " | " | " | |
| 67-66-3 | Chloroform | < 0.0850 | 0.100 | < 0.41 | 0.49 | U | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 0.0805 | 0.100 | < 0.24 | 0.29 | U | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.0560 | 0.100 | < 0.23 | 0.40 | U | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | **0.190** | 0.100 | **1.04** | 0.55 | | " | " | " | " | X |
| 71-43-2 | Benzene | **2.60** | 0.100 | **8.29** | 0.32 | | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | **0.130** | 0.100 | **0.82** | 0.63 | | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 0.0790 | 0.100 | < 0.27 | 0.34 | U | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 0.0950 | 0.100 | < 0.44 | 0.46 | U | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 0.0811 | 0.100 | < 0.54 | 0.67 | U | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 0.0930 | 0.100 | < 0.50 | 0.54 | U | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 0.279 | 0.500 | < 1.00 | 1.80 | U | " | " | " | " | X |
| 142-82-5 | n-Heptane | **2.56** | 0.100 | **10.49** | 0.41 | | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | **0.750** | 0.100 | **3.07** | 0.41 | | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.0680 | 0.100 | < 0.31 | 0.45 | U | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.0902 | 0.100 | < 0.41 | 0.45 | U | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.0690 | 0.100 | < 0.38 | 0.55 | U | " | " | " | " | X |
| 108-88-3 | Toluene | **2.96** | 0.100 | **11.14** | 0.38 | | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 0.0970 | 0.100 | < 0.40 | 0.41 | U | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.0730 | 0.100 | < 0.62 | 0.85 | U | " | " | " | " | X |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 0.0840 | 0.100 | < 0.65 | 0.77 | U | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 4 IA**<br>SC06447-07 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:01 | 21-Apr-15 |

**Air Quality Analyses**

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air Low Level | | ppbv | Prepared 27-Apr-15<br>Dilution: 1 | | | | Can pressure: -3<br>Can ID: 0702 | | | | |
| 127-18-4 | Tetrachloroethene | < 0.0808 | 0.100 | < 0.55 | 0.68 | U | EPA TO-15L | 28-Apr-15 | BRF | 1508066 | X |
| 108-90-7 | Chlorobenzene | < 0.0620 | 0.100 | < 0.29 | 0.46 | U | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 0.0840 | 0.100 | < 0.58 | 0.69 | U | " | " | " | " | |
| 100-41-4 | Ethylbenzene | **0.260** | 0.100 | **1.13** | 0.43 | | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | **0.750** | 0.200 | **3.25** | 0.87 | | " | " | " | " | X |
| 75-25-2 | Bromoform | < 0.0670 | 0.100 | < 0.69 | 1.03 | U | " | " | " | " | X |
| 100-42-5 | Styrene | **0.100** | 0.100 | **0.43** | 0.43 | | " | " | " | " | X |
| 95-47-6 | o-Xylene | **0.200** | 0.100 | **0.87** | 0.43 | | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 0.0290 | 0.100 | < 0.20 | 0.69 | U | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 0.0380 | 0.100 | < 0.19 | 0.49 | U | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | **0.130** | 0.100 | **0.64** | 0.49 | | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.0380 | 0.100 | < 0.19 | 0.49 | U | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | **0.310** | 0.100 | **1.52** | 0.49 | | " | " | " | " | X |
| 91-20-3 | Naphthalene | **0.120** | 0.500 | **0.63** | 2.62 | J | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.0805 | 0.100 | < 0.48 | 0.60 | U | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 0.0740 | 0.100 | < 0.38 | 0.52 | U | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.0550 | 0.100 | < 0.33 | 0.60 | U | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 0.0630 | 0.100 | < 0.35 | 0.55 | U | " | " | " | " | |
| 99-87-6 | 4-Isopropyltoluene | < 0.0650 | 0.100 | < 0.35 | 0.54 | U | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.0760 | 0.100 | < 0.46 | 0.60 | U | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 0.0840 | 0.100 | < 0.46 | 0.55 | U | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.0630 | 0.100 | < 0.47 | 0.74 | U | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.0670 | 0.100 | < 0.71 | 1.07 | U | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *93* | | *80-120 %* | | | " | " | " | " | |
| Re-analysis of Volatile Organics in Air Low Level | | | Dilution: 10 | | | GS1 | | | | | |
| 115-07-1 | Propene | < 0.960 | 1.00 | < 1.65 | 1.72 | U, D | EPA TO-15L | 30-Apr-15 | BRF | 1508169 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | < 0.990 | 1.00 | < 4.90 | 4.94 | U, D | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.610 | 1.00 | < 1.26 | 2.07 | U, D | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 0.960 | 1.00 | < 6.71 | 6.99 | U, D | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 0.960 | 1.00 | < 2.45 | 2.56 | U, D | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 0.520 | 1.00 | < 1.15 | 2.21 | U, D | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 0.650 | 1.00 | < 2.52 | 3.88 | U, D | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 0.840 | 1.00 | < 2.22 | 2.64 | U, D | " | " | " | " | X |
| 67-64-1 | Acetone | **118** | 5.00 | **280.40** | 11.88 | D | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **2.70** | 1.00 | **15.17** | 5.62 | D | " | " | " | " | X |
| 64-17-5 | Ethanol | **42.2** | 5.00 | **79.57** | 9.43 | D | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 0.720 | 1.00 | < 1.56 | 2.17 | U, D | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.950 | 1.00 | < 3.77 | 3.97 | U, D | " | " | " | " | X |
| 75-09-2 | Methylene chloride | **1.20** | 1.00 | **4.17** | 3.47 | D, B | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | < 0.860 | 1.00 | < 6.59 | 7.66 | U, D | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | < 1.59 | 5.00 | < 4.95 | 15.56 | U, D | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.920 | 1.00 | < 3.65 | 3.97 | U, D | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.702 | 1.00 | < 2.84 | 4.05 | U, D | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 4 IA**<br>SC06447-07 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:01 | 21-Apr-15 |

**Air Quality Analyses**

Volatile Organics in Air Low Level — ppbv — Prepared 29-Apr-15 — Dilution: 10 — GS1 — Can pressure: -3

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1634-04-4 | Methyl tert-butyl ether | < 0.710 | 1.00 | < 2.56 | 3.61 | U, D | EPA TO-15L | 30-Apr-15 | BRF | 1508169 | X |
| 67-63-0 | Isopropyl alcohol | **4.90** | 5.00 | **12.02** | 12.27 | J, D | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | **1.50** | 1.00 | **4.42** | 2.95 | D | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | < 0.990 | 1.00 | < 3.93 | 3.97 | U, D | " | " | " | " | X |
| 110-54-3 | Hexane | **2.50** | 5.00 | **8.81** | 17.63 | J, D | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | < 0.920 | 1.00 | < 3.32 | 3.60 | U, D | " | " | " | " | |
| 67-66-3 | Chloroform | < 0.850 | 1.00 | < 4.14 | 4.87 | U, D | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 0.805 | 1.00 | < 2.37 | 2.95 | U, D | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.560 | 1.00 | < 2.27 | 4.05 | U, D | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | < 0.508 | 1.00 | < 2.77 | 5.46 | U, D | " | " | " | " | X |
| 71-43-2 | Benzene | **1.40** | 1.00 | **4.47** | 3.19 | D | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | < 0.504 | 1.00 | < 3.17 | 6.29 | U, D | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 0.790 | 1.00 | < 2.72 | 3.44 | U, D | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 0.950 | 1.00 | < 4.39 | 4.62 | U, D | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 0.811 | 1.00 | < 5.43 | 6.70 | U, D | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 0.930 | 1.00 | < 5.00 | 5.37 | U, D | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 2.79 | 5.00 | < 10.04 | 18.00 | U, D | " | " | " | " | X |
| 142-82-5 | n-Heptane | **1.50** | 1.00 | **6.15** | 4.10 | D | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | < 0.840 | 1.00 | < 3.44 | 4.10 | U, D | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.680 | 1.00 | < 3.09 | 4.54 | U, D | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.902 | 1.00 | < 4.09 | 4.54 | U, D | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.690 | 1.00 | < 3.76 | 5.46 | U, D | " | " | " | " | X |
| 108-88-3 | Toluene | **1.80** | 1.00 | **6.77** | 3.76 | D | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 0.970 | 1.00 | < 3.98 | 4.10 | U, D | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.730 | 1.00 | < 6.22 | 8.52 | U, D | " | " | " | " | X |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 0.840 | 1.00 | < 6.46 | 7.69 | U, D | " | " | " | " | |
| 127-18-4 | Tetrachloroethene | < 0.808 | 1.00 | < 5.48 | 6.78 | U, D | " | " | " | " | X |
| 108-90-7 | Chlorobenzene | < 0.620 | 1.00 | < 2.86 | 4.61 | U, D | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 0.840 | 1.00 | < 5.77 | 6.87 | U, D | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 0.860 | 1.00 | < 3.73 | 4.34 | U, D | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | < 1.83 | 2.00 | < 7.93 | 8.67 | U, D | " | " | " | " | X |
| 75-25-2 | Bromoform | < 0.670 | 1.00 | < 6.92 | 10.34 | U, D | " | " | " | " | X |
| 100-42-5 | Styrene | < 0.690 | 1.00 | < 2.93 | 4.25 | U, D | " | " | " | " | X |
| 95-47-6 | o-Xylene | < 0.920 | 1.00 | < 3.99 | 4.34 | U, D | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 0.290 | 1.00 | < 1.99 | 6.87 | U, D | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 0.380 | 1.00 | < 1.87 | 4.92 | U, D | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 0.810 | 1.00 | < 3.98 | 4.92 | U, D | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.380 | 1.00 | < 1.87 | 4.92 | U, D | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | < 0.840 | 1.00 | < 4.13 | 4.92 | U, D | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 0.970 | 5.00 | < 5.08 | 26.18 | U, D | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.805 | 1.00 | < 4.84 | 6.01 | U, D | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 0.740 | 1.00 | < 3.81 | 5.15 | U, D | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.550 | 1.00 | < 3.31 | 6.01 | U, D | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 0.630 | 1.00 | < 3.46 | 5.49 | U, D | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 4 IA**<br>SC06447-07 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:01 | 21-Apr-15 |

| *CAS No.* | *Analyte(s)* | *Result/Units* | **RDL* | *Result ug/m³* | **RDL* | *Flag* | *Method Ref.* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air Low Level | | ppbv | Prepared 29-Apr-15<br>Dilution: 10 | | | GS1 | Can pressure: -3 | | | | |
| 99-87-6 | 4-Isopropyltoluene | < 0.650 | 1.00 | < 3.49 | 5.37 | U, D | EPA TO-15L | 30-Apr-15 | BRF | 1508169 | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.760 | 1.00 | < 4.57 | 6.01 | U, D | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 0.840 | 1.00 | < 4.61 | 5.49 | U, D | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.630 | 1.00 | < 4.68 | 7.42 | U, D | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.670 | 1.00 | < 7.14 | 10.66 | U, D | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *87* | | *80-120 %* | | | " | " | " | " | |
| Chlorinated SIM | | ppbv | Prepared 27-Apr-15<br>Dilution: 1 | | | | Can pressure: -3<br>Can ID: 0702 | | | | |
| 75-01-4 | Vinyl chloride | < 0.0181 | 0.0400 | < 0.05 | 0.10 | U | EPA TO-15 SIM | 28-Apr-15 | BRF | 1508066 | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.0247 | 0.0400 | < 0.10 | 0.16 | U | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.0237 | 0.0400 | < 0.10 | 0.16 | U | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | **0.110** | 0.0400 | **0.69** | 0.25 | | " | " | " | " | X |
| 79-01-6 | Trichloroethene | **0.0700** | 0.0400 | **0.38** | 0.21 | | " | " | " | " | X |
| 127-18-4 | Tetrachloroethene | **0.0600** | 0.0400 | **0.41** | 0.27 | | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *93* | | *80-120 %* | | | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 4 SS**<br>SC06447-08 | 4884S-13 | Soil Gas | 16-Apr-15 16:01 | 21-Apr-15 |

| *CAS No.* | *Analyte(s)* | *Result/Units* | **RDL* | *Result ug/m³* | **RDL* | *Flag* | *Method Ref.* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air | | ppbv | Prepared 08-May-15<br>Dilution: 1 | | | | | Can pressure: -7<br>Can ID: 1399 | | | |
| 115-07-1 | Propene | < 0.409 | 0.500 | < 0.70 | 0.86 | U | EPA TO-15 | 09-May-15 | BRF | 1509016 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | < 0.457 | 0.500 | < 2.26 | 2.47 | U | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.306 | 0.500 | < 0.63 | 1.03 | U | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 0.492 | 0.500 | < 3.44 | 3.49 | U | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 0.385 | 0.500 | < 0.98 | 1.28 | U | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 0.315 | 0.500 | < 0.70 | 1.10 | U | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 0.331 | 0.500 | < 1.28 | 1.94 | U | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 0.427 | 0.500 | < 1.13 | 1.32 | U | " | " | " | " | X |
| 67-64-1 | Acetone | **10.7** | 0.500 | **25.43** | 1.19 | | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **5.19** | 0.500 | **29.17** | 2.81 | | " | " | " | " | X |
| 64-17-5 | Ethanol | **6.29** | 0.500 | **11.86** | 0.94 | | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 0.499 | 0.500 | < 1.08 | 1.08 | U | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.398 | 0.500 | < 1.58 | 1.98 | U | " | " | " | " | X |
| 75-09-2 | Methylene chloride | **0.640** | 0.500 | **2.22** | 1.74 | | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | < 0.378 | 0.500 | < 2.90 | 3.83 | U | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | < 0.473 | 0.500 | < 1.47 | 1.56 | U | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.370 | 0.500 | < 1.47 | 1.98 | U | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.357 | 0.500 | < 1.45 | 2.02 | U | " | " | " | " | X |
| 1634-04-4 | Methyl tert-butyl ether | < 0.311 | 0.500 | < 1.12 | 1.80 | U | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | < 0.479 | 0.500 | < 1.18 | 1.23 | U | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | < 0.435 | 0.500 | < 1.28 | 1.47 | U | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | **73.3** | 0.500 | **290.65** | 1.98 | E | " | " | " | " | X |
| 110-54-3 | Hexane | < 0.302 | 0.500 | < 1.06 | 1.76 | U | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | < 0.441 | 0.500 | < 1.59 | 1.80 | U | " | " | " | " | |
| 67-66-3 | Chloroform | **0.450** | 0.500 | **2.19** | 2.43 | J | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 0.492 | 0.500 | < 1.45 | 1.47 | U | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.477 | 0.500 | < 1.93 | 2.02 | U | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | < 0.249 | 0.500 | < 1.36 | 2.73 | U | " | " | " | " | X |
| 71-43-2 | Benzene | < 0.398 | 0.500 | < 1.27 | 1.60 | U | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | < 0.348 | 0.500 | < 2.19 | 3.15 | U | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 0.425 | 0.500 | < 1.46 | 1.72 | U | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 0.490 | 0.500 | < 2.26 | 2.31 | U | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 0.311 | 0.500 | < 2.08 | 3.35 | U | " | " | " | " | X |
| 79-01-6 | Trichloroethene | **12.0** | 0.500 | **64.49** | 2.69 | | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 0.443 | 0.500 | < 1.59 | 1.80 | U | " | " | " | " | X |
| 142-82-5 | n-Heptane | < 0.392 | 0.500 | < 1.61 | 2.05 | U | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | < 0.279 | 0.500 | < 1.14 | 2.05 | U | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.375 | 0.500 | < 1.70 | 2.27 | U | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.324 | 0.500 | < 1.47 | 2.27 | U | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.352 | 0.500 | < 1.92 | 2.73 | U | " | " | " | " | X |
| 108-88-3 | Toluene | **0.670** | 0.500 | **2.52** | 1.88 | | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 0.456 | 0.500 | < 1.87 | 2.05 | U | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.384 | 0.500 | < 3.27 | 4.26 | U | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 4 SS**<br>SC06447-08 | 4884S-13 | Soil Gas | 16-Apr-15 16:01 | 21-Apr-15 |

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air | | ppbv | Prepared 08-May-15<br>Dilution: 1 | | | | Can pressure: -7<br>Can ID: 1399 | | | | |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 0.423 | 0.500 | < 3.25 | 3.84 | U | EPA TO-15 | 09-May-15 | BRF | 1509016 | |
| 127-18-4 | Tetrachloroethene | **0.690** | 0.500 | **4.68** | 3.39 | | " | " | " | " | X |
| 108-90-7 | Chlorobenzene | < 0.430 | 0.500 | < 1.98 | 2.30 | U | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 0.412 | 0.500 | < 2.83 | 3.44 | U | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 0.451 | 0.500 | < 1.96 | 2.17 | U | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | < 0.807 | 1.00 | < 3.50 | 4.34 | U | " | " | " | " | X |
| 75-25-2 | Bromoform | < 0.311 | 0.500 | < 3.21 | 5.17 | U | " | " | " | " | X |
| 100-42-5 | Styrene | < 0.339 | 0.500 | < 1.44 | 2.13 | U | " | " | " | " | X |
| 95-47-6 | o-Xylene | < 0.401 | 0.500 | < 1.74 | 2.17 | U | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 0.387 | 0.500 | < 2.66 | 3.43 | U | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 0.377 | 0.500 | < 1.85 | 2.46 | U | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | **0.340** | 0.500 | **1.67** | 2.46 | J | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.288 | 0.500 | < 1.42 | 2.46 | U | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | **1.17** | 0.500 | **5.75** | 2.46 | | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 0.366 | 0.500 | < 1.92 | 2.62 | U | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.327 | 0.500 | < 1.97 | 3.01 | U | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 0.448 | 0.500 | < 2.31 | 2.58 | U | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.337 | 0.500 | < 2.03 | 3.01 | U | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 0.336 | 0.500 | < 1.84 | 2.74 | U | " | " | " | " | |
| 99-87-6 | 4-Isopropyltoluene | < 0.408 | 0.500 | < 2.19 | 2.68 | U | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.301 | 0.500 | < 1.81 | 3.01 | U | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 0.373 | 0.500 | < 2.05 | 2.74 | U | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.273 | 0.500 | < 2.03 | 3.71 | U | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.283 | 0.500 | < 3.02 | 5.33 | U | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *102* | | *80-120 %* | | | " | " | " | " | |
| Re-analysis of Volatile Organics in Air | | | Dilution: 2 | | | GS1 | | | | | |
| 115-07-1 | Propene | < 0.818 | 1.00 | < 1.41 | 1.72 | U, D | EPA TO-15 | 10-May-15 | BRF | 1509087 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | < 0.914 | 1.00 | < 4.52 | 4.94 | U, D | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.612 | 1.00 | < 1.26 | 2.07 | U, D | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 0.984 | 1.00 | < 6.88 | 6.99 | U, D | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 0.770 | 1.00 | < 1.97 | 2.56 | U, D | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 0.630 | 1.00 | < 1.39 | 2.21 | U, D | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 0.662 | 1.00 | < 2.57 | 3.88 | U, D | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 0.854 | 1.00 | < 2.25 | 2.64 | U, D | " | " | " | " | X |
| 67-64-1 | Acetone | **10.7** | 1.00 | **25.43** | 2.38 | D | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **5.92** | 1.00 | **33.27** | 5.62 | D | " | " | " | " | X |
| 64-17-5 | Ethanol | **8.50** | 1.00 | **16.03** | 1.89 | D | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 0.998 | 1.00 | < 2.16 | 2.17 | U, D | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.796 | 1.00 | < 3.16 | 3.97 | U, D | " | " | " | " | X |
| 75-09-2 | Methylene chloride | < 0.816 | 1.00 | < 2.83 | 3.47 | U, D | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | < 0.756 | 1.00 | < 5.79 | 7.66 | U, D | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 4 SS**<br>SC06447-08 | 4884S-13 | Soil Gas | 16-Apr-15 16:01 | 21-Apr-15 |

**Air Quality Analyses**

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air | | ppbv | Prepared 10-May-15<br>Dilution: 2 | | | GS1 | Can pressure: -7 | | | | |
| 75-15-0 | Carbon disulfide | < 0.946 | 1.00 | < 2.94 | 3.11 | U, D | EPA TO-15 | 10-May-15 | BRF | 1509087 | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.740 | 1.00 | < 2.93 | 3.97 | U, D | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.714 | 1.00 | < 2.89 | 4.05 | U, D | " | " | " | " | X |
| 1634-04-4 | Methyl tert-butyl ether | < 0.622 | 1.00 | < 2.24 | 3.61 | U, D | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | < 0.958 | 1.00 | < 2.35 | 2.45 | U, D | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | < 0.870 | 1.00 | < 2.57 | 2.95 | U, D | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | 80.6 | 1.00 | 319.60 | 3.97 | D | " | " | " | " | X |
| 110-54-3 | Hexane | < 0.604 | 1.00 | < 2.13 | 3.53 | U, D | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | < 0.882 | 1.00 | < 3.18 | 3.60 | U, D | " | " | " | " | |
| 67-66-3 | Chloroform | < 0.808 | 1.00 | < 3.93 | 4.87 | U, D | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 0.984 | 1.00 | < 2.90 | 2.95 | U, D | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.954 | 1.00 | < 3.86 | 4.05 | U, D | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | < 0.498 | 1.00 | < 2.72 | 5.46 | U, D | " | " | " | " | X |
| 71-43-2 | Benzene | < 0.796 | 1.00 | < 2.54 | 3.19 | U, D | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | < 0.696 | 1.00 | < 4.38 | 6.29 | U, D | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 0.850 | 1.00 | < 2.93 | 3.44 | U, D | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 0.980 | 1.00 | < 4.53 | 4.62 | U, D | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 0.622 | 1.00 | < 4.17 | 6.70 | U, D | " | " | " | " | X |
| 79-01-6 | Trichloroethene | 11.6 | 1.00 | 62.34 | 5.37 | D | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 0.886 | 1.00 | < 3.19 | 3.60 | U, D | " | " | " | " | X |
| 142-82-5 | n-Heptane | < 0.784 | 1.00 | < 3.21 | 4.10 | U, D | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | < 0.558 | 1.00 | < 2.29 | 4.10 | U, D | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.750 | 1.00 | < 3.40 | 4.54 | U, D | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.648 | 1.00 | < 2.94 | 4.54 | U, D | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.704 | 1.00 | < 3.84 | 5.46 | U, D | " | " | " | " | X |
| 108-88-3 | Toluene | < 0.730 | 1.00 | < 2.75 | 3.76 | U, D | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 0.912 | 1.00 | < 3.74 | 4.10 | U, D | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.768 | 1.00 | < 6.54 | 8.52 | U, D | " | " | " | " | X |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 0.846 | 1.00 | < 6.50 | 7.69 | U, D | " | " | " | " | |
| 127-18-4 | Tetrachloroethene | < 0.682 | 1.00 | < 4.62 | 6.78 | U, D | " | " | " | " | X |
| 108-90-7 | Chlorobenzene | < 0.860 | 1.00 | < 3.96 | 4.61 | U, D | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 0.824 | 1.00 | < 5.66 | 6.87 | U, D | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 0.902 | 1.00 | < 3.91 | 4.34 | U, D | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | < 1.61 | 2.00 | < 6.98 | 8.67 | U, D | " | " | " | " | X |
| 75-25-2 | Bromoform | < 0.622 | 1.00 | < 6.43 | 10.34 | U, D | " | " | " | " | X |
| 100-42-5 | Styrene | < 0.678 | 1.00 | < 2.88 | 4.25 | U, D | " | " | " | " | X |
| 95-47-6 | o-Xylene | < 0.802 | 1.00 | < 3.48 | 4.34 | U, D | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 0.774 | 1.00 | < 5.32 | 6.87 | U, D | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 0.754 | 1.00 | < 3.71 | 4.92 | U, D | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 0.676 | 1.00 | < 3.32 | 4.92 | U, D | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.576 | 1.00 | < 2.83 | 4.92 | U, D | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.06 | 1.00 | 5.21 | 4.92 | D | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 0.732 | 1.00 | < 3.83 | 5.24 | U, D | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.654 | 1.00 | < 3.93 | 6.01 | U, D | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 4 SS** | 4884S-13 | Soil Gas | 16-Apr-15 16:01 | 21-Apr-15 |
| SC06447-08 | | | | |

| *CAS No.* | *Analyte(s)* | *Result/Units* | **RDL* | *Result ug/m³* | **RDL* | *Flag* | *Method Ref.* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air | | ppbv | Prepared 10-May-15<br>Dilution: 2 | | | GS1 | Can pressure: -7 | | | | |
| 100-44-7 | Benzyl chloride | < 0.896 | 1.00 | < 4.62 | 5.15 | U, D | EPA TO-15 | 10-May-15 | BRF | 1509087 | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.674 | 1.00 | < 4.05 | 6.01 | U, D | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 0.672 | 1.00 | < 3.69 | 5.49 | U, D | " | " | " | " | |
| 99-87-6 | 4-Isopropyltoluene | < 0.816 | 1.00 | < 4.38 | 5.37 | U, D | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.602 | 1.00 | < 3.62 | 6.01 | U, D | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 0.746 | 1.00 | < 4.09 | 5.49 | U, D | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.546 | 1.00 | < 4.05 | 7.42 | U, D | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.566 | 1.00 | < 6.04 | 10.66 | U, D | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *98* | | *80-120 %* | | | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 5 IA** | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 14:10 | 21-Apr-15 |
| SC06447-09 | | | | |

**Air Quality Analyses**

Volatile Organics in Air — ppbv — Prepared 08-May-15 — Dilution: 1 — Can pressure: -3 — Can ID: 0265

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 115-07-1 | Propene | < 0.409 | 0.500 | < 0.70 | 0.86 | U | EPA TO-15 | 09-May-15 | BRF | 1509016 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | **0.500** | 0.500 | **2.47** | 2.47 | | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.306 | 0.500 | < 0.63 | 1.03 | U | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 0.492 | 0.500 | < 3.44 | 3.49 | U | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 0.385 | 0.500 | < 0.98 | 1.28 | U | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 0.315 | 0.500 | < 0.70 | 1.10 | U | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 0.331 | 0.500 | < 1.28 | 1.94 | U | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 0.427 | 0.500 | < 1.13 | 1.32 | U | " | " | " | " | X |
| 67-64-1 | Acetone | **45.4** | 0.500 | **107.88** | 1.19 | | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **0.710** | 0.500 | **3.99** | 2.81 | | " | " | " | " | X |
| 64-17-5 | Ethanol | **21.9** | 0.500 | **41.29** | 0.94 | | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 0.499 | 0.500 | < 1.08 | 1.08 | U | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.398 | 0.500 | < 1.58 | 1.98 | U | " | " | " | " | X |
| 75-09-2 | Methylene chloride | **0.590** | 0.500 | **2.05** | 1.74 | | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | < 0.378 | 0.500 | < 2.90 | 3.83 | U | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | < 0.473 | 0.500 | < 1.47 | 1.56 | U | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.370 | 0.500 | < 1.47 | 1.98 | U | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.357 | 0.500 | < 1.45 | 2.02 | U | " | " | " | " | X |
| 1634-04-4 | Methyl tert-butyl ether | < 0.311 | 0.500 | < 1.12 | 1.80 | U | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | < 0.479 | 0.500 | < 1.18 | 1.23 | U | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | < 0.435 | 0.500 | < 1.28 | 1.47 | U | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | < 0.379 | 0.500 | < 1.50 | 1.98 | U | " | " | " | " | X |
| 110-54-3 | Hexane | **2.29** | 0.500 | **8.07** | 1.76 | | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | **2.90** | 0.500 | **10.45** | 1.80 | | " | " | " | " | |
| 67-66-3 | Chloroform | < 0.404 | 0.500 | < 1.97 | 2.43 | U | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 0.492 | 0.500 | < 1.45 | 1.47 | U | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.477 | 0.500 | < 1.93 | 2.02 | U | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | < 0.249 | 0.500 | < 1.36 | 2.73 | U | " | " | " | " | X |
| 71-43-2 | Benzene | **0.740** | 0.500 | **2.36** | 1.60 | | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | < 0.348 | 0.500 | < 2.19 | 3.15 | U | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 0.425 | 0.500 | < 1.46 | 1.72 | U | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 0.490 | 0.500 | < 2.26 | 2.31 | U | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 0.311 | 0.500 | < 2.08 | 3.35 | U | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 0.408 | 0.500 | < 2.19 | 2.69 | U | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 0.443 | 0.500 | < 1.59 | 1.80 | U | " | " | " | " | X |
| 142-82-5 | n-Heptane | **0.440** | 0.500 | **1.80** | 2.05 | J | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | **0.290** | 0.500 | **1.19** | 2.05 | J | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.375 | 0.500 | < 1.70 | 2.27 | U | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.324 | 0.500 | < 1.47 | 2.27 | U | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.352 | 0.500 | < 1.92 | 2.73 | U | " | " | " | " | X |
| 108-88-3 | Toluene | **0.660** | 0.500 | **2.48** | 1.88 | | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 0.456 | 0.500 | < 1.87 | 2.05 | U | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.384 | 0.500 | < 3.27 | 4.26 | U | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 5 IA** SC06447-09 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 14:10 | 21-Apr-15 |

| *CAS No.* | *Analyte(s)* | *Result/Units* | **RDL* | *Result ug/m³* | **RDL* | *Flag* | *Method Ref.* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air | | ppbv | Prepared 08-May-15 Dilution: 1 | | | | Can pressure: -3 Can ID: 0265 | | | | |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 0.423 | 0.500 | < 3.25 | 3.84 | U | EPA TO-15 | 09-May-15 | BRF | 1509016 | |
| 127-18-4 | Tetrachloroethene | < 0.341 | 0.500 | < 2.31 | 3.39 | U | " | " | " | " | X |
| 108-90-7 | Chlorobenzene | < 0.430 | 0.500 | < 1.98 | 2.30 | U | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 0.412 | 0.500 | < 2.83 | 3.44 | U | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 0.451 | 0.500 | < 1.96 | 2.17 | U | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | < 0.807 | 1.00 | < 3.50 | 4.34 | U | " | " | " | " | X |
| 75-25-2 | Bromoform | < 0.311 | 0.500 | < 3.21 | 5.17 | U | " | " | " | " | X |
| 100-42-5 | Styrene | < 0.339 | 0.500 | < 1.44 | 2.13 | U | " | " | " | " | X |
| 95-47-6 | o-Xylene | < 0.401 | 0.500 | < 1.74 | 2.17 | U | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 0.387 | 0.500 | < 2.66 | 3.43 | U | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 0.377 | 0.500 | < 1.85 | 2.46 | U | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 0.338 | 0.500 | < 1.66 | 2.46 | U | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.288 | 0.500 | < 1.42 | 2.46 | U | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | < 0.390 | 0.500 | < 1.92 | 2.46 | U | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 0.366 | 0.500 | < 1.92 | 2.62 | U | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.327 | 0.500 | < 1.97 | 3.01 | U | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 0.448 | 0.500 | < 2.31 | 2.58 | U | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.337 | 0.500 | < 2.03 | 3.01 | U | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 0.336 | 0.500 | < 1.84 | 2.74 | U | " | " | " | " | |
| 99-87-6 | 4-Isopropyltoluene | < 0.408 | 0.500 | < 2.19 | 2.68 | U | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.301 | 0.500 | < 1.81 | 3.01 | U | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 0.373 | 0.500 | < 2.05 | 2.74 | U | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.273 | 0.500 | < 2.03 | 3.71 | U | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.283 | 0.500 | < 3.02 | 5.33 | U | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *99* | | *80-120 %* | | | " | " | " | " | |
| Volatile Organics in Air Low Level | | ppbv | Prepared 29-Apr-15 Dilution: 1 | | | | Can pressure: -3 Can ID: 0265 | | | | |
| 115-07-1 | Propene | < 0.0960 | 0.100 | < 0.17 | 0.17 | U | EPA TO-15L | 30-Apr-15 | BRF | 1508169 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | **0.640** | 0.100 | **3.16** | 0.49 | | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.0610 | 0.100 | < 0.13 | 0.21 | U | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 0.0960 | 0.100 | < 0.67 | 0.70 | U | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 0.0960 | 0.100 | < 0.25 | 0.26 | U | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 0.0520 | 0.100 | < 0.11 | 0.22 | U | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 0.0650 | 0.100 | < 0.25 | 0.39 | U | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 0.0840 | 0.100 | < 0.22 | 0.26 | U | " | " | " | " | X |
| 67-64-1 | Acetone | **75.4** | 0.500 | **179.17** | 1.19 | E | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **1.15** | 0.100 | **6.46** | 0.56 | | " | " | " | " | X |
| 64-17-5 | Ethanol | **26.6** | 0.500 | **50.15** | 0.94 | E | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 0.0720 | 0.100 | < 0.16 | 0.22 | U | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.0950 | 0.100 | < 0.38 | 0.40 | U | " | " | " | " | X |
| 75-09-2 | Methylene chloride | **0.510** | 0.100 | **1.77** | 0.35 | B | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | **0.140** | 0.100 | **1.07** | 0.77 | | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 5 IA** | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 14:10 | 21-Apr-15 |
| SC06447-09 | | | | |

**Air Quality Analyses**

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air Low Level | | ppbv | Prepared 29-Apr-15<br>Dilution: 1 | | | | Can pressure: -3<br>Can ID: 0265 | | | | |
| 75-15-0 | Carbon disulfide | < 0.159 | 0.500 | < 0.49 | 1.56 | U | EPA TO-15L | 30-Apr-15 | BRF | 1508169 | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.0920 | 0.100 | < 0.36 | 0.40 | U | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.0702 | 0.100 | < 0.28 | 0.40 | U | " | " | " | " | X |
| 1634-04-4 | Methyl tert-butyl ether | < 0.0710 | 0.100 | < 0.26 | 0.36 | U | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | **2.15** | 0.500 | **5.28** | 1.23 | | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | **1.38** | 0.100 | **4.07** | 0.29 | | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | < 0.0990 | 0.100 | < 0.39 | 0.40 | U | " | " | " | " | X |
| 110-54-3 | Hexane | **0.410** | 0.500 | **1.45** | 1.76 | J | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | **0.910** | 0.100 | **3.28** | 0.36 | | " | " | " | " | |
| 67-66-3 | Chloroform | **0.260** | 0.100 | **1.27** | 0.49 | | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 0.0805 | 0.100 | < 0.24 | 0.29 | U | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.0560 | 0.100 | < 0.23 | 0.40 | U | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | **0.180** | 0.100 | **0.98** | 0.55 | | " | " | " | " | X |
| 71-43-2 | Benzene | **1.48** | 0.100 | **4.72** | 0.32 | | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | **0.110** | 0.100 | **0.69** | 0.63 | | " | " | " | " | X |
| 110-82-7 | Cyclohexane | **0.180** | 0.100 | **0.62** | 0.34 | | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 0.0950 | 0.100 | < 0.44 | 0.46 | U | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 0.0811 | 0.100 | < 0.54 | 0.67 | U | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 0.0930 | 0.100 | < 0.50 | 0.54 | U | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 0.279 | 0.500 | < 1.00 | 1.80 | U | " | " | " | " | X |
| 142-82-5 | n-Heptane | **0.740** | 0.100 | **3.03** | 0.41 | | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | **0.510** | 0.100 | **2.09** | 0.41 | | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.0680 | 0.100 | < 0.31 | 0.45 | U | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.0902 | 0.100 | < 0.41 | 0.45 | U | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.0690 | 0.100 | < 0.38 | 0.55 | U | " | " | " | " | X |
| 108-88-3 | Toluene | **0.900** | 0.100 | **3.39** | 0.38 | | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 0.0970 | 0.100 | < 0.40 | 0.41 | U | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.0730 | 0.100 | < 0.62 | 0.85 | U | " | " | " | " | X |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 0.0840 | 0.100 | < 0.65 | 0.77 | U | " | " | " | " | |
| 127-18-4 | Tetrachloroethene | < 0.0808 | 0.100 | < 0.55 | 0.68 | U | " | " | " | " | X |
| 108-90-7 | Chlorobenzene | < 0.0620 | 0.100 | < 0.29 | 0.46 | U | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 0.0840 | 0.100 | < 0.58 | 0.69 | U | " | " | " | " | |
| 100-41-4 | Ethylbenzene | **0.120** | 0.100 | **0.52** | 0.43 | | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | **0.340** | 0.200 | **1.47** | 0.87 | | " | " | " | " | X |
| 75-25-2 | Bromoform | < 0.0670 | 0.100 | < 0.69 | 1.03 | U | " | " | " | " | X |
| 100-42-5 | Styrene | < 0.0690 | 0.100 | < 0.29 | 0.43 | U | " | " | " | " | X |
| 95-47-6 | o-Xylene | **0.150** | 0.100 | **0.65** | 0.43 | | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 0.0290 | 0.100 | < 0.20 | 0.69 | U | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 0.0380 | 0.100 | < 0.19 | 0.49 | U | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 0.0810 | 0.100 | < 0.40 | 0.49 | U | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.0380 | 0.100 | < 0.19 | 0.49 | U | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | < 0.0840 | 0.100 | < 0.41 | 0.49 | U | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 0.0970 | 0.500 | < 0.51 | 2.62 | U | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.0805 | 0.100 | < 0.48 | 0.60 | U | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 5 IA** SC06447-09 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 14:10 | 21-Apr-15 |

| *CAS No.* | *Analyte(s)* | *Result/Units* | **RDL* | *Result ug/m³* | **RDL* | *Flag* | *Method Ref.* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air Low Level | | ppbv | Prepared 29-Apr-15 Dilution: 1 | | | | | Can pressure: -3 Can ID: 0265 | | | |
| 100-44-7 | Benzyl chloride | < 0.0740 | 0.100 | < 0.38 | 0.52 | U | EPA TO-15L | 30-Apr-15 | BRF | 1508169 | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.0550 | 0.100 | < 0.33 | 0.60 | U | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 0.0630 | 0.100 | < 0.35 | 0.55 | U | " | " | " | " | |
| 99-87-6 | 4-Isopropyltoluene | < 0.0650 | 0.100 | < 0.35 | 0.54 | U | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.0760 | 0.100 | < 0.46 | 0.60 | U | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 0.0840 | 0.100 | < 0.46 | 0.55 | U | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.0630 | 0.100 | < 0.47 | 0.74 | U | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.0670 | 0.100 | < 0.71 | 1.07 | U | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *92* | | *80-120 %* | | | " | " | " | " | |
| Chlorinated SIM | | ppbv | Prepared 29-Apr-15 Dilution: 1 | | | | | Can pressure: -3 Can ID: 0265 | | | |
| 75-01-4 | Vinyl chloride | < 0.0181 | 0.0400 | < 0.05 | 0.10 | U | EPA TO-15 SIM | " | BRF | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.0247 | 0.0400 | < 0.10 | 0.16 | U | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.0237 | 0.0400 | < 0.10 | 0.16 | U | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | **0.110** | 0.0400 | **0.69** | 0.25 | | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 0.0118 | 0.0400 | < 0.06 | 0.21 | U | " | " | " | " | X |
| 127-18-4 | Tetrachloroethene | < 0.0118 | 0.0400 | < 0.08 | 0.27 | U | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *92* | | *80-120 %* | | | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 5 SS**<br>SC06447-10 | 4884S-13 | Soil Gas | 16-Apr-15 15:46 | 21-Apr-15 |

**Air Quality Analyses**

Volatile Organics in Air — ppbv — Prepared 08-May-15 — Dilution: 1 — Can pressure: -12 — Can ID: 0251

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 115-07-1 | Propene | < 0.409 | 0.500 | < 0.70 | 0.86 | U | EPA TO-15 | 09-May-15 | BRF | 1509016 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | **0.550** | 0.500 | **2.72** | 2.47 | | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.306 | 0.500 | < 0.63 | 1.03 | U | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 0.492 | 0.500 | < 3.44 | 3.49 | U | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 0.385 | 0.500 | < 0.98 | 1.28 | U | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 0.315 | 0.500 | < 0.70 | 1.10 | U | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 0.331 | 0.500 | < 1.28 | 1.94 | U | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 0.427 | 0.500 | < 1.13 | 1.32 | U | " | " | " | " | X |
| 67-64-1 | Acetone | **10.8** | 0.500 | **25.66** | 1.19 | | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **0.550** | 0.500 | **3.09** | 2.81 | | " | " | " | " | X |
| 64-17-5 | Ethanol | **4.67** | 0.500 | **8.81** | 0.94 | | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 0.499 | 0.500 | < 1.08 | 1.08 | U | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.398 | 0.500 | < 1.58 | 1.98 | U | " | " | " | " | X |
| 75-09-2 | Methylene chloride | < 0.408 | 0.500 | < 1.42 | 1.74 | U | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | < 0.378 | 0.500 | < 2.90 | 3.83 | U | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | **0.830** | 0.500 | **2.58** | 1.56 | | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.370 | 0.500 | < 1.47 | 1.98 | U | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.357 | 0.500 | < 1.45 | 2.02 | U | " | " | " | " | X |
| 1634-04-4 | Methyl tert-butyl ether | < 0.311 | 0.500 | < 1.12 | 1.80 | U | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | **1.28** | 0.500 | **3.14** | 1.23 | | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | **1.68** | 0.500 | **4.95** | 1.47 | | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | < 0.379 | 0.500 | < 1.50 | 1.98 | U | " | " | " | " | X |
| 110-54-3 | Hexane | < 0.302 | 0.500 | < 1.06 | 1.76 | U | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | **1.46** | 0.500 | **5.26** | 1.80 | | " | " | " | " | |
| 67-66-3 | Chloroform | **4.67** | 0.500 | **22.73** | 2.43 | | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 0.492 | 0.500 | < 1.45 | 1.47 | U | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.477 | 0.500 | < 1.93 | 2.02 | U | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | **2.37** | 0.500 | **12.93** | 2.73 | | " | " | " | " | X |
| 71-43-2 | Benzene | < 0.398 | 0.500 | < 1.27 | 1.60 | U | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | **0.910** | 0.500 | **5.72** | 3.15 | | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 0.425 | 0.500 | < 1.46 | 1.72 | U | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 0.490 | 0.500 | < 2.26 | 2.31 | U | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 0.311 | 0.500 | < 2.08 | 3.35 | U | " | " | " | " | X |
| 79-01-6 | Trichloroethene | **7.01** | 0.500 | **37.67** | 2.69 | | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 0.443 | 0.500 | < 1.59 | 1.80 | U | " | " | " | " | X |
| 142-82-5 | n-Heptane | < 0.392 | 0.500 | < 1.61 | 2.05 | U | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | < 0.279 | 0.500 | < 1.14 | 2.05 | U | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.375 | 0.500 | < 1.70 | 2.27 | U | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.324 | 0.500 | < 1.47 | 2.27 | U | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.352 | 0.500 | < 1.92 | 2.73 | U | " | " | " | " | X |
| 108-88-3 | Toluene | **0.570** | 0.500 | **2.14** | 1.88 | | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 0.456 | 0.500 | < 1.87 | 2.05 | U | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.384 | 0.500 | < 3.27 | 4.26 | U | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 5 SS**<br>SC06447-10 | 4884S-13 | Soil Gas | 16-Apr-15 15:46 | 21-Apr-15 |

| *CAS No.* | *Analyte(s)* | *Result/Units* | **RDL* | *Result ug/m³* | **RDL* | *Flag* | *Method Ref.* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air | | ppbv | Prepared 08-May-15<br>Dilution: 1 | | | | Can pressure: -12<br>Can ID: 0251 | | | | |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 0.423 | 0.500 | < 3.25 | 3.84 | U | EPA TO-15 | 09-May-15 | BRF | 1509016 | |
| 127-18-4 | Tetrachloroethene | **9.82** | 0.500 | **66.59** | 3.39 | | " | " | " | " | X |
| 108-90-7 | Chlorobenzene | < 0.430 | 0.500 | < 1.98 | 2.30 | U | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 0.412 | 0.500 | < 2.83 | 3.44 | U | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 0.451 | 0.500 | < 1.96 | 2.17 | U | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | < 0.807 | 1.00 | < 3.50 | 4.34 | U | " | " | " | " | X |
| 75-25-2 | Bromoform | < 0.311 | 0.500 | < 3.21 | 5.17 | U | " | " | " | " | X |
| 100-42-5 | Styrene | < 0.339 | 0.500 | < 1.44 | 2.13 | U | " | " | " | " | X |
| 95-47-6 | o-Xylene | < 0.401 | 0.500 | < 1.74 | 2.17 | U | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 0.387 | 0.500 | < 2.66 | 3.43 | U | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 0.377 | 0.500 | < 1.85 | 2.46 | U | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 0.338 | 0.500 | < 1.66 | 2.46 | U | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.288 | 0.500 | < 1.42 | 2.46 | U | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | **0.830** | 0.500 | **4.08** | 2.46 | | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 0.366 | 0.500 | < 1.92 | 2.62 | U | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.327 | 0.500 | < 1.97 | 3.01 | U | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 0.448 | 0.500 | < 2.31 | 2.58 | U | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.337 | 0.500 | < 2.03 | 3.01 | U | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 0.336 | 0.500 | < 1.84 | 2.74 | U | " | " | " | " | |
| 99-87-6 | 4-Isopropyltoluene | < 0.408 | 0.500 | < 2.19 | 2.68 | U | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.301 | 0.500 | < 1.81 | 3.01 | U | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 0.373 | 0.500 | < 2.05 | 2.74 | U | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.273 | 0.500 | < 2.03 | 3.71 | U | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.283 | 0.500 | < 3.02 | 5.33 | U | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *103* | | *80-120 %* | | | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 6 IA**<br>SC06447-11 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 15:25 | 21-Apr-15 |

**Air Quality Analyses**

Volatile Organics in Air Low Level — ppbv — Prepared 27-Apr-15 — Dilution: 1 — Can pressure: -3 — Can ID: 1681

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 115-07-1 | Propene | < 0.0960 | 0.100 | < 0.17 | 0.17 | U | EPA TO-15L | 28-Apr-15 | BRF | 1508066 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | **0.730** | 0.100 | **3.61** | 0.49 | | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.0610 | 0.100 | < 0.13 | 0.21 | U | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 0.0960 | 0.100 | < 0.67 | 0.70 | U | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 0.0960 | 0.100 | < 0.25 | 0.26 | U | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 0.0520 | 0.100 | < 0.11 | 0.22 | U | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 0.0650 | 0.100 | < 0.25 | 0.39 | U | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 0.0840 | 0.100 | < 0.22 | 0.26 | U | " | " | " | " | X |
| 67-64-1 | Acetone | **88.4** | 0.500 | **210.06** | 1.19 | E | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **2.52** | 0.100 | **14.16** | 0.56 | | " | " | " | " | X |
| 64-17-5 | Ethanol | **50.2** | 0.500 | **94.65** | 0.94 | E | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 0.0720 | 0.100 | < 0.16 | 0.22 | U | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.0950 | 0.100 | < 0.38 | 0.40 | U | " | " | " | " | X |
| 75-09-2 | Methylene chloride | **1.21** | 0.100 | **4.20** | 0.35 | B | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | **0.110** | 0.100 | **0.84** | 0.77 | | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | < 0.159 | 0.500 | < 0.49 | 1.56 | U | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.0920 | 0.100 | < 0.36 | 0.40 | U | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.0702 | 0.100 | < 0.28 | 0.40 | U | " | " | " | " | X |
| 1634-04-4 | Methyl tert-butyl ether | < 0.0710 | 0.100 | < 0.26 | 0.36 | U | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | **6.08** | 0.500 | **14.92** | 1.23 | | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | **6.80** | 0.100 | **20.05** | 0.29 | | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | < 0.0990 | 0.100 | < 0.39 | 0.40 | U | " | " | " | " | X |
| 110-54-3 | Hexane | **0.460** | 0.500 | **1.62** | 1.76 | J | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | < 0.0920 | 0.100 | < 0.33 | 0.36 | U | " | " | " | " | |
| 67-66-3 | Chloroform | < 0.0850 | 0.100 | < 0.41 | 0.49 | U | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 0.0805 | 0.100 | < 0.24 | 0.29 | U | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.0560 | 0.100 | < 0.23 | 0.40 | U | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | **0.210** | 0.100 | **1.15** | 0.55 | | " | " | " | " | X |
| 71-43-2 | Benzene | **4.36** | 0.100 | **13.91** | 0.32 | | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | **0.120** | 0.100 | **0.75** | 0.63 | | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 0.0790 | 0.100 | < 0.27 | 0.34 | U | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 0.0950 | 0.100 | < 0.44 | 0.46 | U | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 0.0811 | 0.100 | < 0.54 | 0.67 | U | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 0.0930 | 0.100 | < 0.50 | 0.54 | U | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 0.279 | 0.500 | < 1.00 | 1.80 | U | " | " | " | " | X |
| 142-82-5 | n-Heptane | **2.39** | 0.100 | **9.79** | 0.41 | | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | **3.40** | 0.100 | **13.93** | 0.41 | | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.0680 | 0.100 | < 0.31 | 0.45 | U | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.0902 | 0.100 | < 0.41 | 0.45 | U | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.0690 | 0.100 | < 0.38 | 0.55 | U | " | " | " | " | X |
| 108-88-3 | Toluene | **1.23** | 0.100 | **4.63** | 0.38 | | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 0.0970 | 0.100 | < 0.40 | 0.41 | U | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.0730 | 0.100 | < 0.62 | 0.85 | U | " | " | " | " | X |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 0.0840 | 0.100 | < 0.65 | 0.77 | U | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 6 IA**<br>SC06447-11 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 15:25 | 21-Apr-15 |

**Air Quality Analyses**

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air Low Level | | ppbv | Prepared 27-Apr-15<br>Dilution: 1 | | | | Can pressure: -3<br>Can ID: 1681 | | | | |
| 127-18-4 | Tetrachloroethene | < 0.0808 | 0.100 | < 0.55 | 0.68 | U | EPA TO-15L | 28-Apr-15 | BRF | 1508066 | X |
| 108-90-7 | Chlorobenzene | < 0.0620 | 0.100 | < 0.29 | 0.46 | U | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 0.0840 | 0.100 | < 0.58 | 0.69 | U | " | " | " | " | |
| 100-41-4 | Ethylbenzene | **0.150** | 0.100 | **0.65** | 0.43 | | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | **0.370** | 0.200 | **1.60** | 0.87 | | " | " | " | " | X |
| 75-25-2 | Bromoform | < 0.0670 | 0.100 | < 0.69 | 1.03 | U | " | " | " | " | X |
| 100-42-5 | Styrene | **0.120** | 0.100 | **0.51** | 0.43 | | " | " | " | " | X |
| 95-47-6 | o-Xylene | **0.140** | 0.100 | **0.61** | 0.43 | | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 0.0290 | 0.100 | < 0.20 | 0.69 | U | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 0.0380 | 0.100 | < 0.19 | 0.49 | U | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 0.0810 | 0.100 | < 0.40 | 0.49 | U | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.0380 | 0.100 | < 0.19 | 0.49 | U | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | **0.140** | 0.100 | **0.69** | 0.49 | | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 0.0970 | 0.500 | < 0.51 | 2.62 | U | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.0805 | 0.100 | < 0.48 | 0.60 | U | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 0.0740 | 0.100 | < 0.38 | 0.52 | U | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.0550 | 0.100 | < 0.33 | 0.60 | U | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 0.0630 | 0.100 | < 0.35 | 0.55 | U | " | " | " | " | |
| 99-87-6 | 4-Isopropyltoluene | < 0.0650 | 0.100 | < 0.35 | 0.54 | U | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.0760 | 0.100 | < 0.46 | 0.60 | U | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 0.0840 | 0.100 | < 0.46 | 0.55 | U | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.0630 | 0.100 | < 0.47 | 0.74 | U | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.0670 | 0.100 | < 0.71 | 1.07 | U | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *93* | | *80-120 %* | | | " | " | " | " | |
| Re-analysis of Volatile Organics in Air Low Level | | | Dilution: 10 | | | GS1 | | | | | |
| 115-07-1 | Propene | < 0.960 | 1.00 | < 1.65 | 1.72 | U, D | EPA TO-15L | 30-Apr-15 | BRF | 1508169 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | < 0.990 | 1.00 | < 4.90 | 4.94 | U, D | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.610 | 1.00 | < 1.26 | 2.07 | U, D | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 0.960 | 1.00 | < 6.71 | 6.99 | U, D | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 0.960 | 1.00 | < 2.45 | 2.56 | U, D | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 0.520 | 1.00 | < 1.15 | 2.21 | U, D | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 0.650 | 1.00 | < 2.52 | 3.88 | U, D | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 0.840 | 1.00 | < 2.22 | 2.64 | U, D | " | " | " | " | X |
| 67-64-1 | Acetone | **84.3** | 5.00 | **200.32** | 11.88 | D | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **2.40** | 1.00 | **13.49** | 5.62 | D | " | " | " | " | X |
| 64-17-5 | Ethanol | **44.8** | 5.00 | **84.47** | 9.43 | D | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 0.720 | 1.00 | < 1.56 | 2.17 | U, D | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.950 | 1.00 | < 3.77 | 3.97 | U, D | " | " | " | " | X |
| 75-09-2 | Methylene chloride | < 0.860 | 1.00 | < 2.99 | 3.47 | U, D | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | < 0.860 | 1.00 | < 6.59 | 7.66 | U, D | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | < 1.59 | 5.00 | < 4.95 | 15.56 | U, D | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.920 | 1.00 | < 3.65 | 3.97 | U, D | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.702 | 1.00 | < 2.84 | 4.05 | U, D | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 6 IA** | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 15:25 | 21-Apr-15 |
| SC06447-11 | | | | |

**Air Quality Analyses**

Volatile Organics in Air Low Level — ppbv — Prepared 29-Apr-15 — Dilution: 10 — GS1 — Can pressure: -3

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1634-04-4 | Methyl tert-butyl ether | < 0.710 | 1.00 | < 2.56 | 3.61 | U, D | EPA TO-15L | 30-Apr-15 | BRF | 1508169 | X |
| 67-63-0 | Isopropyl alcohol | **4.00** | 5.00 | **9.82** | 12.27 | J, D | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | **5.70** | 1.00 | **16.81** | 2.95 | D | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | < 0.990 | 1.00 | < 3.93 | 3.97 | U, D | " | " | " | " | X |
| 110-54-3 | Hexane | < 1.25 | 5.00 | < 4.41 | 17.63 | U, D | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | < 0.920 | 1.00 | < 3.32 | 3.60 | U, D | " | " | " | " | |
| 67-66-3 | Chloroform | < 0.850 | 1.00 | < 4.14 | 4.87 | U, D | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 0.805 | 1.00 | < 2.37 | 2.95 | U, D | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.560 | 1.00 | < 2.27 | 4.05 | U, D | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | < 0.508 | 1.00 | < 2.77 | 5.46 | U, D | " | " | " | " | X |
| 71-43-2 | Benzene | **2.70** | 1.00 | **8.61** | 3.19 | D | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | < 0.504 | 1.00 | < 3.17 | 6.29 | U, D | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 0.790 | 1.00 | < 2.72 | 3.44 | U, D | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 0.950 | 1.00 | < 4.39 | 4.62 | U, D | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 0.811 | 1.00 | < 5.43 | 6.70 | U, D | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 0.930 | 1.00 | < 5.00 | 5.37 | U, D | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 2.79 | 5.00 | < 10.04 | 18.00 | U, D | " | " | " | " | X |
| 142-82-5 | n-Heptane | **1.90** | 1.00 | **7.79** | 4.10 | D | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | **3.10** | 1.00 | **12.70** | 4.10 | D | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.680 | 1.00 | < 3.09 | 4.54 | U, D | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.902 | 1.00 | < 4.09 | 4.54 | U, D | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.690 | 1.00 | < 3.76 | 5.46 | U, D | " | " | " | " | X |
| 108-88-3 | Toluene | **0.900** | 1.00 | **3.39** | 3.76 | J, D | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 0.970 | 1.00 | < 3.98 | 4.10 | U, D | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.730 | 1.00 | < 6.22 | 8.52 | U, D | " | " | " | " | X |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 0.840 | 1.00 | < 6.46 | 7.69 | U, D | " | " | " | " | |
| 127-18-4 | Tetrachloroethene | < 0.808 | 1.00 | < 5.48 | 6.78 | U, D | " | " | " | " | X |
| 108-90-7 | Chlorobenzene | < 0.620 | 1.00 | < 2.86 | 4.61 | U, D | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 0.840 | 1.00 | < 5.77 | 6.87 | U, D | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 0.860 | 1.00 | < 3.73 | 4.34 | U, D | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | < 1.83 | 2.00 | < 7.93 | 8.67 | U, D | " | " | " | " | X |
| 75-25-2 | Bromoform | < 0.670 | 1.00 | < 6.92 | 10.34 | U, D | " | " | " | " | X |
| 100-42-5 | Styrene | < 0.690 | 1.00 | < 2.93 | 4.25 | U, D | " | " | " | " | X |
| 95-47-6 | o-Xylene | < 0.920 | 1.00 | < 3.99 | 4.34 | U, D | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 0.290 | 1.00 | < 1.99 | 6.87 | U, D | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 0.380 | 1.00 | < 1.87 | 4.92 | U, D | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 0.810 | 1.00 | < 3.98 | 4.92 | U, D | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.380 | 1.00 | < 1.87 | 4.92 | U, D | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | < 0.840 | 1.00 | < 4.13 | 4.92 | U, D | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 0.970 | 5.00 | < 5.08 | 26.18 | U, D | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.805 | 1.00 | < 4.84 | 6.01 | U, D | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 0.740 | 1.00 | < 3.81 | 5.15 | U, D | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.550 | 1.00 | < 3.31 | 6.01 | U, D | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 0.630 | 1.00 | < 3.46 | 5.49 | U, D | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 6 IA**<br>SC06447-11 | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 15:25 | 21-Apr-15 |

| *CAS No.* | *Analyte(s)* | *Result/Units* | **RDL* | *Result ug/m³* | **RDL* | *Flag* | *Method Ref.* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air Low Level | | ppbv | Prepared 29-Apr-15<br>Dilution: 10 | | | GS1 | Can pressure: -3 | | | | |
| 99-87-6 | 4-Isopropyltoluene | < 0.650 | 1.00 | < 3.49 | 5.37 | U, D | EPA TO-15L | 30-Apr-15 | BRF | 1508169 | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.760 | 1.00 | < 4.57 | 6.01 | U, D | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 0.840 | 1.00 | < 4.61 | 5.49 | U, D | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.630 | 1.00 | < 4.68 | 7.42 | U, D | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.670 | 1.00 | < 7.14 | 10.66 | U, D | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *88* | | *80-120 %* | | | " | " | " | " | |
| Chlorinated SIM | | ppbv | Prepared 27-Apr-15<br>Dilution: 1 | | | | Can pressure: -3<br>Can ID: 1681 | | | | |
| 75-01-4 | Vinyl chloride | < 0.0181 | 0.0400 | < 0.05 | 0.10 | U | EPA TO-15 SIM | 28-Apr-15 | BRF | 1508066 | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.0247 | 0.0400 | < 0.10 | 0.16 | U | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.0237 | 0.0400 | < 0.10 | 0.16 | U | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | **0.120** | 0.0400 | **0.75** | 0.25 | | " | " | " | " | X |
| 79-01-6 | Trichloroethene | **0.0400** | 0.0400 | **0.21** | 0.21 | | " | " | " | " | X |
| 127-18-4 | Tetrachloroethene | **0.0400** | 0.0400 | **0.27** | 0.27 | | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *93* | | *80-120 %* | | | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 6 SS**<br>SC06447-12 | 4884S-13 | Soil Gas | 16-Apr-15 15:51 | 21-Apr-15 |

**Air Quality Analyses**

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air | | ppbv | Prepared 08-May-15<br>Dilution: 5 | | | GS1 | Can pressure: -11<br>Can ID: 4562 | | | | |
| 115-07-1 | Propene | < 2.04 | 2.50 | < 3.51 | 4.30 | U, D | EPA TO-15 | 09-May-15 | BRF | 1509016 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | < 2.28 | 2.50 | < 11.27 | 12.36 | U, D | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 1.53 | 2.50 | < 3.16 | 5.16 | U, D | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 2.46 | 2.50 | < 17.19 | 17.47 | U, D | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 1.92 | 2.50 | < 4.91 | 6.39 | U, D | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 1.58 | 2.50 | < 3.49 | 5.52 | U, D | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 1.66 | 2.50 | < 6.44 | 9.70 | U, D | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 2.14 | 2.50 | < 5.65 | 6.60 | U, D | " | " | " | " | X |
| 67-64-1 | Acetone | **61.4** | 2.50 | **145.90** | 5.94 | D | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | < 1.74 | 2.50 | < 9.78 | 14.05 | U, D | " | " | " | " | X |
| 64-17-5 | Ethanol | **321** | 2.50 | **605.24** | 4.71 | D, E | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 2.50 | 2.50 | < 5.42 | 5.42 | U, D | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 1.99 | 2.50 | < 7.89 | 9.92 | U, D | " | " | " | " | X |
| 75-09-2 | Methylene chloride | < 2.04 | 2.50 | < 7.08 | 8.68 | U, D | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | < 1.89 | 2.50 | < 14.49 | 19.16 | U, D | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | < 2.36 | 2.50 | < 7.35 | 7.78 | U, D | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 1.85 | 2.50 | < 7.34 | 9.91 | U, D | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 1.78 | 2.50 | < 7.21 | 10.12 | U, D | " | " | " | " | X |
| 1634-04-4 | Methyl tert-butyl ether | < 1.56 | 2.50 | < 5.63 | 9.02 | U, D | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | **4.75** | 2.50 | **11.66** | 6.13 | D | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | **3.85** | 2.50 | **11.35** | 7.37 | D | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | < 1.90 | 2.50 | < 7.53 | 9.91 | U, D | " | " | " | " | X |
| 110-54-3 | Hexane | **2.05** | 2.50 | **7.23** | 8.81 | J, D | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | < 2.20 | 2.50 | < 7.93 | 9.01 | U, D | " | " | " | " | |
| 67-66-3 | Chloroform | < 2.02 | 2.50 | < 9.83 | 12.17 | U, D | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 2.46 | 2.50 | < 7.25 | 7.37 | U, D | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 2.38 | 2.50 | < 9.64 | 10.12 | U, D | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | < 1.24 | 2.50 | < 6.77 | 13.64 | U, D | " | " | " | " | X |
| 71-43-2 | Benzene | < 1.99 | 2.50 | < 6.35 | 7.98 | U, D | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | < 1.74 | 2.50 | < 10.95 | 15.73 | U, D | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 2.12 | 2.50 | < 7.30 | 8.61 | U, D | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 2.45 | 2.50 | < 11.32 | 11.55 | U, D | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 1.56 | 2.50 | < 10.45 | 16.75 | U, D | " | " | " | " | X |
| 79-01-6 | Trichloroethene | **13.6** | 2.50 | **73.09** | 13.44 | D | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 2.22 | 2.50 | < 7.99 | 9.00 | U, D | " | " | " | " | X |
| 142-82-5 | n-Heptane | < 1.96 | 2.50 | < 8.03 | 10.25 | U, D | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | **6.15** | 2.50 | **25.20** | 10.25 | D | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 1.88 | 2.50 | < 8.53 | 11.35 | U, D | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 1.62 | 2.50 | < 7.35 | 11.35 | U, D | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 1.76 | 2.50 | < 9.60 | 13.64 | U, D | " | " | " | " | X |
| 108-88-3 | Toluene | **6.10** | 2.50 | **22.95** | 9.41 | D | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 2.28 | 2.50 | < 9.34 | 10.25 | U, D | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 1.92 | 2.50 | < 16.36 | 21.30 | U, D | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 6 SS**<br>SC06447-12 | 4884S-13 | Soil Gas | 16-Apr-15 15:51 | 21-Apr-15 |

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air | | ppbv | Prepared 08-May-15<br>Dilution: 5 | | | GS1 | Can pressure: -11<br>Can ID: 4562 | | | | |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 2.12 | 2.50 | < 16.29 | 19.21 | U, D | EPA TO-15 | 09-May-15 | BRF | 1509016 | |
| 127-18-4 | Tetrachloroethene | **11.4** | 2.50 | **77.31** | 16.95 | D | " | " | " | " | X |
| 108-90-7 | Chlorobenzene | < 2.15 | 2.50 | < 9.90 | 11.51 | U, D | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 2.06 | 2.50 | < 14.15 | 17.18 | U, D | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 2.26 | 2.50 | < 9.80 | 10.84 | U, D | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | **6.15** | 5.00 | **26.66** | 21.68 | D | " | " | " | " | X |
| 75-25-2 | Bromoform | < 1.56 | 2.50 | < 16.12 | 25.84 | U, D | " | " | " | " | X |
| 100-42-5 | Styrene | < 1.70 | 2.50 | < 7.23 | 10.63 | U, D | " | " | " | " | X |
| 95-47-6 | o-Xylene | < 2.00 | 2.50 | < 8.67 | 10.84 | U, D | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 1.94 | 2.50 | < 13.32 | 17.17 | U, D | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 1.88 | 2.50 | < 9.24 | 12.29 | U, D | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 1.69 | 2.50 | < 8.31 | 12.29 | U, D | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 1.44 | 2.50 | < 7.08 | 12.29 | U, D | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | < 1.95 | 2.50 | < 9.59 | 12.29 | U, D | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 1.83 | 2.50 | < 9.58 | 13.09 | U, D | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 1.64 | 2.50 | < 9.86 | 15.03 | U, D | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 2.24 | 2.50 | < 11.54 | 12.88 | U, D | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 1.68 | 2.50 | < 10.10 | 15.03 | U, D | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 1.68 | 2.50 | < 9.22 | 13.72 | U, D | " | " | " | " | |
| 99-87-6 | 4-Isopropyltoluene | < 2.04 | 2.50 | < 10.95 | 13.42 | U, D | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 1.50 | 2.50 | < 9.02 | 15.03 | U, D | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 1.86 | 2.50 | < 10.21 | 13.72 | U, D | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 1.36 | 2.50 | < 10.10 | 18.56 | U, D | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 1.42 | 2.50 | < 15.14 | 26.66 | U, D | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *98* | | *80-120 %* | | | " | " | " | " | |
| Re-analysis of Volatile Organics in Air | | | Dilution: 10 | | | GS1 | | | | | |
| 115-07-1 | Propene | < 4.09 | 5.00 | < 7.04 | 8.61 | U, D | EPA TO-15 | 10-May-15 | BRF | 1509087 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | < 4.57 | 5.00 | < 22.60 | 24.72 | U, D | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 3.06 | 5.00 | < 6.32 | 10.33 | U, D | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 4.92 | 5.00 | < 34.39 | 34.95 | U, D | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 3.85 | 5.00 | < 9.84 | 12.78 | U, D | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 3.15 | 5.00 | < 6.96 | 11.04 | U, D | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 3.31 | 5.00 | < 12.85 | 19.41 | U, D | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 4.27 | 5.00 | < 11.26 | 13.19 | U, D | " | " | " | " | X |
| 67-64-1 | Acetone | **69.6** | 5.00 | **165.39** | 11.88 | D | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | < 3.49 | 5.00 | < 19.61 | 28.10 | U, D | " | " | " | " | X |
| 64-17-5 | Ethanol | **350** | 5.00 | **659.92** | 9.43 | D | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 4.99 | 5.00 | < 10.82 | 10.84 | U, D | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 3.98 | 5.00 | < 15.79 | 19.84 | U, D | " | " | " | " | X |
| 75-09-2 | Methylene chloride | < 4.08 | 5.00 | < 14.17 | 17.36 | U, D | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | < 3.78 | 5.00 | < 28.97 | 38.32 | U, D | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 6 SS**<br>SC06447-12 | 4884S-13 | Soil Gas | 16-Apr-15 15:51 | 21-Apr-15 |

**Air Quality Analyses**

Volatile Organics in Air — ppbv — Prepared 10-May-15 — Dilution: 10 — GS1 — Can pressure: -11

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 75-15-0 | Carbon disulfide | < 4.73 | 5.00 | < 14.72 | 15.56 | U, D | EPA TO-15 | 10-May-15 | BRF | 1509087 | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 3.70 | 5.00 | < 14.67 | 19.83 | U, D | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 3.57 | 5.00 | < 14.46 | 20.25 | U, D | " | " | " | " | X |
| 1634-04-4 | Methyl tert-butyl ether | < 3.11 | 5.00 | < 11.22 | 18.04 | U, D | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | 6.90 | 5.00 | 16.93 | 12.27 | D | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | < 4.35 | 5.00 | < 12.83 | 14.74 | U, D | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | < 3.79 | 5.00 | < 15.03 | 19.83 | U, D | " | " | " | " | X |
| 110-54-3 | Hexane | < 3.02 | 5.00 | < 10.65 | 17.63 | U, D | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | < 4.41 | 5.00 | < 15.89 | 18.02 | U, D | " | " | " | " | |
| 67-66-3 | Chloroform | < 4.04 | 5.00 | < 19.66 | 24.34 | U, D | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 4.92 | 5.00 | < 14.51 | 14.74 | U, D | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 4.77 | 5.00 | < 19.31 | 20.25 | U, D | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | < 2.49 | 5.00 | < 13.59 | 27.28 | U, D | " | " | " | " | X |
| 71-43-2 | Benzene | < 3.98 | 5.00 | < 12.70 | 15.95 | U, D | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | < 3.48 | 5.00 | < 21.89 | 31.45 | U, D | " | " | " | " | X |
| 110-82-7 | Cyclohexane | < 4.25 | 5.00 | < 14.63 | 17.21 | U, D | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 4.90 | 5.00 | < 22.65 | 23.11 | U, D | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 3.11 | 5.00 | < 20.84 | 33.50 | U, D | " | " | " | " | X |
| 79-01-6 | Trichloroethene | 14.4 | 5.00 | 77.39 | 26.87 | D | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 4.43 | 5.00 | < 15.94 | 18.00 | U, D | " | " | " | " | X |
| 142-82-5 | n-Heptane | < 3.92 | 5.00 | < 16.06 | 20.49 | U, D | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | 6.20 | 5.00 | 25.41 | 20.49 | D | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 3.75 | 5.00 | < 17.02 | 22.70 | U, D | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 3.24 | 5.00 | < 14.71 | 22.70 | U, D | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 3.52 | 5.00 | < 19.21 | 27.28 | U, D | " | " | " | " | X |
| 108-88-3 | Toluene | 4.80 | 5.00 | 18.06 | 18.81 | J, D | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 4.56 | 5.00 | < 18.69 | 20.49 | U, D | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 3.84 | 5.00 | < 32.71 | 42.60 | U, D | " | " | " | " | X |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 4.23 | 5.00 | < 32.51 | 38.43 | U, D | " | " | " | " | |
| 127-18-4 | Tetrachloroethene | 12.7 | 5.00 | 86.12 | 33.91 | D | " | " | " | " | X |
| 108-90-7 | Chlorobenzene | < 4.30 | 5.00 | < 19.80 | 23.03 | U, D | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 4.12 | 5.00 | < 28.31 | 34.36 | U, D | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 4.51 | 5.00 | < 19.55 | 21.68 | U, D | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | < 8.07 | 10.0 | < 34.99 | 43.35 | U, D | " | " | " | " | X |
| 75-25-2 | Bromoform | < 3.11 | 5.00 | < 32.14 | 51.68 | U, D | " | " | " | " | X |
| 100-42-5 | Styrene | < 3.39 | 5.00 | < 14.42 | 21.27 | U, D | " | " | " | " | X |
| 95-47-6 | o-Xylene | < 4.01 | 5.00 | < 17.38 | 21.68 | U, D | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 3.87 | 5.00 | < 26.58 | 34.34 | U, D | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 3.77 | 5.00 | < 18.53 | 24.58 | U, D | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | < 3.38 | 5.00 | < 16.62 | 24.58 | U, D | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 2.88 | 5.00 | < 14.16 | 24.58 | U, D | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | < 3.90 | 5.00 | < 19.17 | 24.58 | U, D | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 3.66 | 5.00 | < 19.16 | 26.18 | U, D | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 3.27 | 5.00 | < 19.66 | 30.06 | U, D | " | " | " | " | X |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Area 6 SS** | 4884S-13 | Soil Gas | 16-Apr-15 15:51 | 21-Apr-15 |
| SC06447-12 | | | | |

| *CAS No.* | *Analyte(s)* | *Result/Units* | **RDL* | *Result ug/m³* | **RDL* | *Flag* | *Method Ref.* | *Analyzed* | *Analyst* | *Batch* | *Cert.* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air | | ppbv | Prepared 10-May-15<br>Dilution: 10 | | | GS1 | Can pressure: -11 | | | | |
| 100-44-7 | Benzyl chloride | < 4.48 | 5.00 | < 23.09 | 25.77 | U, D | EPA TO-15 | 10-May-15 | BRF | 1509087 | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 3.37 | 5.00 | < 20.26 | 30.06 | U, D | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 3.36 | 5.00 | < 18.44 | 27.44 | U, D | " | " | " | " | |
| 99-87-6 | 4-Isopropyltoluene | < 4.08 | 5.00 | < 21.89 | 26.83 | U, D | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 3.01 | 5.00 | < 18.10 | 30.06 | U, D | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 3.73 | 5.00 | < 20.47 | 27.44 | U, D | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 2.73 | 5.00 | < 20.27 | 37.12 | U, D | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 2.83 | 5.00 | < 30.18 | 53.31 | U, D | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *95* | | *80-120 %* | | | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Outdoor Background** | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:08 | 21-Apr-15 |
| SC06447-13 | | | | |

**Air Quality Analyses**

Volatile Organics in Air Low Level — ppbv — Prepared 27-Apr-15 — Dilution: 1 — Can pressure: -8 — Can ID: 17157

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 115-07-1 | Propene | < 0.0960 | 0.100 | < 0.17 | 0.17 | U | EPA TO-15L | 28-Apr-15 | BRF | 1508066 | |
| 75-71-8 | Dichlorodifluoromethane (Freon12) | **0.690** | 0.100 | **3.41** | 0.49 | | " | " | " | " | X |
| 74-87-3 | Chloromethane | < 0.0610 | 0.100 | < 0.13 | 0.21 | U | " | " | " | " | X |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane (Freon 114) | < 0.0960 | 0.100 | < 0.67 | 0.70 | U | " | " | " | " | X |
| 75-01-4 | Vinyl chloride | < 0.0960 | 0.100 | < 0.25 | 0.26 | U | " | " | " | " | X |
| 106-99-0 | 1,3-Butadiene | < 0.0520 | 0.100 | < 0.11 | 0.22 | U | " | " | " | " | X |
| 74-83-9 | Bromomethane | < 0.0650 | 0.100 | < 0.25 | 0.39 | U | " | " | " | " | X |
| 75-00-3 | Chloroethane | < 0.0840 | 0.100 | < 0.22 | 0.26 | U | " | " | " | " | X |
| 67-64-1 | Acetone | **12.3** | 0.500 | **29.23** | 1.19 | | " | " | " | " | X |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | **0.430** | 0.100 | **2.42** | 0.56 | | " | " | " | " | X |
| 64-17-5 | Ethanol | **13.5** | 0.500 | **25.45** | 0.94 | | " | " | " | " | |
| 107-13-1 | Acrylonitrile | < 0.0720 | 0.100 | < 0.16 | 0.22 | U | " | " | " | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.0950 | 0.100 | < 0.38 | 0.40 | U | " | " | " | " | X |
| 75-09-2 | Methylene chloride | **4.18** | 0.100 | **14.51** | 0.35 | B | " | " | " | " | X |
| 76-13-1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | **0.0900** | 0.100 | **0.69** | 0.77 | J | " | " | " | " | X |
| 75-15-0 | Carbon disulfide | < 0.159 | 0.500 | < 0.49 | 1.56 | U | " | " | " | " | X |
| 156-60-5 | trans-1,2-Dichloroethene | < 0.0920 | 0.100 | < 0.36 | 0.40 | U | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.0702 | 0.100 | < 0.28 | 0.40 | U | " | " | " | " | X |
| 1634-04-4 | Methyl tert-butyl ether | < 0.0710 | 0.100 | < 0.26 | 0.36 | U | " | " | " | " | X |
| 67-63-0 | Isopropyl alcohol | **11.8** | 0.500 | **28.96** | 1.23 | | " | " | " | " | X |
| 78-93-3 | 2-Butanone (MEK) | **0.830** | 0.100 | **2.45** | 0.29 | | " | " | " | " | X |
| 156-59-2 | cis-1,2-Dichloroethene | < 0.0990 | 0.100 | < 0.39 | 0.40 | U | " | " | " | " | X |
| 110-54-3 | Hexane | **0.830** | 0.500 | **2.93** | 1.76 | | " | " | " | " | X |
| 141-78-6 | Ethyl acetate | < 0.0920 | 0.100 | < 0.33 | 0.36 | U | " | " | " | " | |
| 67-66-3 | Chloroform | < 0.0850 | 0.100 | < 0.41 | 0.49 | U | " | " | " | " | X |
| 109-99-9 | Tetrahydrofuran | < 0.0805 | 0.100 | < 0.24 | 0.29 | U | " | " | " | " | |
| 107-06-2 | 1,2-Dichloroethane | < 0.0560 | 0.100 | < 0.23 | 0.40 | U | " | " | " | " | X |
| 71-55-6 | 1,1,1-Trichloroethane | **0.240** | 0.100 | **1.31** | 0.55 | | " | " | " | " | X |
| 71-43-2 | Benzene | **0.250** | 0.100 | **0.80** | 0.32 | | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | **0.110** | 0.100 | **0.69** | 0.63 | | " | " | " | " | X |
| 110-82-7 | Cyclohexane | **0.240** | 0.100 | **0.83** | 0.34 | | " | " | " | " | X |
| 78-87-5 | 1,2-Dichloropropane | < 0.0950 | 0.100 | < 0.44 | 0.46 | U | " | " | " | " | X |
| 75-27-4 | Bromodichloromethane | < 0.0811 | 0.100 | < 0.54 | 0.67 | U | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 0.0930 | 0.100 | < 0.50 | 0.54 | U | " | " | " | " | X |
| 123-91-1 | 1,4-Dioxane | < 0.279 | 0.500 | < 1.00 | 1.80 | U | " | " | " | " | X |
| 142-82-5 | n-Heptane | **0.180** | 0.100 | **0.74** | 0.41 | | " | " | " | " | X |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | **0.120** | 0.100 | **0.49** | 0.41 | | " | " | " | " | X |
| 10061-01-5 | cis-1,3-Dichloropropene | < 0.0680 | 0.100 | < 0.31 | 0.45 | U | " | " | " | " | X |
| 10061-02-6 | trans-1,3-Dichloropropene | < 0.0902 | 0.100 | < 0.41 | 0.45 | U | " | " | " | " | X |
| 79-00-5 | 1,1,2-Trichloroethane | < 0.0690 | 0.100 | < 0.38 | 0.55 | U | " | " | " | " | X |
| 108-88-3 | Toluene | **1.06** | 0.100 | **3.99** | 0.38 | | " | " | " | " | X |
| 591-78-6 | 2-Hexanone (MBK) | < 0.0970 | 0.100 | < 0.40 | 0.41 | U | " | " | " | " | |
| 124-48-1 | Dibromochloromethane | < 0.0730 | 0.100 | < 0.62 | 0.85 | U | " | " | " | " | X |
| 106-93-4 | 1,2-Dibromoethane (EDB) | < 0.0840 | 0.100 | < 0.65 | 0.77 | U | " | " | " | " | |

| Sample Identification | Client Project # | Matrix | Collection Date/Time | Received |
|---|---|---|---|---|
| **Outdoor Background** | 4884S-13 | Indoor/Ambient Air | 16-Apr-15 16:08 | 21-Apr-15 |
| SC06447-13 | | | | |

| CAS No. | Analyte(s) | Result/Units | *RDL | Result ug/m³ | *RDL | Flag | Method Ref. | Analyzed | Analyst | Batch | Cert. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Air Quality Analyses** | | | | | | | | | | | |
| Volatile Organics in Air Low Level | | ppbv | Prepared 27-Apr-15<br>Dilution: 1 | | | | | Can pressure: -8<br>Can ID: 17157 | | | |
| 127-18-4 | Tetrachloroethene | **0.130** | 0.100 | **0.88** | 0.68 | | EPA TO-15L | 28-Apr-15 | BRF | 1508066 | X |
| 108-90-7 | Chlorobenzene | < 0.0620 | 0.100 | < 0.29 | 0.46 | U | " | " | " | " | X |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | < 0.0840 | 0.100 | < 0.58 | 0.69 | U | " | " | " | " | |
| 100-41-4 | Ethylbenzene | < 0.0860 | 0.100 | < 0.37 | 0.43 | U | " | " | " | " | X |
| 179601-23-1 | m,p-Xylene | **0.230** | 0.200 | **1.00** | 0.87 | | " | " | " | " | X |
| 75-25-2 | Bromoform | < 0.0670 | 0.100 | < 0.69 | 1.03 | U | " | " | " | " | X |
| 100-42-5 | Styrene | < 0.0690 | 0.100 | < 0.29 | 0.43 | U | " | " | " | " | X |
| 95-47-6 | o-Xylene | < 0.0920 | 0.100 | < 0.40 | 0.43 | U | " | " | " | " | X |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | < 0.0290 | 0.100 | < 0.20 | 0.69 | U | " | " | " | " | X |
| 98-82-8 | Isopropylbenzene | < 0.0380 | 0.100 | < 0.19 | 0.49 | U | " | " | " | " | X |
| 108-67-8 | 1,3,5-Trimethylbenzene | **0.150** | 0.100 | **0.74** | 0.49 | | " | " | " | " | X |
| 622-96-8 | 4-Ethyltoluene | < 0.0380 | 0.100 | < 0.19 | 0.49 | U | " | " | " | " | |
| 95-63-6 | 1,2,4-Trimethylbenzene | **0.340** | 0.100 | **1.67** | 0.49 | | " | " | " | " | X |
| 91-20-3 | Naphthalene | < 0.0970 | 0.500 | < 0.51 | 2.62 | U | " | " | " | " | X |
| 541-73-1 | 1,3-Dichlorobenzene | < 0.0805 | 0.100 | < 0.48 | 0.60 | U | " | " | " | " | X |
| 100-44-7 | Benzyl chloride | < 0.0740 | 0.100 | < 0.38 | 0.52 | U | " | " | " | " | X |
| 106-46-7 | 1,4-Dichlorobenzene | < 0.0550 | 0.100 | < 0.33 | 0.60 | U | " | " | " | " | X |
| 135-98-8 | sec-Butylbenzene | < 0.0630 | 0.100 | < 0.35 | 0.55 | U | " | " | " | " | |
| 99-87-6 | 4-Isopropyltoluene | < 0.0650 | 0.100 | < 0.35 | 0.54 | U | " | " | " | " | |
| 95-50-1 | 1,2-Dichlorobenzene | < 0.0760 | 0.100 | < 0.46 | 0.60 | U | " | " | " | " | X |
| 104-51-8 | n-Butylbenzene | < 0.0840 | 0.100 | < 0.46 | 0.55 | U | " | " | " | " | |
| 120-82-1 | 1,2,4-Trichlorobenzene | < 0.0630 | 0.100 | < 0.47 | 0.74 | U | " | " | " | " | X |
| 87-68-3 | Hexachlorobutadiene | < 0.0670 | 0.100 | < 0.71 | 1.07 | U | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *92* | | *80-120 %* | | | " | " | " | " | |
| Chlorinated SIM | | ppbv | Prepared 27-Apr-15<br>Dilution: 1 | | | | | Can pressure: -8<br>Can ID: 17157 | | | |
| 75-01-4 | Vinyl chloride | < 0.0181 | 0.0400 | < 0.05 | 0.10 | U | EPA TO-15 SIM | " | BRF | " | X |
| 75-35-4 | 1,1-Dichloroethene | < 0.0247 | 0.0400 | < 0.10 | 0.16 | U | " | " | " | " | X |
| 75-34-3 | 1,1-Dichloroethane | < 0.0237 | 0.0400 | < 0.10 | 0.16 | U | " | " | " | " | X |
| 56-23-5 | Carbon tetrachloride | **0.120** | 0.0400 | **0.75** | 0.25 | | " | " | " | " | X |
| 79-01-6 | Trichloroethene | < 0.0118 | 0.0400 | < 0.06 | 0.21 | U | " | " | " | " | X |
| 127-18-4 | Tetrachloroethene | **0.130** | 0.0400 | **0.88** | 0.27 | | " | " | " | " | X |
| *Surrogate recoveries:* | | | | | | | | | | | |
| *460-00-4* | *4-Bromofluorobenzene* | *92* | | *80-120 %* | | | " | " | " | " | |

# Certificate of Analysis

**Container Type:** Summa canister 6 liter **Date of Analysis:** 4/8/2015

**Canister ID:** 0252 **Analyst's Initials:** EK

**The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.**

| *Analyte* | *Quantitation Limit (ppbv)* | *Analyte* | *Quantitation Limit (ppbv)* |
|---|---|---|---|
| Acetone | <0.5 | Ethanol | <0.5 |
| Acrylonitrile | <0.1 | 4-Isopropyl Toluene | <0.5 |
| Benzene | <0.1 | Ethyl acetate | <0.1 |
| Benzyl chloride | <0.1 | Ethylbenzene | <0.1 |
| Bromodichloromethane | <0.1 | 4-Ethyltoluene | <0.1 |
| Bromoform | <0.1 | n-Heptane | <0.1 |
| Bromomethane | <0.1 | Hexachlorobutadiene | <0.1 |
| 1,3-Butadiene | <0.1 | Hexane | <0.1 |
| 2-Butanone (MEK) | <0.1 | 2-Hexanone (MBK) | <0.1 |
| Carbon disulfide | <0.5 | Isopropyl alcohol | <0.5 |
| Carbon tetrachloride | <0.1 | 4-Methyl-2-pentanone (MIBK) | <0.1 |
| Chlorobenzene | <0.1 | Methyl tert-butyl ether | <0.1 |
| Chloroethane | <0.1 | Methylene chloride | <0.1 |
| 1,4-Dioxane | <0.1 | Naphthalene | <0.5 |
| n-Butylbenzene | <0.1 | 1,1,1,2-Tetrachlorethane | <0.1 |
| Chloroform | <0.1 | Propene | <0.1 |
| Chloromethane | <0.1 | Styrene | <0.1 |
| Cyclohexane | <0.1 | 1,1,2,2-Tetrachloroethane | <0.1 |
| Dibromochloromethane | <0.1 | Tetrachloroethene | <0.1 |
| 1,2-Dibromoethane (EDB) | <0.1 | Tetrahydrofuran | <0.1 |
| 1,2-Dichlorobenzene | <0.1 | Toluene | <0.1 |
| 1,3-Dichlorobenzene | <0.1 | 1,2,4-Trichlorobenzene | <0.1 |
| 1,4-Dichlorobenzene | <0.1 | 1,1,1-Trichloroethane | <0.1 |
| Dichlorodifluoromethane (Freon12) | <0.1 | 1,1,2-Trichloroethane | <0.1 |
| 1,1-Dichloroethane | <0.1 | Trichloroethene | <0.1 |
| 1,2-Dichloroethane | <0.1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | <0.1 |
| 1,1-Dichloroethene | <0.1 | Trichlorofluoromethane (Freon 11) | <0.1 |
| cis-1,2-Dichloroethene | <0.1 | 1,2,4-Trimethylbenzene | <0.1 |
| trans-1,2-Dichloroethene | <0.1 | 1,3,5-Trimethylbenzene | <0.1 |
| 1,2-Dichloropropane | <0.1 | Vinyl chloride | <0.1 |
| cis-1,3-Dichloropropene | <0.1 | m,p-Xylene | <0.1 |
| trans-1,3-Dichloropropene | <0.1 | o-Xylene | <0.1 |
| 1,2-Dichlorotetrafluoroethane (Freon 114) | <0.1 | sec-Butylbenzene | <0.1 |
| Isopropylbenzene | <0.1 | | |

**This certification applies to the following sampling devices:**

0252

# Certificate of Analysis

**Container Type:** Summa canister 6 liter **Date of Analysis:** 4/7/2015

**Canister ID:** 0254 **Analyst's Initials:** NAA

**The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.**

| *Analyte* | *Quantitation Limit (ppbv)* | *Analyte* | *Quantitation Limit (ppbv)* |
|---|---|---|---|
| Acetone | <0.2 | Ethanol | <0.2 |
| Acrylonitrile | <0.2 | 4-Isopropyl Toluene | <0.2 |
| Benzene | <0.2 | Ethyl acetate | <0.2 |
| Benzyl chloride | <0.2 | Ethylbenzene | <0.2 |
| Bromodichloromethane | <0.2 | 4-Ethyltoluene | <0.2 |
| Bromoform | <0.2 | n-Heptane | <0.2 |
| Bromomethane | <0.2 | Hexachlorobutadiene | <0.2 |
| 1,3-Butadiene | <0.2 | Hexane | <0.2 |
| 2-Butanone (MEK) | <0.2 | 2-Hexanone (MBK) | <0.2 |
| Carbon disulfide | <0.2 | Isopropyl alcohol | <0.2 |
| Carbon tetrachloride | <0.2 | 4-Methyl-2-pentanone (MIBK) | <0.2 |
| Chlorobenzene | <0.2 | Methyl tert-butyl ether | <0.2 |
| Chloroethane | <0.2 | Methylene chloride | <0.2 |
| 1,4-Dioxane | <0.2 | Naphthalene | <0.2 |
| n-Butylbenzene | <0.2 | 1,1,1,2-Tetrachlorethane | <0.2 |
| Chloroform | <0.2 | Propene | <0.2 |
| Chloromethane | <0.2 | Styrene | <0.2 |
| Cyclohexane | <0.2 | 1,1,2,2-Tetrachloroethane | <0.2 |
| Dibromochloromethane | <0.2 | Tetrachloroethene | <0.2 |
| 1,2-Dibromoethane (EDB) | <0.2 | Tetrahydrofuran | <0.2 |
| 1,2-Dichlorobenzene | <0.2 | Toluene | <0.2 |
| 1,3-Dichlorobenzene | <0.2 | 1,2,4-Trichlorobenzene | <0.2 |
| 1,4-Dichlorobenzene | <0.2 | 1,1,1-Trichloroethane | <0.2 |
| Dichlorodifluoromethane (Freon12) | <0.2 | 1,1,2-Trichloroethane | <0.2 |
| 1,1-Dichloroethane | <0.2 | Trichloroethene | <0.2 |
| 1,2-Dichloroethane | <0.2 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | <0.2 |
| 1,1-Dichloroethene | <0.2 | Trichlorofluoromethane (Freon 11) | <0.2 |
| cis-1,2-Dichloroethene | <0.2 | 1,2,4-Trimethylbenzene | <0.2 |
| trans-1,2-Dichloroethene | <0.2 | 1,3,5-Trimethylbenzene | <0.2 |
| 1,2-Dichloropropane | <0.2 | Vinyl chloride | <0.2 |
| cis-1,3-Dichloropropene | <0.2 | m,p-Xylene | <0.2 |
| trans-1,3-Dichloropropene | <0.2 | o-Xylene | <0.2 |
| 1,2-Dichlorotetrafluoroethane (Freon 114) | <0.2 | sec-Butylbenzene | <0.2 |
| Isopropylbenzene | <0.2 | | |

**This certification applies to the following sampling devices:**

0254

# Certificate of Analysis

**Container Type:** Summa canister 6 liter **Date of Analysis:** 3/18/2015

**Canister ID:** 0255 **Analyst's Initials:** BRF

**The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.**

| *Analyte* | *Quantitation Limit (ppbv)* | *Analyte* | *Quantitation Limit (ppbv)* |
|---|---|---|---|
| Acetone | <0.2 | Ethanol | <0.2 |
| Acrylonitrile | <0.2 | 4-Isopropyl Toluene | <0.2 |
| Benzene | <0.2 | Ethyl acetate | <0.2 |
| Benzyl chloride | <0.2 | Ethylbenzene | <0.2 |
| Bromodichloromethane | <0.2 | 4-Ethyltoluene | <0.2 |
| Bromoform | <0.2 | n-Heptane | <0.2 |
| Bromomethane | <0.2 | Hexachlorobutadiene | <0.2 |
| 1,3-Butadiene | <0.2 | Hexane | <0.2 |
| 2-Butanone (MEK) | <0.2 | 2-Hexanone (MBK) | <0.2 |
| Carbon disulfide | <0.2 | Isopropyl alcohol | <0.2 |
| Carbon tetrachloride | <0.2 | 4-Methyl-2-pentanone (MIBK) | <0.2 |
| Chlorobenzene | <0.2 | Methyl tert-butyl ether | <0.2 |
| Chloroethane | <0.2 | Methylene chloride | <0.2 |
| 1,4-Dioxane | <0.2 | Naphthalene | <0.2 |
| n-Butylbenzene | <0.2 | 1,1,1,2-Tetrachlorethane | <0.2 |
| Chloroform | <0.2 | Propene | <0.2 |
| Chloromethane | <0.2 | Styrene | <0.2 |
| Cyclohexane | <0.2 | 1,1,2,2-Tetrachloroethane | <0.2 |
| Dibromochloromethane | <0.2 | Tetrachloroethene | <0.2 |
| 1,2-Dibromoethane (EDB) | <0.2 | Tetrahydrofuran | <0.2 |
| 1,2-Dichlorobenzene | <0.2 | Toluene | <0.2 |
| 1,3-Dichlorobenzene | <0.2 | 1,2,4-Trichlorobenzene | <0.2 |
| 1,4-Dichlorobenzene | <0.2 | 1,1,1-Trichloroethane | <0.2 |
| Dichlorodifluoromethane (Freon12) | <0.2 | 1,1,2-Trichloroethane | <0.2 |
| 1,1-Dichloroethane | <0.2 | Trichloroethene | <0.2 |
| 1,2-Dichloroethane | <0.2 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | <0.2 |
| 1,1-Dichloroethene | <0.2 | Trichlorofluoromethane (Freon 11) | <0.2 |
| cis-1,2-Dichloroethene | <0.2 | 1,2,4-Trimethylbenzene | <0.2 |
| trans-1,2-Dichloroethene | <0.2 | 1,3,5-Trimethylbenzene | <0.2 |
| 1,2-Dichloropropane | <0.2 | Vinyl chloride | <0.2 |
| cis-1,3-Dichloropropene | <0.2 | m,p-Xylene | <0.2 |
| trans-1,3-Dichloropropene | <0.2 | o-Xylene | <0.2 |
| 1,2-Dichlorotetrafluoroethane (Freon 114) | <0.2 | sec-Butylbenzene | <0.2 |
| Isopropylbenzene | <0.2 | | |

**This certification applies to the following sampling devices:**

0251

0262

1399

# Certificate of Analysis

**Container Type:** Summa canister 6 liter **Date of Analysis:** 4/7/2015

**Canister ID:** 0265 **Analyst's Initials:** EK

**The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.**

| *Analyte* | *Quantitation Limit (ppbv)* | *Analyte* | *Quantitation Limit (ppbv)* |
|---|---|---|---|
| Acetone | <0.5 | Ethanol | <0.5 |
| Acrylonitrile | <0.1 | 4-Isopropyl Toluene | <0.5 |
| Benzene | <0.1 | Ethyl acetate | <0.1 |
| Benzyl chloride | <0.1 | Ethylbenzene | <0.1 |
| Bromodichloromethane | <0.1 | 4-Ethyltoluene | <0.1 |
| Bromoform | <0.1 | n-Heptane | <0.1 |
| Bromomethane | <0.1 | Hexachlorobutadiene | <0.1 |
| 1,3-Butadiene | <0.1 | Hexane | <0.1 |
| 2-Butanone (MEK) | <0.1 | 2-Hexanone (MBK) | <0.1 |
| Carbon disulfide | <0.5 | Isopropyl alcohol | <0.5 |
| Carbon tetrachloride | <0.1 | 4-Methyl-2-pentanone (MIBK) | <0.1 |
| Chlorobenzene | <0.1 | Methyl tert-butyl ether | <0.1 |
| Chloroethane | <0.1 | Methylene chloride | <0.1 |
| 1,4-Dioxane | <0.1 | Naphthalene | <0.5 |
| n-Butylbenzene | <0.1 | 1,1,1,2-Tetrachlorethane | <0.1 |
| Chloroform | <0.1 | Propene | <0.1 |
| Chloromethane | <0.1 | Styrene | <0.1 |
| Cyclohexane | <0.1 | 1,1,2,2-Tetrachloroethane | <0.1 |
| Dibromochloromethane | <0.1 | Tetrachloroethene | <0.1 |
| 1,2-Dibromoethane (EDB) | <0.1 | Tetrahydrofuran | <0.1 |
| 1,2-Dichlorobenzene | <0.1 | Toluene | <0.1 |
| 1,3-Dichlorobenzene | <0.1 | 1,2,4-Trichlorobenzene | <0.1 |
| 1,4-Dichlorobenzene | <0.1 | 1,1,1-Trichloroethane | <0.1 |
| Dichlorodifluoromethane (Freon12) | <0.1 | 1,1,2-Trichloroethane | <0.1 |
| 1,1-Dichloroethane | <0.1 | Trichloroethene | <0.1 |
| 1,2-Dichloroethane | <0.1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | <0.1 |
| 1,1-Dichloroethene | <0.1 | Trichlorofluoromethane (Freon 11) | <0.1 |
| cis-1,2-Dichloroethene | <0.1 | 1,2,4-Trimethylbenzene | <0.1 |
| trans-1,2-Dichloroethene | <0.1 | 1,3,5-Trimethylbenzene | <0.1 |
| 1,2-Dichloropropane | <0.1 | Vinyl chloride | <0.1 |
| cis-1,3-Dichloropropene | <0.1 | m,p-Xylene | <0.1 |
| trans-1,3-Dichloropropene | <0.1 | o-Xylene | <0.1 |
| 1,2-Dichlorotetrafluoroethane (Freon 114) | <0.1 | sec-Butylbenzene | <0.1 |
| Isopropylbenzene | <0.1 | | |

**This certification applies to the following sampling devices:**

0265

# Certificate of Analysis

**Container Type:** Summa canister 6 liter **Date of Analysis:** 4/7/2015

**Canister ID:** 0271 **Analyst's Initials:** NAA

**The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.**

| *Analyte* | *Quantitation Limit (ppbv)* | *Analyte* | *Quantitation Limit (ppbv)* |
|---|---|---|---|
| Acetone | <0.5 | Ethanol | <0.5 |
| Acrylonitrile | <0.1 | 4-Isopropyl Toluene | <0.5 |
| Benzene | <0.1 | Ethyl acetate | <0.1 |
| Benzyl chloride | <0.1 | Ethylbenzene | <0.1 |
| Bromodichloromethane | <0.1 | 4-Ethyltoluene | <0.1 |
| Bromoform | <0.1 | n-Heptane | <0.1 |
| Bromomethane | <0.1 | Hexachlorobutadiene | <0.1 |
| 1,3-Butadiene | <0.1 | Hexane | <0.1 |
| 2-Butanone (MEK) | <0.1 | 2-Hexanone (MBK) | <0.1 |
| Carbon disulfide | <0.5 | Isopropyl alcohol | <0.5 |
| Carbon tetrachloride | <0.1 | 4-Methyl-2-pentanone (MIBK) | <0.1 |
| Chlorobenzene | <0.1 | Methyl tert-butyl ether | <0.1 |
| Chloroethane | <0.1 | Methylene chloride | <0.1 |
| 1,4-Dioxane | <0.1 | Naphthalene | <0.5 |
| n-Butylbenzene | <0.1 | 1,1,1,2-Tetrachlorethane | <0.1 |
| Chloroform | <0.1 | Propene | <0.1 |
| Chloromethane | <0.1 | Styrene | <0.1 |
| Cyclohexane | <0.1 | 1,1,2,2-Tetrachloroethane | <0.1 |
| Dibromochloromethane | <0.1 | Tetrachloroethene | <0.1 |
| 1,2-Dibromoethane (EDB) | <0.1 | Tetrahydrofuran | <0.1 |
| 1,2-Dichlorobenzene | <0.1 | Toluene | <0.1 |
| 1,3-Dichlorobenzene | <0.1 | 1,2,4-Trichlorobenzene | <0.1 |
| 1,4-Dichlorobenzene | <0.1 | 1,1,1-Trichloroethane | <0.1 |
| Dichlorodifluoromethane (Freon12) | <0.1 | 1,1,2-Trichloroethane | <0.1 |
| 1,1-Dichloroethane | <0.1 | Trichloroethene | <0.1 |
| 1,2-Dichloroethane | <0.1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | <0.1 |
| 1,1-Dichloroethene | <0.1 | Trichlorofluoromethane (Freon 11) | <0.1 |
| cis-1,2-Dichloroethene | <0.1 | 1,2,4-Trimethylbenzene | <0.1 |
| trans-1,2-Dichloroethene | <0.1 | 1,3,5-Trimethylbenzene | <0.1 |
| 1,2-Dichloropropane | <0.1 | Vinyl chloride | <0.1 |
| cis-1,3-Dichloropropene | <0.1 | m,p-Xylene | <0.1 |
| trans-1,3-Dichloropropene | <0.1 | o-Xylene | <0.1 |
| 1,2-Dichlorotetrafluoroethane (Freon 114) | <0.1 | sec-Butylbenzene | <0.1 |
| Isopropylbenzene | <0.1 | | |

**This certification applies to the following sampling devices:**

0271

# Certificate of Analysis

**Container Type:** Summa canister 6 liter **Date of Analysis:** 4/8/2015

**Canister ID:** 0647 **Analyst's Initials:** EK

**The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.**

| *Analyte* | *Quantitation Limit (ppbv)* | *Analyte* | *Quantitation Limit (ppbv)* |
|---|---|---|---|
| Acetone | <0.5 | Ethanol | <0.5 |
| Acrylonitrile | <0.1 | 4-Isopropyl Toluene | <0.5 |
| Benzene | <0.1 | Ethyl acetate | <0.1 |
| Benzyl chloride | <0.1 | Ethylbenzene | <0.1 |
| Bromodichloromethane | <0.1 | 4-Ethyltoluene | <0.1 |
| Bromoform | <0.1 | n-Heptane | <0.1 |
| Bromomethane | <0.1 | Hexachlorobutadiene | <0.1 |
| 1,3-Butadiene | <0.1 | Hexane | <0.1 |
| 2-Butanone (MEK) | <0.1 | 2-Hexanone (MBK) | <0.1 |
| Carbon disulfide | <0.5 | Isopropyl alcohol | <0.5 |
| Carbon tetrachloride | <0.1 | 4-Methyl-2-pentanone (MIBK) | <0.1 |
| Chlorobenzene | <0.1 | Methyl tert-butyl ether | <0.1 |
| Chloroethane | <0.1 | Methylene chloride | <0.1 |
| 1,4-Dioxane | <0.1 | Naphthalene | <0.5 |
| n-Butylbenzene | <0.1 | 1,1,1,2-Tetrachlorethane | <0.1 |
| Chloroform | <0.1 | Propene | <0.1 |
| Chloromethane | <0.1 | Styrene | <0.1 |
| Cyclohexane | <0.1 | 1,1,2,2-Tetrachloroethane | <0.1 |
| Dibromochloromethane | <0.1 | Tetrachloroethene | <0.1 |
| 1,2-Dibromoethane (EDB) | <0.1 | Tetrahydrofuran | <0.1 |
| 1,2-Dichlorobenzene | <0.1 | Toluene | <0.1 |
| 1,3-Dichlorobenzene | <0.1 | 1,2,4-Trichlorobenzene | <0.1 |
| 1,4-Dichlorobenzene | <0.1 | 1,1,1-Trichloroethane | <0.1 |
| Dichlorodifluoromethane (Freon12) | <0.1 | 1,1,2-Trichloroethane | <0.1 |
| 1,1-Dichloroethane | <0.1 | Trichloroethene | <0.1 |
| 1,2-Dichloroethane | <0.1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | <0.1 |
| 1,1-Dichloroethene | <0.1 | Trichlorofluoromethane (Freon 11) | <0.1 |
| cis-1,2-Dichloroethene | <0.1 | 1,2,4-Trimethylbenzene | <0.1 |
| trans-1,2-Dichloroethene | <0.1 | 1,3,5-Trimethylbenzene | <0.1 |
| 1,2-Dichloropropane | <0.1 | Vinyl chloride | <0.1 |
| cis-1,3-Dichloropropene | <0.1 | m,p-Xylene | <0.1 |
| trans-1,3-Dichloropropene | <0.1 | o-Xylene | <0.1 |
| 1,2-Dichlorotetrafluoroethane (Freon 114) | <0.1 | sec-Butylbenzene | <0.1 |
| Isopropylbenzene | <0.1 | | |

**This certification applies to the following sampling devices:**

0647

# Certificate of Analysis

**Container Type:** Summa canister 6 liter **Date of Analysis:** 4/8/2015

**Canister ID:** 0702 **Analyst's Initials:** NAA

**The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.**

| *Analyte* | *Quantitation Limit (ppbv)* | *Analyte* | *Quantitation Limit (ppbv)* |
|---|---|---|---|
| Acetone | <0.5 | Ethanol | <0.5 |
| Acrylonitrile | <0.1 | 4-Isopropyl Toluene | <0.5 |
| Benzene | <0.1 | Ethyl acetate | <0.1 |
| Benzyl chloride | <0.1 | Ethylbenzene | <0.1 |
| Bromodichloromethane | <0.1 | 4-Ethyltoluene | <0.1 |
| Bromoform | <0.1 | n-Heptane | <0.1 |
| Bromomethane | <0.1 | Hexachlorobutadiene | <0.1 |
| 1,3-Butadiene | <0.1 | Hexane | <0.1 |
| 2-Butanone (MEK) | <0.1 | 2-Hexanone (MBK) | <0.1 |
| Carbon disulfide | <0.5 | Isopropyl alcohol | <0.5 |
| Carbon tetrachloride | <0.1 | 4-Methyl-2-pentanone (MIBK) | <0.1 |
| Chlorobenzene | <0.1 | Methyl tert-butyl ether | <0.1 |
| Chloroethane | <0.1 | Methylene chloride | <0.1 |
| 1,4-Dioxane | <0.1 | Naphthalene | <0.5 |
| n-Butylbenzene | <0.1 | 1,1,1,2-Tetrachlorethane | <0.1 |
| Chloroform | <0.1 | Propene | <0.1 |
| Chloromethane | <0.1 | Styrene | <0.1 |
| Cyclohexane | <0.1 | 1,1,2,2-Tetrachloroethane | <0.1 |
| Dibromochloromethane | <0.1 | Tetrachloroethene | <0.1 |
| 1,2-Dibromoethane (EDB) | <0.1 | Tetrahydrofuran | <0.1 |
| 1,2-Dichlorobenzene | <0.1 | Toluene | <0.1 |
| 1,3-Dichlorobenzene | <0.1 | 1,2,4-Trichlorobenzene | <0.1 |
| 1,4-Dichlorobenzene | <0.1 | 1,1,1-Trichloroethane | <0.1 |
| Dichlorodifluoromethane (Freon12) | <0.1 | 1,1,2-Trichloroethane | <0.1 |
| 1,1-Dichloroethane | <0.1 | Trichloroethene | <0.1 |
| 1,2-Dichloroethane | <0.1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | <0.1 |
| 1,1-Dichloroethene | <0.1 | Trichlorofluoromethane (Freon 11) | <0.1 |
| cis-1,2-Dichloroethene | <0.1 | 1,2,4-Trimethylbenzene | <0.1 |
| trans-1,2-Dichloroethene | <0.1 | 1,3,5-Trimethylbenzene | <0.1 |
| 1,2-Dichloropropane | <0.1 | Vinyl chloride | <0.1 |
| cis-1,3-Dichloropropene | <0.1 | m,p-Xylene | <0.1 |
| trans-1,3-Dichloropropene | <0.1 | o-Xylene | <0.1 |
| 1,2-Dichlorotetrafluoroethane (Freon 114) | <0.1 | sec-Butylbenzene | <0.1 |
| Isopropylbenzene | <0.1 | | |

**This certification applies to the following sampling devices:**

0702

# Certificate of Analysis

**Container Type:** Summa canister 6 liter **Date of Analysis:** 4/7/2015

**Canister ID:** 1681 **Analyst's Initials:** EK

**The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.**

| *Analyte* | *Quantitation Limit (ppbv)* | *Analyte* | *Quantitation Limit (ppbv)* |
|---|---|---|---|
| Acetone | <0.5 | Ethanol | <0.5 |
| Acrylonitrile | <0.1 | 4-Isopropyl Toluene | <0.5 |
| Benzene | <0.1 | Ethyl acetate | <0.1 |
| Benzyl chloride | <0.1 | Ethylbenzene | <0.1 |
| Bromodichloromethane | <0.1 | 4-Ethyltoluene | <0.1 |
| Bromoform | <0.1 | n-Heptane | <0.1 |
| Bromomethane | <0.1 | Hexachlorobutadiene | <0.1 |
| 1,3-Butadiene | <0.1 | Hexane | <0.1 |
| 2-Butanone (MEK) | <0.1 | 2-Hexanone (MBK) | <0.1 |
| Carbon disulfide | <0.5 | Isopropyl alcohol | <0.5 |
| Carbon tetrachloride | <0.1 | 4-Methyl-2-pentanone (MIBK) | <0.1 |
| Chlorobenzene | <0.1 | Methyl tert-butyl ether | <0.1 |
| Chloroethane | <0.1 | Methylene chloride | <0.1 |
| 1,4-Dioxane | <0.1 | Naphthalene | <0.5 |
| n-Butylbenzene | <0.1 | 1,1,1,2-Tetrachlorethane | <0.1 |
| Chloroform | <0.1 | Propene | <0.1 |
| Chloromethane | <0.1 | Styrene | <0.1 |
| Cyclohexane | <0.1 | 1,1,2,2-Tetrachloroethane | <0.1 |
| Dibromochloromethane | <0.1 | Tetrachloroethene | <0.1 |
| 1,2-Dibromoethane (EDB) | <0.1 | Tetrahydrofuran | <0.1 |
| 1,2-Dichlorobenzene | <0.1 | Toluene | <0.1 |
| 1,3-Dichlorobenzene | <0.1 | 1,2,4-Trichlorobenzene | <0.1 |
| 1,4-Dichlorobenzene | <0.1 | 1,1,1-Trichloroethane | <0.1 |
| Dichlorodifluoromethane (Freon12) | <0.1 | 1,1,2-Trichloroethane | <0.1 |
| 1,1-Dichloroethane | <0.1 | Trichloroethene | <0.1 |
| 1,2-Dichloroethane | <0.1 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | <0.1 |
| 1,1-Dichloroethene | <0.1 | Trichlorofluoromethane (Freon 11) | <0.1 |
| cis-1,2-Dichloroethene | <0.1 | 1,2,4-Trimethylbenzene | <0.1 |
| trans-1,2-Dichloroethene | <0.1 | 1,3,5-Trimethylbenzene | <0.1 |
| 1,2-Dichloropropane | <0.1 | Vinyl chloride | <0.1 |
| cis-1,3-Dichloropropene | <0.1 | m,p-Xylene | <0.1 |
| trans-1,3-Dichloropropene | <0.1 | o-Xylene | <0.1 |
| 1,2-Dichlorotetrafluoroethane (Freon 114) | <0.1 | sec-Butylbenzene | <0.1 |
| Isopropylbenzene | <0.1 | | |

**This certification applies to the following sampling devices:**

1681

4562

# Certificate of Analysis

**Container Type:** Summa canister 6 liter **Date of Analysis:** 4/9/2015

**Canister ID:** 5347 **Analyst's Initials:** NAA

**The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.**

| *Analyte* | *Quantitation Limit (ppbv)* | *Analyte* | *Quantitation Limit (ppbv)* |
|---|---|---|---|
| Acetone | <0.2 | Ethanol | <0.2 |
| Acrylonitrile | <0.2 | 4-Isopropyl Toluene | <0.2 |
| Benzene | <0.2 | Ethyl acetate | <0.2 |
| Benzyl chloride | <0.2 | Ethylbenzene | <0.2 |
| Bromodichloromethane | <0.2 | 4-Ethyltoluene | <0.2 |
| Bromoform | <0.2 | n-Heptane | <0.2 |
| Bromomethane | <0.2 | Hexachlorobutadiene | <0.2 |
| 1,3-Butadiene | <0.2 | Hexane | <0.2 |
| 2-Butanone (MEK) | <0.2 | 2-Hexanone (MBK) | <0.2 |
| Carbon disulfide | <0.2 | Isopropyl alcohol | <0.2 |
| Carbon tetrachloride | <0.2 | 4-Methyl-2-pentanone (MIBK) | <0.2 |
| Chlorobenzene | <0.2 | Methyl tert-butyl ether | <0.2 |
| Chloroethane | <0.2 | Methylene chloride | <0.2 |
| 1,4-Dioxane | <0.2 | Naphthalene | <0.2 |
| n-Butylbenzene | <0.2 | 1,1,1,2-Tetrachlorethane | <0.2 |
| Chloroform | <0.2 | Propene | <0.2 |
| Chloromethane | <0.2 | Styrene | <0.2 |
| Cyclohexane | <0.2 | 1,1,2,2-Tetrachloroethane | <0.2 |
| Dibromochloromethane | <0.2 | Tetrachloroethene | <0.2 |
| 1,2-Dibromoethane (EDB) | <0.2 | Tetrahydrofuran | <0.2 |
| 1,2-Dichlorobenzene | <0.2 | Toluene | <0.2 |
| 1,3-Dichlorobenzene | <0.2 | 1,2,4-Trichlorobenzene | <0.2 |
| 1,4-Dichlorobenzene | <0.2 | 1,1,1-Trichloroethane | <0.2 |
| Dichlorodifluoromethane (Freon12) | <0.2 | 1,1,2-Trichloroethane | <0.2 |
| 1,1-Dichloroethane | <0.2 | Trichloroethene | <0.2 |
| 1,2-Dichloroethane | <0.2 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | <0.2 |
| 1,1-Dichloroethene | <0.2 | Trichlorofluoromethane (Freon 11) | <0.2 |
| cis-1,2-Dichloroethene | <0.2 | 1,2,4-Trimethylbenzene | <0.2 |
| trans-1,2-Dichloroethene | <0.2 | 1,3,5-Trimethylbenzene | <0.2 |
| 1,2-Dichloropropane | <0.2 | Vinyl chloride | <0.2 |
| cis-1,3-Dichloropropene | <0.2 | m,p-Xylene | <0.2 |
| trans-1,3-Dichloropropene | <0.2 | o-Xylene | <0.2 |
| 1,2-Dichlorotetrafluoroethane (Freon 114) | <0.2 | sec-Butylbenzene | <0.2 |
| Isopropylbenzene | <0.2 | | |

**This certification applies to the following sampling devices:**

17157

# Certificate of Analysis

**Container Type:** Summa canister 6 liter **Date of Analysis:** 4/7/2015

**Canister ID:** 5586 **Analyst's Initials:** NAA

**The sampling device detailed above has been tested and is certified to the limits for the target compounds as listed below.**

| *Analyte* | *Quantitation Limit (ppbv)* | *Analyte* | *Quantitation Limit (ppbv)* |
|---|---|---|---|
| Acetone | <0.2 | Ethanol | <0.2 |
| Acrylonitrile | <0.2 | 4-Isopropyl Toluene | <0.2 |
| Benzene | <0.2 | Ethyl acetate | <0.2 |
| Benzyl chloride | <0.2 | Ethylbenzene | <0.2 |
| Bromodichloromethane | <0.2 | 4-Ethyltoluene | <0.2 |
| Bromoform | <0.2 | n-Heptane | <0.2 |
| Bromomethane | <0.2 | Hexachlorobutadiene | <0.2 |
| 1,3-Butadiene | <0.2 | Hexane | <0.2 |
| 2-Butanone (MEK) | <0.2 | 2-Hexanone (MBK) | <0.2 |
| Carbon disulfide | <0.2 | Isopropyl alcohol | <0.2 |
| Carbon tetrachloride | <0.2 | 4-Methyl-2-pentanone (MIBK) | <0.2 |
| Chlorobenzene | <0.2 | Methyl tert-butyl ether | <0.2 |
| Chloroethane | <0.2 | Methylene chloride | <0.2 |
| 1,4-Dioxane | <0.2 | Naphthalene | <0.2 |
| n-Butylbenzene | <0.2 | 1,1,1,2-Tetrachlorethane | <0.2 |
| Chloroform | <0.2 | Propene | <0.2 |
| Chloromethane | <0.2 | Styrene | <0.2 |
| Cyclohexane | <0.2 | 1,1,2,2-Tetrachloroethane | <0.2 |
| Dibromochloromethane | <0.2 | Tetrachloroethene | <0.2 |
| 1,2-Dibromoethane (EDB) | <0.2 | Tetrahydrofuran | <0.2 |
| 1,2-Dichlorobenzene | <0.2 | Toluene | <0.2 |
| 1,3-Dichlorobenzene | <0.2 | 1,2,4-Trichlorobenzene | <0.2 |
| 1,4-Dichlorobenzene | <0.2 | 1,1,1-Trichloroethane | <0.2 |
| Dichlorodifluoromethane (Freon12) | <0.2 | 1,1,2-Trichloroethane | <0.2 |
| 1,1-Dichloroethane | <0.2 | Trichloroethene | <0.2 |
| 1,2-Dichloroethane | <0.2 | 1,1,2-Trichlorotrifluoroethane (Freon 113) | <0.2 |
| 1,1-Dichloroethene | <0.2 | Trichlorofluoromethane (Freon 11) | <0.2 |
| cis-1,2-Dichloroethene | <0.2 | 1,2,4-Trimethylbenzene | <0.2 |
| trans-1,2-Dichloroethene | <0.2 | 1,3,5-Trimethylbenzene | <0.2 |
| 1,2-Dichloropropane | <0.2 | Vinyl chloride | <0.2 |
| cis-1,3-Dichloropropene | <0.2 | m,p-Xylene | <0.2 |
| trans-1,3-Dichloropropene | <0.2 | o-Xylene | <0.2 |
| 1,2-Dichlorotetrafluoroethane (Freon 114) | <0.2 | sec-Butylbenzene | <0.2 |
| Isopropylbenzene | <0.2 | | |

**This certification applies to the following sampling devices:**

5586

## Notes and Definitions

| | |
|---|---|
| AirP | Due to the low volume of sample collected it was necessary to pressurize the Summa can in laboratory prior to analysis which results in elevated reporting limits. |
| B | Analyte is found in the associated blank as well as in the sample (CLP B-flag). |
| CRL1 | Low level calibration check failed, data was accepted due to sample concentrations < MDL. |
| CRL2 | Low level calibration check failed, data was accepted due to sample concentrations > 3X MRL. |
| CRL5 | Low level calibration check failed, reportable sample concentrations may be biased high. |
| D | Data reported from a dilution |
| E | This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration. |
| GS1 | Sample dilution required for high concentration of target analytes to be within the instrument calibration range. |
| J | Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag). |
| O01 | This compound is a common laboratory contaminant. |
| QC2 | Analyte out of acceptance range in QC spike but no reportable concentration present in sample. |
| QM9 | The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits. |
| QR2 | The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data. |
| U | Analyte included in the analysis, but not detected at or above the MDL. |
| dry | Sample results reported on a dry weight basis |
| NR | Not Reported |
| RPD | Relative Percent Difference |

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
Rebecca Merz

SPECTRUM ANALYTICAL, INC.
*Featuring*
HANIBAL TECHNOLOGY

# Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page 1 of 2

SC06447 BY

***Special Handling:***
☒ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: _____
All TATs subject to laboratory approval.
Min. 24-hour notification needed for rushes.

| | | | |
|---|---|---|---|
| **Report To:** | **Invoice To:** SAME | | |
| Day Environmental, Inc. | | **Project No.:** 4884S-13 | |
| 1563 Lyell Avenue | | **Site Name:** 211 Franklin Street | |
| Rochester, New York | | **Location:** Olean **State:** NY | |
| **Tel #:** 585-454-0210 | **Attn:** | **Sampler(s):** C. Hampton/T. Roszak | |
| **Project Manager:** C.Hampton | **P.O. No.:** **RQN:** | | |

| Can ID | Can Size (L) | Outgoing Canister Pressure ("Hg) (Lab) | Incoming Canister Pressure ("Hg) (Lab) | Flow Reg. ID | Flow Controller Readout (ml/min) | Lab Id: | Sample Id: | Sample Date(s) | Time Start (24 hr clock) | Time Stop (24 hr clock) | Canister Pressure in Field ("Hg) (Start) | Canister Pressure in Field ("Hg) (Stop) | Interior Temp. (F) (Start) | Interior Temp. (F) (Stop) | Analysis: TO-15 Low Level | Analysis: TO-15 Standard | Matrix: Indoor/Ambient Air | Matrix: Soil Gas | Check box if canister is returned unused |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LABORATORY USE ONLY | | | | | | | | | | | | | | | | |
| 0271 | 6 | -30 | | 2960 | 9.9 | SC06447-01 | Area 1 IA | 04/16/15 | 07:56 | 16:12 | -28 | -9.5 | ~70 | ~70 | x | | x | | |
| 0262 | 6 | -30 | | 2989 | 9.7 | 02 | Area 1 SS | 04/16/15 | 07:56 | 16:11 | -29 | -10 | ~70 | ~70 | | x | | x | |
| 0252 | 6 | -30 | | 2964 | 9.6 | 03 | Area 2 IA | 04/16/15 | 08:00 | 16:22 | -28 | -10 | ~70 | ~70 | x | | x | | |
| 0254 | 6 | -30 | | 2887 | 9.8 | 04 | Area 2 SS | 04/16/15 | 08:21 | 16:35 | -30 | -8 | ~70 | ~70 | | x | | x | |
| 0647 | 6 | -30 | | 2858 | 9.8 | 05 | Area 3 IA | 04/16/15 | 07:52 | 16:05 | -29 | -4 | ~70 | ~70 | x | | x | | |
| 5586 | 6 | -30 | | 2889 | 8.9 | 06 | Area 3 SS | 04/16/15 | 07:52 | 16:05 | -29 | -14 | ~70 | ~70 | | x | | x | |
| 0702 | 6 | -30 | | 2991 | 9.9 | 07 | Area 4 IA | 04/16/15 | 07:49 | 16:01 | -28 | -4 | ~70 | ~70 | x | | x | | |
| 1399 | 6 | -30 | | 0862 | 9.7 | 08 | Area 4 SS | 04/16/15 | 07:48 | 16:01 | -30 | -9.5 | ~70 | ~70 | | x | | x | |
| 0265 | 6 | -30 | | 0056 | 8.9 | 09 | Area 5 IA | 04/16/15 | 07:41 | 14:10 | -30 | -2 | ~70 | ~70 | x | | x | | |
| 1520 | 6 | -30 | | 2999 | 9.8 | 10 | Area 5 SS | 04/16/15 | 07:41 | 15:46 | -30 | -14 | ~70 | ~70 | | x | | x | |

Date of Request: Total # Canisters:
Requested by: # LL Canisters:
Company: # Flow Controllers:
Location: Flow Rate Setting:
Date Needed: Order #: Prepared by:

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: Date:

Printed:

**QA/QC Reporting Level:**

☐ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM
☐ NO QC ☒ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP
☐ DQA* * additional charges may apply contact SA's QA Department for further info.

| Client Use | Ambient Temperature (Fahrenheit) | Ambient Pressure (inches of Hg) |
|---|---|---|
| Start | ~37 | ~30 |
| Stop | ~58 | ~30 |

**Special Instructions/QC Requirements & Comments:**

Initial run without dilution

215-0121.5 R01

*Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.*

| Relinquished by: | Received by: | Date: | Time: |
|---|---|---|---|
| [signature] | [signature] | 4/21/15 | 10:16 |
| [signature] | [signature] | 4/23/15 | 1405 |

☒ EDD Format NYSDEC EQUIS
☒ E-mail Results to champton@daymail.net

SC06447

SPECTRUM ANALYTICAL, INC.
*Featuring*
HANIBAL TECHNOLOGY

# Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page 2 of 2

***Special Handling:***
☒ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: _____

All TATs subject to laboratory approval.
Min. 24-hour notification needed for rushes.

| Report To: | Invoice To: SAME | | |
|---|---|---|---|
| Day Environmental, Inc. | | Project No.: 4884S-13 | |
| 1563 Lyell Avenue | | Site Name: 211 Franklin Street | |
| Rochester, New York | | Location: Olean | State: NY |
| Tel #: 585-454-0210 | Attn: | Sampler(s): C. Hampton/T. Roszak | |
| Project Manager: C.Hampton | P.O. No.: | RQN: | |

| Can ID | Can Size (L) | Outgoing Canister Pressure ("Hg) (Lab) | Incoming Canister Pressure ("Hg) (Lab) | Flow Reg. ID | Flow Controller Readout (ml/min) | Lab Id: | Sample Id: | Sample Date(s) | Time Start (24 hr clock) | Time Stop (24 hr clock) | Canister Pressure in Field ("Hg) (Start) | Canister Pressure in Field ("Hg) (Stop) | Interior Temp. (F) (Start) | Interior Temp. (F) (Stop) | Analysis: TO-15 Low Level | Analysis: TO-15 Standard | Matrix: Indoor /Ambient Air | Matrix: Soil Gas | Check box if canister is returned unused |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LABORATORY USE ONLY | | | | | | | | | | | | | | | | | |
| 1681 | 6 | -30 | | 0052 | 9.5 | SC06447-11 | Area 6 IA | 04/16/15 | 07:44 | 15:25 | -29 | -3.5 | ~70 | ~70 | x | | x | | |
| 4562 | 6 | -30 | | 1309 | 9.9 | ↓ 12 | Area 6 SS | 04/16/15 | 07:44 | 15:51 | -30 | -12 | ~70 | ~70 | | x | | x | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| 0234 | 6 | -30 | | 2927 | 9.6 | | | | | | | | | | | | | | x |
| 4604 | 6 | -30 | | 2883 | 9.7 | | | | | | | | | | | | | | x |
| 0701 | 6 | -30 | | 0958 | 9.5 | | | | | | | | | | | | | | x |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |

Date of Request:
Requested by:
Company:
Location:
Date Needed: Order #:

Total # Canisters:
# LL Canisters:
# Flow Controllers:
Flow Rate/Setting:
Prepared by:

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: Date:

Printed:

**QA/QC Reporting Level:**

☐ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM
☐ NO QC ☒ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP
☐ DQA*

* additional charges may apply contact SA's QA Department for further info.

| Client Use | Ambient Temperature (Fahrenheit) | Ambient Pressure (inches of Hg) |
|---|---|---|
| Start | ~37 | ~30 |
| Stop | ~58 | ~30 |

**Special Instructions/QC Requirements & Comments:**

Initial run without dilution

21.5 | -0 | 21.5 120

*Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.*

| Relinquished by: | Received by: | Date: | Time: |
|---|---|---|---|
| [signature] | Tony Cipriano | 4/21/15 | 10:16 |
| Tony Cipriano | [signature] | 4/23/15 | 14:05 |
| | | | |

☐ EDD Format NYSDEC EQUIS
☐ E-mail Results to champton@daymail.net

SPECTRUM ANALYTICAL, INC.
*Featuring*
HANIBAL TECHNOLOGY

# Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page ____ of ____

***Special Handling:***
☐ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: _____

All TATs subject to laboratory approval.
Min. 24-hour notification needed for rushes.

| Report To: | Invoice To: | | Analysis | Matrix | Check box if canister is returned unused |
|---|---|---|---|---|---|
| | | Project No.: | | | |
| | | Site Name: | | | |
| | | Location: State: | | | |
| Tel #: | Attn: | Sampler(s): | | | |
| Project Manager: | P.O. No.: RQN: | | | | |

| Can ID | Can Size (L) | Outgoing Canister Pressure ("Hg) (Lab) | Incoming Canister Pressure ("Hg) (Lab) | Flow Reg. ID | Flow Controller Readout (ml/min) | Lab Id: | Sample Id: | Sample Date(s) | Time Start (24 hr clock) | Time Stop (24 hr clock) | Canister Pressure in Field ("Hg) (Start) | Canister Pressure in Field ("Hg) (Stop) | Interior Temp. (F) (Start) | Interior Temp. (F) (Stop) | Indoor /Ambient Air | Soil Gas |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LABORATORY USE ONLY | | | | | | | | | | | | | | | | |
| 0647 | 6 | -30 | | 2858 | 9.8 | | | | | | | | | | | |
| 0271 | 6 | -30 | | 2960 | 9.9 | | | | | | | | | | | |
| 0852 | 6 | -30 | | 2964 | 9.6 | | | | | | | | | | | |
| 17157 | 6 | -30 | | 0011 | 9.8 | | | | | | | | | | | |
| 7648 | 6 | -30 | | 2975 | 9.9 | | | | | | | | | | | |
| 16004 | 6 | -30 | | 0027 | 9.3 | | | | | | | | | | | |
| 17159 | 6 | -30 | | 0957 | 9.0 | | | | | | | | | | | |
| 0241 | 6 | -30 | | 0036 | 9.1 | | | | | | | | | | | |
| 0234 | 6 | -30 | | 2927 | 9.6 | | | | | | | | | | | |
| 46044 | 6 | -30 | | 2883 | 9.7 | | | | | | | | | | | |

Date of Request: 4/7/15 — Total # Canisters: 20
Requested by: Charles Hampton — # LL Canisters: 13
Company: Day Environmental — # Flow Controllers: 20
Location: Rochester NY — Flow Rate/Setting: 8 hrs
Date Needed: 4/10/15 — Order #: 35409 — Prepared by: MAA BRB

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: Date:

Printed:

**QA/QC Reporting Level:**

☐ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM
☐ NO QC ☐ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP
☐ DQA*

* additional charges may apply contact SA's QA Department for further info.

| Client Use | Ambient Temperature (Fahrenheit) | Ambient Pressure (inches of Hg) |
|---|---|---|
| Start | | |
| Stop | | |

**Special Instructions/QC Requirements & Comments:**

***Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.***

| Relinquished by: | Received by: | Date: | Time: |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

☐ EDD Format
☐ E-mail Results to

SPECTRUM ANALYTICAL, INC.
*Featuring*
HANIBAL TECHNOLOGY

# Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page ____ of ____

***Special Handling:***
☐ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: _____

· All TATs subject to laboratory approval.
· Min. 24-hour notification needed for rushes.

| **Report To:** | **Invoice To:** | | **Analysis** | **Matrix** | |
|---|---|---|---|---|---|
| | | **Project No.:** | | | |
| | | **Site Name:** | | | |
| | | **Location:** **State:** | | | |
| **Tel #:** | **Attn:** | **Sampler(s):** | | | |
| **Project Manager:** | **P.O. No.:** **RQN:** | | | | |

| Can ID | Can Size (L) | Outgoing Canister Pressure ("Hg) (Lab) | Incoming Canister Pressure ("Hg) (Lab) | Flow Reg. ID | Flow Controller Readout (ml/min) | Lab Id: | Sample Id: | Sample Date(s) | Time Start (24 hr clock) | Time Stop (24 hr clock) | Canister Pressure in Field ("Hg) (Start) | Canister Pressure in Field ("Hg) (Stop) | Interior Temp. (F) (Start) | Interior Temp. (F) (Stop) | Indoor /Ambient Air | Soil Gas | Check box if canister is returned unused |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LABORATORY USE ONLY | | | | | | | | | | | | | | | | | |
| LL 0265 | 6 | -30 | | 0056 | 8.9 | | | | | | | | | | | | |
| LL 1681 | 6 | -30 | | 0052 | 9.5 | | | | | | | | | | | | |
| LL 0782 | 6 | -30 | | 2991 | 9.9 | | | | | | | | | | | | |
| 1399 | 6 | -30 | | 0862 | 9.7 | | | | | | | | | | | | |
| 0259 | 6 | -30 | | 2999 | 9.8 | | | | | | | | | | | | |
| 0254 | 6 | -30 | | 2987 | 9.8 | | | | | | | | | | | | |
| 5586 | 6 | -30 | | 2889 | 8.9 | | | | | | | | | | | | |
| 0262 | 6 | -30 | | 2989 | 9.7 | | | | | | | | | | | | |
| 0701 | 6 | -30 | | 0958 | 9.5 | | | | | | | | | | | | |
| 4562 | 6 | -30 | | 1309 | 9.9 | | | | | | | | | | | | |

Date of Request: 4/7/15 — Total # Canisters: 20
Requested by: Charles Hampton — # LL Canisters: 13
Company: Day Environmental — # Flow Controllers: 20
Location: Rochester NY — Flow Rate/Setting: 8 hrs
Date Needed: 4/10/15 — Order #: 35409 — Prepared by: VMA B2P

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: Date:

Printed:

**QA/QC Reporting Level:**

☐ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM
☐ NO QC ☐ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP
☐ DQA* * additional charges may apply contact SA's QA Department for further info.

| Client Use | Ambient Temperature (Fahrenheit) | Ambient Pressure (inches of Hg) |
|---|---|---|
| Start | | |
| Stop | | |

**Special Instructions/QC Requirements & Comments:**

***Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.***

| **Relinquished by:** | **Received by:** | **Date:** | **Time:** |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

☐ EDD Format
☐ E-mail Results to

SPECTRUM ANALYTICAL, INC.
*Featuring*
HANIBAL TECHNOLOGY

# Chain of Custody Record/Field Test Data Sheets for Air Analyses

SC06447 BM



***Special Handling:***
☒ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: _____
All TATs subject to laboratory approval.
Min. 24-hour notification needed for rushes.

| Report To: | Invoice To: SAME | | Analysis | | | | Matrix | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Day Environmental, Inc. | | Project No.: 4884S-13 | TO-15 Low Level | TO-15 Standard | | | Indoor/Ambient Air | Soil Gas | | Check box if canister is returned unused |
| 1563 Lyell Avenue | | Site Name: 211 Franklin Street | | | | | | | | |
| Rochester, New York | | Location: Olean State: NY | | | | | | | | |
| Tel #: 585-454-0210 | Attn: | Sampler(s): C. Hampton/T. Roszak | | | | | | | | |
| Project Manager: C.Hampton | P.O. No.: RQN: | | | | | | | | | |

| Can ID | Can Size (L) | Outgoing Canister Pressure ("Hg) (Lab) | Incoming Canister Pressure ("Hg) (Lab) | Flow Reg. ID | Flow Controller Readout (ml/min) | Lab Id: | Sample Id: | Sample Date(s) | Time Start (24 hr clock) | Time Stop (24 hr clock) | Canister Pressure in Field ("Hg) (Start) | Canister Pressure in Field ("Hg) (Stop) | Interior Temp. (F) (Start) | Interior Temp. (F) (Stop) | TO-15 Low Level | TO-15 Standard | | | Indoor/Ambient Air | Soil Gas | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LABORATORY USE ONLY | | | | | | | | | | | | | | | | | | | | |
| 0271 | 6 | -30 | | 2960 | 9.9 | SC06447-01 | Area 1 IA | 04/16/15 | 07:56 | 16:12 | -28 | -9.5 | ~70 | ~70 | X | | | | X | | | |
| 0262 | 6 | -30 | | 2989 | 9.7 | 02 | Area 1 SS | 04/16/15 | 07:56 | 16:11 | -29 | -10 | ~70 | ~70 | | X | | | | X | | |
| 0252 | 6 | -30 | | 2964 | 9.6 | 03 | Area 2 IA | 04/16/15 | 08:00 | 16:22 | -28 | -10 | ~70 | ~70 | X | | | | X | | | |
| 0254 | 6 | -30 | | 2887 | 9.8 | 04 | Area 2 SS | 04/16/15 | 08:21 | 16:35 | -30 | -8 | ~70 | ~70 | | X | | | | | X | |
| 0647 | 6 | -30 | | 2858 | 9.8 | 05 | Area 3 IA | 04/16/15 | 07:52 | 16:05 | -29 | -4 | ~70 | ~70 | X | | | | X | | | |
| 5586 | 6 | -30 | | 2889 | 8.9 | 06 | Area 3 SS | 04/16/15 | 07:52 | 16:05 | -29 | -14 | ~70 | ~70 | | X | | | | | X | |
| 0702 | 6 | -30 | | 2991 | 9.9 | 07 | Area 4 IA | 04/16/15 | 07:49 | 16:01 | -28 | -4 | ~70 | ~70 | X | | | | X | | | |
| 1399 | 6 | -30 | | 0862 | 9.7 | 08 | Area 4 SS | 04/16/15 | 07:48 | 16:01 | -30 | -9.5 | ~70 | ~70 | | X | | | | | X | |
| 0265 | 6 | -30 | | 0056 | 8.9 | 09 | Area 5 IA | 04/16/15 | 07:41 | 14:10 | -30 | -2 | ~70 | ~70 | X | | | | X | | | |
| 0251 ~~1520~~ | 6 | -30 | | 2999 | 9.8 | 10 | Area 5 SS | 04/16/15 | 07:41 | 15:46 | -30 | -14 | ~70 | ~70 | | X | | | | | X | |

FM 4/24

| | | | |
|---|---|---|---|
| Date of Request: | Total # Canisters: | QA/QC Reporting Level: | |
| Requested by: | # LL Canisters: | ☐ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM | |
| Company: | # Flow Controllers: | ☐ NO QC ☒ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP | |
| Location: | Flow Rate Setting: | ☐ DQA* * additional charges may apply contact SA's QA Department for further info. | |
| Date Needed: Order #: | Prepared by: | Special Instructions/QC Requirements & Comments: | |

| Client Use | Ambient Temperature (Fahrenheit) | Ambient Pressure (inches of Hg) |
|---|---|---|
| Start | ~37 | ~30 |
| Stop | ~58 | ~30 |

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: Date:

Printed:

Initial run without dilution

21.5 | -0 | 21.5 | R01

*Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.*

| Relinquished by: | Received by: | Date: | Time: |
|---|---|---|---|
| [signature] | [signature] | 4/21/15 | 10 16 |
| [signature] | [signature] | 4/23/15 | 1405 |

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☒ E-mail Results to champton@daymail.net

SC06447

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*Featuring*
HANIBAL TECHNOLOGY

# Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page 2 of 2

***Special Handling:***
☒ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: _____

All TATs subject to laboratory approval.
Min. 24-hour notification needed for rushes.

| Report To: | Invoice To: SAME | |
|---|---|---|
| Day Environmental, Inc. | | Project No.: 4884S-13 |
| 1563 Lyell Avenue | | Site Name: 211 Franklin Street |
| Rochester, New York | | Location: Olean State: NY |
| Tel #: 585-454-0210 | Attn: | Sampler(s): C. Hampton/T. Roszak |
| Project Manager: C.Hampton | P.O. No.: RQN: | |

| Can ID | Can Size (L) | Outgoing Canister Pressure ("Hg) (Lab) | Incoming Canister Pressure ("Hg) (Lab) | Flow Reg. ID | Flow Controller Readout (ml/min) | Lab Id: | Sample Id: | Sample Date(s) | Time Start (24 hr clock) | Time Stop (24 hr clock) | Canister Pressure in Field ("Hg) (Start) | Canister Pressure in Field ("Hg) (Stop) | Interior Temp. (F) (Start) | Interior Temp. (F) (Stop) | Analysis: TO-15 Low Level | Analysis: TO-15 Standard | Matrix: Indoor /Ambient Air | Matrix: Soil Gas | Check box if canister is returned unused |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LABORATORY USE ONLY | | | | | | | | | | | | | | | | |
| 1681 | 6 | -30 | | 0052 | 9.5 | SC06447-11 | Area 6 IA | 04/16/15 | 07:44 | 15:25 | -29 | -3.5 | ~70 | ~70 | x | | x | | |
| 4562 | 6 | -30 | | 1309 | 9.9 | ↓ 12 | Area 6 SS | 04/16/15 | 07:44 | 15:51 | -30 | -12 | ~70 | ~70 | | x | | x | |
| 17157 | | | | 0011 | | ↓ 13 | Outdoor Background | 4/16/15 | 08:06 | 16:08 | -24 | -7 | — | — | x | | x | | |
| | | | | | | | | | | | | | | | | | | | |
| 0234 | 6 | -30 | | 2927 | 9.6 | | | | | | | | | | | | | | x |
| 4604 | 6 | -30 | | 2883 | 9.7 | | | | | | | | | | | | | | x |
| 0701 | 6 | -30 | | 0958 | 9.5 | | | | | | | | | | | | | | x |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Date of Request: | Total # Canisters: | QA/QC Reporting Level: | |
| Requested by: | # 1L Canisters: | ☐ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM | |
| Company: | # Flow Controllers: | ☐ NO QC ☒ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP | |
| Location: | Flow Rate Setting: | ☐ DQA* * additional charges may apply contact SA's QA Department for further info. | |
| Date Needed: Order #: | Prepared by: | | |

| Client Use | Ambient Temperature (Fahrenheit) | Ambient Pressure (inches of Hg) |
|---|---|---|
| Start | ~37 | ~30 |
| Stop | ~58 | ~30 |

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: Date:

Printed:

**Special Instructions/QC Requirements & Comments:**

Initial run without dilution

Sample -13 added per client request. EN 4/24

21.5 | -0 | 21-5 1209

*Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.*

| Relinquished by: | Received by: | Date: | Time: |
|---|---|---|---|
| Tony Copurso | Tony Copurso | 4/21/15 | 10:16 |
| Tony Copurso | JVT | 4/23/15 | 14:05 |
| | | | |

☐ EDD Format NYSDEC EQUIS

☐ E-mail Results to champton@daymail.net

SPECTRUM ANALYTICAL, INC.
Featuring
HANNIBAL TECHNOLOGY

# Chain of Custody Record/Field Test Data Sheets for Air Analyses

SC06447

Page 1 of 2

*Special Handling:*
☒ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: _____

All TATs subject to laboratory approval.
Min. 24-hour notification needed for rushes.

| Report To: | Invoice To: SAME | | |
|---|---|---|---|
| Day Environmental, Inc. | | Project No.: 4884S-13 | |
| 1563 Lyell Avenue | | Site Name: 211 Franklin Street | |
| Rochester, New York | | Location: Olean | State: NY |
| Tel #: 585-454-0210 | Attn: | Sampler(s): C. Hampton/T. Roszak | |
| Project Manager: C.Hampton | P.O. No.: RQN: | | |

| Can ID | Can Size (L) | Outgoing Canister Pressure ("Hg) (Lab) | Incoming Canister Pressure ("Hg) (Lab) | Flow Reg. ID | Flow Controller Readout (ml/min) | Lab Id | Sample Id | Sample Date | Time Start (24 hr clock) | Time Stop (24 hr clock) | Canister Pressure in Field ("Hg) (Start) | Canister Pressure in Field ("Hg) (Stop) | Interior Temp. (°F) (Start) | Interior Temp. (°F) (Stop) | Analysis: TO-15 Low Level | Analysis: TO-15 Standard | Matrix: Indoor/Ambient Air | Matrix: Soil Gas | Check box if canister is returned unused |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LABORATORY USE ONLY | | | | | | | | | | | | | | | | |
| 0271 | 6 | -30 | -11 | 2960 | 9.9 | SC06447-01 | Area 1 IA | 04/16/15 | 07:56 | 16:12 | -28 | -9.5 | ~70 | ~70 | X | | X | | |
| 0262 | 6 | -30 | -12 | 2989 | 9.7 | -02 | Area 1 SS | 04/16/15 | 07:56 | 16:11 | -29 | -10 | ~70 | ~70 | | X | | X | |
| 0252 | 6 | -30 | -12 | 2964 | 9.6 | -03 | Area 2 IA | 04/16/15 | 08:00 | 16:22 | -28 | -10 | ~70 | ~70 | X | | X | | |
| 0254 | 6 | -30 | -14 | 2887 | 9.8 | -04 | Area 2 SS | 04/16/15 | 08:21 | 16:35 | -30 | -8 | ~70 | ~70 | | X | | X | |
| 0647 | 6 | -30 | -4 | 2858 | 9.8 | -05 | Area 3 IA | 04/16/15 | 07:52 | 16:05 | -29 | -4 | ~70 | ~70 | X | | X | | |
| 5586 | 6 | -30 | -15 | 2889 | 8.9 | -06 | Area 3 SS | 04/16/15 | 07:52 | 16:05 | -29 | -14 | ~70 | ~70 | | X | | X | |
| 0702 | 6 | -30 | -3 | 2991 | 9.9 | -07 | Area 4 IA | 04/16/15 | 07:49 | 16:01 | -28 | -4 | ~70 | ~70 | X | | X | | |
| 1399 | 6 | -30 | -7 | 0862 | 9.7 | -08 | Area 4 SS | 04/16/15 | 07:48 | 16:01 | -30 | -9.5 | ~70 | ~70 | | X | | X | |
| 0265 | 6 | -30 | -3 | 0056 | 8.9 | -09 | Area 5 IA | 04/16/15 | 07:41 | 14:10 | -30 | -2 | ~70 | ~70 | X | | X | | |
| ~~1520~~ 0251 | 6 | -30 | -12 | 2999 | 9.8 | -10 | Area 5 SS | 04/16/15 | 07:41 | 15:46 | -30 | -14 | ~70 | ~70 | | X | | X | |

BRR

| | | | |
|---|---|---|---|
| Date of Request: | | Total # Canisters: | |
| Requested by: | | # 1L Canisters: | |
| Company: | | # Flow Controllers: | |
| Location: | | Flow Rate Setting: | |
| Date Needed: | Order #: | Prepared by: | |

QA/QC Reporting Level:

| | | | |
|---|---|---|---|
| ☐ Standard | ☐ NY ASP A* | ☐ TIER II* | ☐ MA DEP CAM |
| ☐ NO QC | ☒ NY ASP B* | ☐ TIER IV* | ☐ CT DPH RCP |
| ☐ DQA* | * additional charges may apply, contact SA's QA Department for further info | | |

| Client Use | Ambient Temperature (Fahrenheit) | Ambient Pressure (inches of Hg) |
|---|---|---|
| Start | ~37 | ~30 |
| Stop | ~58 | ~30 |

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: Date:

Printed:

Special Instructions/QC Requirements & Comments:

Initial run without dilution

21.5 | -0 | -21.5 | 201

*Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.*

| Relinquished by: | Received by: | Date: | Time: |
|---|---|---|---|
| | | 4/21/15 | |
| | | 4/23/15 | 1405 |

☒ EDD Format: NYSDEC EQUIS

☒ E-mail Results to: champton@daymail.net

SC06447

SPECTRUM ANALYTICAL, INC.
Featuring
HANNIBAL TECHNOLOGY

# Chain of Custody Record/Field Test Data Sheets for Air Analyses



*Special Handling:*
☒ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: _____
All TAT's subject to laboratory approval.
Min. 24-hour notification needed for rushes.

| Report To: | Invoice To: SAME | | |
|---|---|---|---|
| Day Environmental, Inc. | | Project No.: 4884S-13 | |
| 1563 Lyell Avenue | | Site Name: 211 Franklin Street | |
| Rochester, New York | | Location: Olean | State: NY |
| Tel #: 585-454-0210 | Attn: | Sampler(s): C. Hampton/T. Roszak | |
| Project Manager: C.Hampton | P.O. No.: | RQN: | |

| Can ID | Can Size (L) | Outgoing Canister Pressure ("Hg) (Lab) | Incoming Canister Pressure ("Hg) (Lab) | Flow Reg. ID (LABORATORY USE ONLY) | Flow Controller Residual (ml/min) | Lab Id: | Sample Id: | Sample Date(s): | Time Start (24 hr clock) | Time Stop (24 hr clock) | Canister Pressure in Field ("Hg) (Start) | Canister Pressure in Field ("Hg) (Stop) | Interior Temp. (°F) (Start) | Interior Temp. (°F) (Stop) | Analysis: TO-15 Low Level | Analysis: TO-15 Standard | Matrix: Indoor/Ambient Air | Matrix: Soil Gas | Check box if canister is returned unused |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1681 | 6 | -30 | -3 | 0052 | 9.5 | SC06447-11 | Area 6 IA | 04/16/15 | 07:44 | 15:25 | -29 | -3.5 | ~70 | ~70 | X | | X | | |
| 4562 | 6 | -30 | -11 | 1309 | 9.9 | 12 | Area 6 SS | 04/16/15 | 07:44 | 15:51 | -30 | -12 | ~70 | ~70 | | X | | X | |
| 17157 | | | -8 | 0011 | 9.8 | 13 | outdoor background | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| 0234 | 6 | -30 | -30 | 2927 | 9.6 | | | | | | | | | | | | | | X |
| 4604 | 6 | -30 | -30 | 2883 | 9.7 | | | | | | | | | | | | | | X |
| 0701 | 6 | -30 | -30 | 0958 | 9.5 | | | | | | | | | | | | | | X |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |

Date of Request: Total # Canisters:
Requested by: # 1L Canisters:
Company: # Flow Controllers:
Location: Flow Rate Setting:
Date Needed: Order #: Prepared by:

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: Date:

Printed:

QA/QC Reporting Level:

☐ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM
☐ NO QC ☒ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP
☐ DQA*

*additional charges may apply; contact SA's QA Department for further info.

Special Instructions/QC Requirements & Comments:

Initial run without dilution

21 51 - 01 21 5 120

*Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.*

| Client use | Ambient Temperature (Fahrenheit) | Ambient Pressure (inches of Hg) |
|---|---|---|
| Start | ~37 | ~30 |
| Stop | ~58 | ~30 |

| Relinquished by: | Received by: | Date: | Time: |
|---|---|---|---|
| | | 4/21/15 | 1410 |
| | | 4/23/15 | 1405 |
| | | | |

☐ EDD Format: NYSDEC EQUIS
☐ E-mail Results to: champton@daymail.net

SC06447

SPECTRUM ANALYTICAL, INC.
A Eurofins
HANIBAL TECHNOLOGY

# Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page

*Special Handling:*
☐ Standard TAT – 7 to 10 business days
☐ Rush TAT – Date Needed:

All TATs subject to laboratory approval.
Min. 24-hour notification needed for rushes.

| Report To: | Invoice To: | Project No.: | Analysis | Matrix | Check box if canister is returned unused |
|---|---|---|---|---|---|
| | | Site Name: | | Indoor /Ambient Air<br>Soil Gas | |
| | | Location: State: | | | |
| Tel #: | Attn: | Sampler(s): | | | |
| Project Manager: | P.O. No.: RON | | | | |

| Can ID | Can Size (L) | Outgoing Canister Pressure ("Hg) (Lab) | Incoming Canister Pressure ("Hg) (Lab) | Flow Reg. ID | Flow Controller Readout (ml/min) | Lab Id | Sample Id | Sample Date(s) | Time Start (Military Hr) | Time Stop (Military Hrs) | Canister Pressure in Field ("Hg) (Start) | Canister Pressure in Field ("Hg) (Stop) | Interior Temp. (F) (Start) | Interior Temp. (F) (Stop) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LABORATORY USE ONLY | | | | | | | | | | | |
| 0647 | 6 | -30 | -4 | 2858 | 9.8 | | | | | | | | | |
| 0071 | 6 | -30 | -11 | 2760 | 9.9 | | | | | | | | | |
| 0852 | 6 | -30 | -12 | 2764 | 9.6 | | | | | | | | | |
| 17157 | 6 | -30 | -8 | 0011 | 9.8 | | | | | | | | | |
| 7648 | 6 | -30 | | 2975 | 9.9 | | | | | | | | | |
| 16004 | 6 | -30 | | 0027 | 9.3 | | | | | | | | | |
| 17159 | 6 | -30 | | 0957 | 9.0 | | | | | | | | | |
| 0241 | 6 | -30 | | 0026 | 9.1 | | | | | | | | | |
| 0234 | 6 | -30 | | 2927 | 9.6 | | | | | | | | | |
| 4604 | 6 | -30 | | 2883 | 9.7 | | | | | | | | | |

Date of Request: 4/7/15 — Total # Canisters: 20
Requested by: Charles Hampton — # LL Canisters: 13
Company: Dey Environmental — # Flow Controllers: 20
Location: Rochester NY — Flow Rate/Setting: 8 hrs
Date Needed: 4/10/15 — Order #: 35409 — Prepared by: MAA BAB

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: Date:

Printed:

**QA/QC Reporting Level:**

☐ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM
☐ NO QC ☐ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP
☐ DQA* * additional charges may apply contact SA's QA Department for further info

| Client Use | Ambient Temperature (Fahrenheit) | Ambient Pressure (inches of Hg) |
|---|---|---|
| Start | | |
| Stop | | |

**Special Instructions/QC Requirements & Comments:**

*Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.*

| Relinquished by: | Received by: | Date: | Time: |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

☐ EDD Format
☐ E-mail Results to:

SC06447

SPECTRUM ANALYTICAL, INC.
HANIBAL TECHNOLOGY

# Chain of Custody Record/Field Test Data Sheets for Air Analyses

Page ___ of ___

*Special Handling:*
☐ Standard TAT - 7 to 10 business days
☐ Rush TAT - Date Needed: ___

All TAT's subject to laboratory approval.
Min. 24-hour notification needed for rushes.

| Report To: | Invoice To: | | Analysis | Matrix | |
|---|---|---|---|---|---|
| | | Project No.: | | | |
| | | Site Name: | | | |
| | | Location: State: | | | |
| Tel #: | Attn: | Sampler(s): | | | |
| Project Manager: | P.O. No.: ROS | | | | |

| Can ID | Can Size (L) | Outgoing Canister Pressure ("Hg) (Lab) | Incoming Canister Pressure ("Hg) (Lab) (LABORATORY USE ONLY) | Flow Reg. ID# | Flow Controller Readout (inHg) | Lab Id | Sample Id | Sample Date(s) | Time Start (24 hr clock) | Time Stop (24 hr clock) | Canister Pressure in Field ("Hg) (Start) | Canister Pressure in Field ("Hg) (Stop) | Interior Temp. (F) (Start) | Interior Temp. (F) (Stop) | Indoor / Ambient Air | Soil Gas | Check box if canister is returned unused |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LL 0265 | 6 | -30 | -3 | 0256 | 8.9 | | | | | | | | | | | | |
| LL 1681 | 6 | -30 | -3 | 0052 | 9.5 | | | | | | | | | | | | |
| LL 0782 | 6 | -30 | -3 | 0791 | 9.9 | | | | | | | | | | | | |
| 1399 | 6 | -30 | -7 | 0862 | 9.7 | | | | | | | | | | | | |
| 0251 | 6 | -30 | -12 | 2999 | 9.8 | | | | | | | | | | | | |
| 0254 | 6 | -30 | -19 | 2987 | 9.8 | | | | | | | | | | | | |
| 5586 | 6 | -30 | -15 | 2889 | 8.9 | | | | | | | | | | | | |
| 0262 | 6 | -30 | -12 | 2989 | 9.7 | | | | | | | | | | | | |
| 0701 | 6 | -30 | | 0958 | 9.5 | | | | | | | | | | | | |
| 4562 | 6 | -30 | -11 | 1309 | 9.9 | | | | | | | | | | | | |

Date of Request: 4/7/15 Total # Canisters: 20
Requested by: Charles Hampton # LL Canisters: 13
Company: Day Environmental # Flow Controllers: 20
Location: Rochester NY Flow Rate/Setting: 8 hrs
Date Needed: 4/10/15 Order #: 35409 Prepared by: USA BLF

I attest that all media relinquished from Spectrum Analytical, Inc. have been received in good working condition, based on visual observation, and agree to the terms and conditions as listed on the back of this document.

Signed: Date:

Printed:

**QA/QC Reporting Level:**

☐ Standard ☐ NY ASP A* ☐ TIER II* ☐ MA DEP CAM
☐ NO QC ☐ NY ASP B* ☐ TIER IV* ☐ CT DPH RCP
☐ DQA* * additional charges may apply contact SA's QA Department for further info

| Client Use | Ambient Temperature (Fahrenheit) | Ambient Pressure (inches of Hg) |
|---|---|---|
| Start | | |
| Stop | | |

**Special Instructions/QC Requirements & Comments:**

*Please contact SA's Air Department immediately at (800) 789-9115 if you experience any technical difficulties or suspect any QC issue(s) with air media.*

| Relinquished by: | Received by: | Date: | Time: |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

☐ EDD Format
☐ E-mail Results to

SPECTRUM ANALYTICAL, INC.

11 Almgren Drive
Agawam, MA 01001
(413) 789-9018

This preceding chain of custody has been amended to include the client requested additional analyses as noted below:

| *Laboratory ID* | *Client ID* | *Analysis* | *Added* |
|---|---|---|---|
| SC06447-09 | Area 5 IA | Volatile Organics in Air | 5/2/2015 |