

# Site Assessment Report

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Plaid Pantry Store #112

1002 W. Fourth Plain Boulevard

Vancouver, Washington 98660

EES Project Number 1179-01

Washington Dept. of Ecology Site ID No. 9158935

Prepared For

Plaid Pantries, Inc.

10025 SW Allen Boulevard

Beaverton, Oregon 97005

Prepared By

**EES**

ENVIRONMENTAL CONSULTING, INC.

240 N. Broadway, Suite 115, Portland OR 97227

(503) 847-2740

[www.ees-environmental.com](http://www.ees-environmental.com)

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## 1 INTRODUCTION

This report documents the results of site assessment activities conducted at the Plaid Pantry #112 convenience market and retail gasoline station located at 1002 W. Fourth Plain Boulevard, Vancouver, Washington (Figure 1). This report was prepared by EES Environmental Consulting, Inc. (EES) on behalf of Plaid Pantries, Inc. (Plaid). On-site and off-site soil and soil vapor sampling was performed August 13 through August 20, 2012. Soil vapor extraction testing was performed on October 4 and 5, 2012.

### 1.1 PURPOSE

The purpose of recent (2012) site assessment activities was to complete lateral delineation of gasoline impacts in soil, and to evaluate whether vapor intrusion was a potential concern at the site.

Initial site assessment activities completed in September 2011 identified gasoline in soil immediately south of the fuel dispenser island. Groundwater was not encountered at the site within 40 feet of the ground surface (greater than 25 feet below the deepest identified soil impacts). Based upon these results, no deep vadose-zone soil impacts or groundwater impacts were suspected at the site. EES and Plaid determined that additional information was needed to adequately evaluate the lateral extent of documented gasoline impacts in compliance with Washington's Model Toxics Control Act (MTCA), Chapter 173-340 of the Washington Administrative Code.

### 1.2 SCOPE OF WORK

The site assessment scope of work was detailed in a work plan dated August 6, 2012. The primary work scope elements were implemented as summarized below.

#### 1.2.1 FIELD COORDINATION/PLANNING

- Obtain a City of Vancouver permit for planned drilling in adjoining Fourth Plain Boulevard and sidewalk right-of-way areas.
- Update the site Health and Safety Plan to guide field safety protocols, in accordance with rules established by the Occupational Safety and Health Administration and Washington Industrial Safety and Health Act.
- Perform a site visit to mark proposed sampling locations for utility identification purposes.
- Request utility identification through the public Northwest Utility Notification Center as required before drilling.
- Contract with a local geophysical locating firm to attempt to identify underground utility features and conduits located at each planned drilling location.

### 1.2.2 DRILLING AND SAMPLING

- Conduct “air-knife” pre-drilling activities intended to assure that each borehole location is clear of utilities to depths up to 10 feet (if feasible) using pressurized air. This approach minimizes but does not eliminate the risk of encountering unidentified underground features during drilling.
- Advance 13 direct-push soil borings including seven borings in the adjoining City of Vancouver right-of-way. Borings were to be advanced to terminal depths ranging from 20 to 40 feet below ground surface.
- Advance eight shallow temporary soil gas borings (S-1 through S-4, S-6, S-7, S-9, and S-10) to 5 feet below ground surface on the Plaid site.
- Complete two shallow soil vapor extraction wells (S-5/SVE-3 and S-8/SVE-5) screened in the depth interval 5 to 10 feet below ground surface within existing “place holder” monuments (previously installed February 2012).
- Advance two deeper temporary soil gas borings (S-11 and S-13) to 15 feet below ground surface on the Plaid site to provide a vertical contaminant profile with paired (collocated) shallow soil gas boring locations.
- Complete two deeper soil vapor extraction wells (S-12/SVE-2 and SVE-4) screened in the depth interval 15-20 feet below ground surface within existing “place holder” monuments (previously installed February 2012).

### 1.2.3 SOIL VAPOR EXTRACTION PILOT TEST

- Conduct a limited soil vapor extraction test to investigate induced air flow conditions within source area vadose zone soils.

## 2 BACKGROUND

The site is located at the northwest corner of Kauffman Avenue and W. Fourth Plain Boulevard in Vancouver, Washington (Figure 1). The 0.26-acre property is owned by Louise Piacentini and is occupied by a single commercial building. Building tenants at the time of sampling activities included a Plaid convenience market and retail gasoline station and a Domino’s Pizza restaurant (Figure 2).

### 2.1 PLAID SITE OPERATIONS

Plaid’s site operations include a retail gasoline station and convenience store, which were constructed in 1982 and opened for business in January 1983. The site’s operating underground gasoline storage tank system includes two 12,000-gallon tanks and a 10,000-gallon tank, and is registered with the Washington Department of Ecology (Ecology, Underground Storage Tank Facility #9158935). During Plaid’s operations, only gasoline has been stored and dispensed at the site. During its period of site operations, Plaid is not aware of any releases from its fueling system. Leaded gasoline may have been dispensed at the site during phase-out of that product in the 1980s. EES understands that Plaid did not store or dispense other hydrocarbons such as diesel fuel, bulk motor oil, or solvents at any time during its site operations.

## 2.2 HISTORICAL SITE FUELING OPERATIONS

Plaid evaluated and documented prior site operations under separate cover. Identified historical operations are summarized below. The first known development of the property (visible in aerial photographs from 1951 through 1978) consisted of a commercial building that appears to have consisted of three conjoined structures. The primary structure was a square-shaped building located in the center of the property parcel. This building appears to have an attached canopy that extends towards the southeast corner of the property. Smaller satellite structures were attached to the northeast and southwest corners of the primary building. City directories and building permit information confirm that site occupants during this period of operation included a gasoline service station, an auto repair shop, an auto detailing and upholstery shop, a dry cleaner, a barber shop, a dairy, a wood furniture refinishing shop, and a second-hand store.

The second stage of site development (visible in aerial photographs from 1984 through 2006) consists of the existing rectangular commercial building currently occupied by Plaid and a Domino's Pizza shop. Aerial photographs dated 1984 through 2006 all show the current site features including the building, fuel dispenser island canopy, concrete underground storage tank pad, and asphalt paved parking areas to the south of the building.

The nature and volume of fuel and other products used and stored at the site by others have not been determined. According to the property owner's representative, a site building and two underground fuel storage tanks (3,000 and 5,000 gallon capacity) were removed before Plaid's redevelopment in the early 1980s.

## 2.3 PREVIOUS ENVIRONMENTAL SITE ASSESSMENTS

### 2.3.1 INITIAL SITE ASSESSMENT (SEPTEMBER 2011)

Initial assessment results completed by PNG Environmental, Inc. (PNG) indicated that gasoline was present in soil between approximately 4.5 and 12.5 feet below ground surface at a single boring (B-5) located south of the existing Plaid fuel dispensing area at the southern site margin (Figure 3). Historical fueling activities and related infrastructure were present in this area in the 1960s and 1970s, prior to Plaid's site redevelopment (PNG, 2011). Fuel fingerprint analysis indicated extensive degradation of old gasoline hydrocarbons in the B-5 soil samples. Evidence of oil contamination also was identified at 9 feet below ground surface in a boring (B-2) located north of the Plaid fueling area. The source(s) of the identified oil impacts at B-2 have not been determined, but are consistent with historical operations.

Among site soils, gasoline impacts at B-5 exceeded default MTCA Method A unrestricted land use cleanup levels applied by Ecology. Oil impacts identified at B-2 are below Ecology soil cleanup levels. In view of the significant depth to water in the site vicinity and the vertical profile of contaminants identified at B-2 and B-5, PNG concluded that groundwater impacts were not suspected at the site.

### 2.3.2 FUEL SYSTEM UPGRADES AND TANK DECOMMISSIONING (JANUARY AND FEBRUARY 2012)

During fuel system upgrades conducted by Plaid in January and February 2012, an abandoned and previously unknown underground fuel tank was encountered immediately south of the Plaid fuel dispenser island, near boring B-5 where soil contamination previously was identified (Figure 4). The steel tank was empty except for residual water and sludge, and its capacity was approximately 1,000 gallons. The tank was not used or known to exist by Plaid or the property owner, and no specific information concerning the tank's prior use or contents was obtained. Laboratory analyses of tank sludge contents following decommissioning indicated the presence of gasoline-range organics. Plaid's contractor notified Ecology of the tank's presence and decommissioned the tank by removal in February 2012.

Upon removal, corrosion and pitting were observed on tank surfaces. Obvious soil contamination surrounded the tank and accessible contaminated soils were excavated and transported to the Hillsboro Landfill under permit by Plaid's contractor. Approximately 13 cubic yards of contaminated soil were excavated from the tank area, although the extent of excavation was limited by Plaid's existing fueling system infrastructure and the adjacent public sidewalk to the south. The final excavation area measured approximately 6 feet by 10 feet, and 6 feet deep. Following excavation, confirmatory soil samples were collected from the four sidewalls and floor of the excavation cavity (Figure 4). Analytical testing results indicated that residual soils remained in place at concentrations exceeding the MTCA Method A unrestricted land use cleanup levels for gasoline and benzene, as indicated in Table 1.

Based on the identification of gasoline and related fuel constituent contamination remaining in soils near the fueling dispenser area, and in an effort to take advantage of exposed infrastructure during the system upgrade and decommissioning time period, Plaid installed one 10-foot deep, two-inch diameter well (SVE-1) for future soil vapor extraction testing, and five additional "place-holder" monuments consisting of small flush-mounted steel vaults placed in locations surrounding the former fuel tank and determined by Plaid's contractor to be isolated from subsurface fuel system piping and other underground Plaid infrastructure (Figure 4).

## 3 SITE CHARACTERIZATION ACTIVITIES

### 3.1 ON-SITE SOIL SAMPLING

On August 16, 2012, soil samples were collected from six borings (B-7, B-8, and SVE-2 through SVE-5) located on the subject property (Figure 5). To minimize the risk of encountering unidentified underground features during drilling, the upper 5 feet at B-7 and B-8 were hand augered. Other on-site borings were not initially hand augered because the borings were advanced through pre-installed "placeholder" monuments where shallow subsurface features had previously been evaluated and ruled out. Direct-push drilling commenced following hand augering (B-7 and B-8) or within "placeholder" monuments. At each drilling location, EES

retrieved, examined, and logged soils. Each boring utilized for soil sampling was completed to a depth ranging from 10 to 40 feet below ground surface.

Soil samples collected during drilling were field screened for volatile organic vapors using a photoionization detector. Soil samples also were observed for evidence of gasoline (i.e., staining or odors). A summary of vapor screening results (in parts per million by volume) and observations in each boring is summarized in the table below along with information regarding the total depth of each boring.

<b>BORING</b>	<b>MAXIMUM VAPOR SCREENING RESULT &amp; DEPTH (parts per million by volume)</b>	<b>ODOR OR SHEEN?</b>	<b>TOTAL DEPTH (feet)</b>
B-7	608 at 13'	Yes	20
B-8	7.8 at 6'	Yes	20
SVE-2	3,127 at 8'	Yes	39
SVE-3	1,329 at 8'	Yes	40
SVE-4	57 at 11'	Yes	20
SVE-5	1,379 at 7.5'	Yes	10

As indicated in the table above, a petroleum odor was noted in soil at each on-site boring location, and positive photoionization detector screening results were noted in each boring. However, maximum photoionization detector measurements were observed at depths between 3 and 13 feet with no evidence of fuel impacts below a depth of 15 feet in any on-site boring. Detailed information regarding photoionization screening results and field observations is provided on the boring logs included in Appendix A. Soil samples collected for laboratory analysis were picked up daily at the site by a courier, and delivered to Apex Labs for laboratory analysis.

Soil vapor extraction wells were installed within each of the pre-established "placeholder" monument borings. "Shallow-zone" soil vapor extraction test wells SVE-3 and SVE-5 were installed to a depth of 10 feet, and screened in the interval 5 to 10 feet below ground surface. "Deep-zone" soil vapor extraction wells SVE-2 and SVE-4 were installed to a depth of 20 feet, and screened in the interval 15 to 20 feet below ground surface. Boring logs for SVE-2 through SVE-5 are provided in Appendix A. Test well SVE-1 was previously installed as a "shallow-zone" well (Appendix A).

Investigation-derived waste was placed into 55-gallon capacity steel drums, labeled, and transported to an off-site staging facility pending the receipt of laboratory testing data. After being profiled, the investigation-derived waste was disposed at the Hillsboro Landfill. Disposal documentation is provided in Appendix B.



### 3.1.1 ON-SITE SOIL SAMPLE LABORATORY RESULTS

#### 3.1.1.1 GASOLINE-RANGE ORGANICS

A total of 21 soil samples collected from six on-site borings (B-7, B-8, and SVE-2 through SVE-5) were tested for gasoline-range organics by Method NWTPH-Gx. Gasoline-range organics were detected in five of six boring locations, in all but boring B-6. Where detected in nine of 21 soil samples, gasoline concentrations exceeded the MTCA Method A soil cleanup level for unrestricted land use of 30 milligrams per kilogram. The highest gasoline-range organic concentrations were detected in soil samples from borings B-7 (1,730 milligrams per kilogram), SVE-2 (6,700 milligrams per kilogram), and SVE-3 (3,820 milligrams per kilogram). Consistent with photoionization detector screening observations maximum gasoline concentrations were detected at depths between 8 and 13 feet below ground surface depending on boring locations. Field observations indicate that in boring SVE-5, gasoline-range organics appear to extend to a depth of approximately 12 feet below ground surface. Gasoline and related organic testing data are summarized in Table 1. Laboratory reports for on-site soil samples are included in Appendix C.

#### 3.1.1.2 VOLATILE GASOLINE CONSTITUENTS

A total of 21 soil samples collected from the six on-site borings were analyzed for volatile gasoline constituents by US Environmental Protection Agency Method 8260B. One or more constituents were detected in at least one soil sample from each of the on-site borings. Benzene was detected at a concentration exceeding the MTCA Method A soil cleanup level for unrestricted land use of 0.03 milligrams per kilogram in all borings except SVE-4. As with gasoline-range organics, the vertical extent of volatile gasoline constituents in soil has been generally delineated. Other volatile organic compounds were not detected among the soil samples analyzed.

#### 3.1.1.3 LEAD

A total of six soil samples collected from gasoline-contaminated on-site borings were analyzed for lead by US Environmental Protection Agency Method 6010C. Lead was detected in each of the six soil samples analyzed. Lead concentrations in the samples did not exceed the typical background concentration for lead in soil of 17 milligrams per kilogram, with is far below the MTCA Method A unrestricted land use cleanup level (250 milligrams per kilogram). These results indicate that no obvious leaded gasoline release has occurred at the site.

## 3.2 OFF-SITE SOIL SAMPLING

On August 13 through 16, 2012, soil samples were collected from seven off-site borings (B-9 through B-16) located in the West Fourth Plain Boulevard right-of-way south of the site (Figure 6). In order to avoid potential underground utilities, the first 10 feet of each off-site boring was advanced using an air-knife with soil sampling at 2-3 foot intervals using a hand auger. Direct-push drilling commenced after a depth of 10 feet had been achieved with the air-knife. At each

drilling location, EES retrieved, examined, and logged soils. Each boring utilized for soil sampling was completed to a depth ranging from 20 to 30 feet below ground surface.

A summary of vapor screening results (in parts per million by volume) and observations in each boring is summarized in the table below along with information regarding the total depth of each boring.

BORING	MAXIMUM VAPOR SCREENING RESULT & DEPTH (parts per million by volume)	ODOR OR SHEEN?	TOTAL DEPTH (feet)
B-9	0.4 at 3' and 9'	No	20
B-10	4.4 at 9'	No	20
B-11	1,152 at 6'	Yes	30
B-12	2.1 at 6'	No	20
B-13	1.8 at 9'	No	20
B-14	0.9 at 3'	No	20
B-15	2.8 at 6'	No	20
B-16	2.7 at 18'	No	20

As indicated in the table above, indications of fuel impacts were observed at boring B-11, located immediately south of the Plaid fuel pump area. Detailed information regarding photoionization detector screening results and field observations is provided on the boring logs included in Appendix A. Soil samples collected for laboratory analysis were picked up daily at the site by a courier, and delivered to Apex Labs for laboratory analysis.

### 3.2.1 SOIL SAMPLE LABORATORY RESULTS

#### 3.2.1.1 GASOLINE-RANGE ORGANICS

A total of 36 soil samples collected from eight right-of-way borings (B-9 through B-16) were tested for gasoline-range organics by Method NWTPH-Gx. Gasoline-range organics were not detected in seven of the eight borings, the exception being two samples collected from boring B-11. Gasoline-range organics were detected in B-11 at depths of 6 feet (20,400 milligrams per kilogram) and 9 feet (1,560 milligrams per kilogram). Both detections exceeded the MTCA Method A soil cleanup level for unrestricted land use of 30 milligrams per kilogram. No gasoline-range organics were detected in deeper soil samples collected between 11 and 29 feet in boring B-11, indicating that the vertical extent of contamination has been adequately delineated in this area. Gasoline-range organic testing data are summarized in Table 1. Laboratory reports for right-of-way soil samples are included in Appendix C.

### 3.2.1.2 DIESEL- AND HEAVY OIL-RANGE ORGANICS

In an effort to determine whether other fuel impacts were present in this area, nine soil samples collected from select off-site borings were analyzed for diesel- and heavy oil-range organics by Method NWTPH-Dx. Heavy oil-range organics were not detected in the nine samples analyzed. Diesel-range organics were detected in one soil sample, collected at a depth of 6 feet in boring B-11. However, the contract laboratory indicated that the detection is due to overlap from a gasoline-range product and non-gasoline fuel impacts therefore are not suspected. As mentioned above, gasoline-range organics in this sample exceed the MTCA Method A soil cleanup level for unrestricted land use.

### 3.2.1.3 VOLATILE GASOLINE CONSTITUENTS

Volatile gasoline-related constituents were not detected in 30 of the 32 samples analyzed by US Environmental Protection Agency Method 8260B. Benzene exceeded the MTCA Method A soil cleanup level for unrestricted land use of 0.03 milligrams per kilogram in both samples collected from B-11. As with gasoline-range organics, the vertical extent of volatile gasoline constituents in soil has been adequately delineated. Other volatile organic compounds were not detected in the 32 samples analyzed.

### 3.2.1.4 LEAD

Four soil samples collected from right-of-way borings were analyzed for lead by US Environmental Protection Agency Method 6010C. Lead was detected in each of the soil samples analyzed. Among these four samples, the maximum lead concentration of 24 milligrams per kilogram slightly exceeded the typical background concentration for lead in soil of 17 milligrams per kilogram. This slight exceedance is not considered indicative of a leaded gasoline release. The MTCA Method A soil cleanup level for unrestricted land use for lead is 250 milligrams per kilogram.

## 3.3 ON-SITE SOIL VAPOR SAMPLING

On August 14 through 20, 2012, soil vapor samples were collected from eight shallow (5 feet below ground surface) and two deep (15 feet below ground surface) temporary borings (Figure 6). In the same timeframe, soil vapor samples were collected from two shallow (screened from 5-10 feet below ground surface) and two deep (screened from 15-20 feet below ground surface) soil vapor extraction test wells (Figure 6). Soil vapor samples were collected in accordance with the standard operating procedure included in Appendix D.

### 3.3.1 SOIL VAPOR SAMPLE LABORATORY RESULTS

#### 3.3.1.1 VOLATILE GASOLINE CONSTITUENTS

Fourteen soil vapor samples collected from both temporary borings and soil vapor extraction test wells were analyzed for volatile gasoline constituents by US Environmental Protection Agency Method TO-15. Analytical results were compared to MTCA Method B soil gas screening levels from Table B-1 of the guidance document *Guidance for Evaluating Soil Vapor Intrusion in*

*Washington State; Investigation and Remedial Action.* Soil vapor concentrations exceeding MTCA Method B soil gas screening levels were not detected in the soil vapor samples collected from temporary borings S-6, S-9, S-10, S-11, or S-13. In vapor samples collected from temporary borings S-1, S-2, S-3, S-4, and S-7 only low levels of volatile gasoline constituents were detected, but benzene slightly exceeded Method B soil vapor screening levels. Soil vapor samples collected from soil vapor extraction wells SVE-2 (S-12), SVE-3 (S-5), SVE-4, and SVE-5 (S-8) yielded multiple volatile gasoline constituent concentrations exceeding MTCA Method B soil gas screening levels. Soil vapor sample analytical results are summarized in Table 2. Benzene concentrations in soil vapor are illustrated in Figure 8.

### 3.3.1.2 OTHER VOLATILE ORGANIC COMPOUNDS

The soil vapor samples also indicated the presence of volatile organic compounds not associated with gasoline. Non-gasoline volatile organic compounds detected in soil vapor samples included tetrachloroethene, trichloroethene, 2-butanone, carbon tetrachloride, and/or 1,1,1-trichloroethane. Of these compounds, tetrachloroethene and carbon tetrachloride were detected at concentrations exceeding MTCA Method B soil gas screening levels. The concentration of one or both of these compounds exceeded screening levels in all borings/soil vapor extraction wells except S-4, S-6, and S-7. The greatest tetrachloroethene concentrations were detected in shallow soil vapor extraction wells SVE-3 and SVE-5.

## 4 PRELIMINARY SOIL VAPOR EXTRACTION TESTING

Based on the 2011-2012 site investigation findings, soils and subsurface vapors located near the current and historical fuel pump island were determined to be contaminated with gasoline and related volatile organic compounds, as well as other chlorinated volatile compounds unrelated to Plaid's operations. Identified gasoline-related impacts exceeding default MTCA Method A soil cleanup levels appear to be concentrated in a relatively small area measuring approximately 20 by 30 feet, extending to maximum depths of less than 15 feet (Figures 7 through 9). In accordance with the work plan dated August 6, 2012, EES performed a preliminary soil vapor extraction pilot test at the site in an effort to evaluate the performance and potential effectiveness of this technology to address identified soil impacts.

This preliminary soil vapor extraction pilot test was performed on October 4 and 5, 2012. The test utilized the five-well array installed at the pump island area during 2012 investigation work (Sections 2 and 3). This well network includes three "shallow-zone" wells screened at depths between 5 and 10 feet (SVE-1, SVE-3, SVE-5), and two "deep-zone" wells (SVE-2, SVE-4) screened at 15 to 20 foot depths. All five test wells are constructed using two-inch diameter schedule-40 PVC casing fitted with 0.02-inch screen slots.

The pilot test was intended to observe subsurface influence across the well network based on vacuum applied individually at one shallow zone well (SVE-1) and one deep zone well (SVE-2). Test results are preliminary in nature because the relatively brief test duration (four to six hours per well) is unlikely to be fully representative of stable operating conditions. However, the findings of this preliminary test adequately demonstrate that soil vapor extraction is likely to be

an effective remedial technology for identified contaminants based on observed conditions and performance.

## 4.1 APPROACH

A one-horsepower Rotron DR404 blower rated at 100 cubic feet per minute was used to apply vacuum individually to each of two extraction wells, first at SVE-1 (October 4) and then at SVE-2 (October 5). The extraction wellhead was connected to the blower using piping and quick connect hoses plumbed to a vapor/water separator (condensate “knockout tank”) equipped with a vacuum gauge and dilution inlet valve. Extracted vapors were routed from the blower to a 55-gallon canister filled with granular activated carbon purposed to treat vapor-phase organic compound exhausts prior to discharge to the atmosphere via a 10-foot tall exhaust stack. The system was equipped with monitoring/sampling ports located upstream of the blower and downstream from the carbon treatment canister.

During the pilot test, vacuum was measured at approximately 15-minute intervals using a set of magnehelic gauges capable of measuring positive and negative air pressures from 0.01 to 50 inches of water. A photoionization detector was used to screen total volatile organic vapor concentrations in system exhaust air stream, both pre- and post-carbon treatment. Exhaust air velocity through the test extraction system was measured with an anemometer.

EES collected samples of the exhaust air at start-up, and just before test end, from each of the wellheads at both SVE-1 and SVE-2. Samples were collected using laboratory evacuated and cleaned six-liter Summa canisters. The vapor samples were shipped to Air Toxics Laboratory (Folsom, California) and analyzed for gasoline-range organics by US Environmental Protection Agency TO-3, and volatile organic compounds by US Environmental Protection Agency Method TO-15.

## 4.2 SOIL VAPOR EXTRACTION TEST RESULTS

### 4.2.1 SHALLOW ZONE - SVE-1

Shallow soil vapor extraction well SVE-1 was evaluated on October 4, 2012. This well is screened from 5 to 10 feet below ground surface. Test parameters such as induced vacuum, airflow, volatile concentrations, and exhaust temperature generally appeared to stabilize after approximately four hours. Vapor extraction from SVE-1 was applied for a test period of 330 minutes (5.5 hours). Supporting field measurements are summarized in Tables 3 and 4.

- During the initial 90 minutes of the test, the blower pressure relief valve was left open to allow the system to equilibrate. The dilution valve was closed at the 90 minute point, at which time airflow at the SVE-1 wellhead was reduced from 18 to 3 cubic feet per minute (Table 3). Near the end of the 5.5 hour test, induced airflow at SVE-1 appears to have stabilized at approximately 1 to 2 cubic feet per minute.
- Applied vacuum at the wellhead remained stable throughout the test at approximately 45 inches of water.

- Field-measured volatile vapor concentrations at the wellhead ranged between 1,782 and 3,569 parts per million by volume, as measured by photoionization detector. Observed concentrations increased over time during the test. No volatiles were measured in the exhaust stream measured downstream of the carbon filtration media.
- While extracting air from SVE-1, radial subsurface vacuum influence was observed at monitoring point SVE-3, located approximately 6 feet from SVE-1 (Table 4). A trace level of induced airflow (1 to 2 liters per hour) was observed at SVE-3 during application of vapor extraction at SVE-1. Induced vacuum and airflow were not measured at other more distant monitoring wells during the shallow-zone test at SVE-1.
- Vapor samples were collected at the start and conclusion of the 5.5 hour test and submitted for TO-3 (gasoline) and TO-15 (volatiles) analyses. Laboratory analytical results (Appendix C and Table 2) are consistent with field observations and indicate increasing concentrations as the extraction test progressed, as follows:
  - Gasoline-range vapor concentrations ranged between 59,000,000 (starting) and 74,000,000 (concluding) micrograms per cubic meter.
  - Benzene concentrations ranged between 240,000 (starting) and 330,000 (concluding) micrograms per cubic meter. Concentrations of other common gasoline additives (toluene, ethylbenzene, xylenes) exceeded 1,000,000 micrograms per cubic meter in aggregate.
  - Because of elevated analytical detection limits caused by the high gasoline and constituent concentrations, other volatile compounds were not quantified but are likely to be present based on other soil vapor and SVE-2 data collected at the site.

#### 4.2.2 DEEP ZONE - SVE-2

Deep soil vapor extraction well SVE-2 was evaluated on October 5, 2012. This well is screened from 15 to 20 feet below ground surface. Test parameters generally appeared to stabilize after approximately 3 hours. Vapor extraction from SVE-2 was continued for a test period of 240 minutes (4 hours). Supporting field measurements are summarized in Tables 5 and 6.

- Airflow at the SVE-2 wellhead was initially measured at 43 cubic feet per minute (Table 5). Near the end of the 4-hour test, airflow appears to have stabilized at approximately 39 cubic feet per minute.
- Applied vacuum at the wellhead remained stable throughout the test at approximately 8 inches of water.
- Field-measured volatile vapor concentrations at the wellhead ranged between approximately 2 and 31 parts per million by volume, as measured by photoionization detector. No volatiles were measured in the exhaust stream measured downstream of the carbon filtration media.
- While extracting air from SVE-2, trace-level but fairly uniform radial subsurface vacuum influence (below 0.1 inches of water column vacuum) was observed at surrounding monitoring points SVE-1, SVE-3, SVE-4, and SVE-5, located at distances

between 10 to 15 feet from this extraction well. Well SVE-4 is the only other well screened in the same 15-20 depth interval as extraction well SVE-2 and vacuum influence observed at SVE-4 ranged between 0.02 and 0.06 inches of water.

- Induced airflow was not observed at surrounding monitoring wells during vapor extraction testing at SVE-2.
- Vapor samples were collected at the start and conclusion of the 4-hour test and submitted for TO-3 (gasoline) and TO-15 (volatiles) analyses. Laboratory analytical results (Appendix C and Table 2) indicate generally stable or increasing volatile concentrations as the extraction test progressed, as follows:
  - Gasoline-range vapor concentrations ranged between 20,000 (starting) and 42,000 (concluding) micrograms per cubic meter.
  - Benzene concentrations ranged between 50 (starting) and 36 (concluding) micrograms per cubic meter. Concentrations of other common gasoline additives (toluene, ethylbenzene, xylenes) exceeded 3,000 micrograms per cubic meter in aggregate.
  - Chlorinated compounds were detected among extracted vapors, including tetrachloroethene (120 to 130 micrograms per cubic meter) and carbon tetrachloride (18 micrograms per cubic meter).

## 5 CONCLUSIONS AND RECOMMENDATIONS

Site assessment activities conducted in August 2012 included the collection of soil and soil vapor samples both on-site, and in the W. Fourth Plain Boulevard right-of-way south of the site.

Significant findings of assessment activities include the following:

- Gasoline and related constituent impacts to soil at concentrations exceeding MTCA Method A cleanup levels were identified at the on-site fuel pump area, and extending off-site to the south beneath the public sidewalk and W. Fourth Plain Boulevard right-of-way.
- The extent of identified gasoline-related impacts exceeding MTCA Method-A default soil cleanup levels appear to cover an area measuring approximately 20 by 30 feet, extending to depths of less than 15 feet deep.
- Identified gasoline impacts in soil extend off-site beneath the public right-of-way immediately south of the Plaid site, but do not appear to be in direct contact with known underground utility infrastructure, based on site characterization data and information provided by the City of Vancouver (see Figure 9).
- Soil vapor data are generally consistent with identified gasoline impacts to soil, with the greatest vapor concentrations centered immediately south of the Plaid fuel dispenser island. Gasoline-related soil vapor concentrations beyond the margins of the fueling area are orders of magnitude lower than where the greatest levels are identified at the fuel pump island, indicating the gasoline source area has been delineated on-site.

- Groundwater has not been encountered at maximum site exploration depths exceeding 40 feet, and is not anticipated within 60 to 80 feet of the ground surface in the site vicinity. Gasoline-contaminated soils at the site appear to be separated from groundwater by a minimum of 25 feet. Thus, gasoline releases at the site are not expected to have impacted groundwater.
- Non-gasoline volatile organic compounds detected in soil vapor samples included tetrachloroethene and other chlorinated compounds typically associated with dry cleaning, degreasing, paint stripping, and other commercial/industrial activities that are inconsistent with operation of the Plaid retail fueling facility. The greatest tetrachloroethene concentrations were detected at shallow soil vapor extraction well locations SVE-3 and SVE-5. Tetrachloroethene was identified at relatively uniform concentrations among four widespread, deeper soil gas samples.

Based on the results of site investigation activities conducted to date, EES believes that gasoline impacts exceeding Ecology cleanup criteria appear limited to a relatively small portion of the site near the current and historical (pre-Plaid) fueling island, and extend southwards into the adjoining sidewalk and roadway area. Deeper soils and groundwater are not known or suspected to be impacted by the gasoline release.

Chlorinated solvent impacts have also been identified in the same general area where gasoline contamination is present. The source(s) and distribution of solvents have not been confirmed or fully delineated. The presence of solvents and other possible non-gasoline chemical impacts is unrelated to Plaid's well-documented history of on-site retail gasoline fueling operations.

Identified soil and soil vapor impacts are most concentrated among shallow fine-grained soils centered near the fueling island. The most highly contaminated soils appear to have relatively low permeability, as confirmed by a limited zone of influence observed during soil vapor extraction testing in October 2012. However, induced airflow and vacuum influence were observed within the shallow contaminated soil zone, and the preliminary test results indicate that vapor extraction appears to be a promising remedial technology for addressing localized gasoline and other volatile organic chemical impacts.

Plaid is coordinating with the property owner to evaluate next steps with respect to investigation and/or cleanup actions as required under Ecology guidance.



## 6 LIMITATIONS

EES has prepared this report for use by Plaid Pantries and its agents. This report may be made available to the property owner, former site operators, and to regulatory agencies at the discretion of Plaid. This report is not intended for use by others and the information contained herein is not applicable to other sites.

Our interpretation of subsurface conditions is based on field observations and chemical analytical data within the areas explored. Areas with contamination may exist in portions of the site that were not explored or analyzed.

Within the limitations of scope, schedule, and budget, our services have been executed in accordance with generally accepted practices and laws, rules, and regulations at the time that the report was prepared. No other conditions, expressed or implied, should be understood.

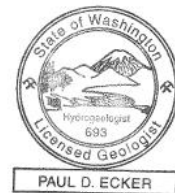
EES Environmental Consulting, Inc.



Leonard Farr Jr., LG  
Principal Geologist



Paul Ecker, LHG  
President



## REFERENCES

PNG Environmental, Inc. 2011. Site Assessment Report - Plaid Pantry Store #112. October 19, 2012.

# Tables

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<b>Table 1</b>	<b>Soil Analytical Results - Gasoline, Diesel, and Related Constituents</b>
<b>Table 2</b>	<b>Soil Vapor Analytical Results - Volatile Organic Compounds</b>
<b>Table 3</b>	<b>Soil Vapor Extraction Pilot Test - SVE-1</b>
<b>Table 4</b>	<b>Soil Vapor Extraction Pilot Test Vacuum Influence - SVE-1</b>
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TABLE 1  
Soil Analytical Results - Gasoline, Diesel, and Related Constituents (mg/kg)  
Plaid Pantry No. 112  
Vancouver, Washington

Location	Date	Sample Depth (feet)	Gasoline	Diesel	Heavy Oil/Lube	Benzene	Toluene	Ethylbenzene	Xylenes	EDB	EDC	MTBE	Naphthalene	Lead	PCE	TCE	2-Butanone	Carbon Tetrachloride	1,1,1-Trichloroethane
MTCA Method A <sup>c</sup> Soil Cleanup Levels																			
Unrestricted Use			100,30 <sup>d</sup>	2,000	2,000	0.03	7	6	9	0.005	NA	0.1	5	250	0.05	0.03	NA	NA	2
B1-3	09/08/2011	3	24 U	59 U	118 U	0.01 U	0.04 U	0.02 U	0.07 U	0.02 U	0.02 U	0.04 U	0.09 U	-	0.02 U	0.02 U	0.44 U	0.02 U	0.02 U
B1-9	09/08/2011	9	22 U	54 U	108 U	0.01 U	0.05 U	0.03 U	0.08 U	0.03 U	0.03 U	0.05 U	0.10 U	8.3	0.03 U	0.03 U	0.51 U	0.03 U	0.03 U
B1-15	09/08/2011	15	21 U	52 U	103 U	0.01 U	0.05 U	0.03 U	0.08 U	0.03 U	0.03 U	0.05 U	0.10 U	-	0.03 U	0.03 U	0.52 U	0.03 U	0.03 U
B2-3	09/07/2011	3	21 U	53 U	107 U	0.01 U	0.04 U	0.02 U	0.06 U	0.02 U	0.02 U	0.04 U	0.09 U	-	0.02 U	0.02 U	0.43 U	0.02 U	0.02 U
B2-9	09/07/2011	9	25 U	25 U <sup>b1</sup>	54 <sup>b1</sup>	0.01 U	0.04 U	0.02 U	0.05 U	0.02 U	0.02 U	0.04 U	0.01 U <sup>f</sup>	-	0.02 U	0.02 U	0.35 U	0.02 U	0.02 U
B2-15	09/09/2011	15	21 U	53 U	105 U	0.01 U	0.03 U	0.01 U	0.04 U	0.01 U	0.01 U	0.03 U	0.05 U	-	0.01 U	0.01 U	0.27 U	0.01 U	0.01 U
B3-3	09/07/2011	3	23 U	57 U	113 U	0.01 U	0.05 U	0.02 U	0.07 U	0.02 U	0.02 U	0.05 U	0.09 U	-	0.02 U	0.02 U	0.47 U	0.02 U	0.02 U
B3-9	09/07/2011	9	26 U	64 U	128 U	0.01 U	0.06 U	0.03 U	0.08 U	0.03 U	0.03 U	0.06 U	0.11 U	12	0.03 U	0.03 U	0.55 U	0.03 U	0.03 U
B4-3	09/07/2011	3	23 U	57 U	114 U	0.01 U	0.05 U	0.03 U	0.08 U	0.03 U	0.03 U	0.05 U	0.10 U	-	0.03 U	0.03 U	0.51 U	0.03 U	0.03 U
B4-9	09/07/2011	9	21 U	53 U	106 U	0.01 U	0.05 U	0.02 U	0.07 U	0.02 U	0.02 U	0.05 U	0.10 U	-	0.02 U	0.02 U	0.49 U	0.02 U	0.02 U
B5-3	09/08/2011	3	22 U	56 U	112 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B5-6	09/08/2011	6	2,900 <sup>a</sup>	>57 <sup>e</sup>	114 U	0.28 U	1.12 U	12	74	0.56 U	0.56 U	1.1 U	14	21	0.56 U	0.56 U	11 U	0.56 U	0.56 U
B5-9	09/08/2011	9	4,070 <sup>a</sup>	>54 <sup>e</sup>	108 U	0.24 U	0.95 U	29	121	0.48 U	0.48 U	0.95 U	8.8	11	0.48 U	0.48 U	9.5 U	0.48 U	0.48 U
B5-12.5	09/08/2011	12.5	444 <sup>a</sup>	638 <sup>b,e</sup>	50 U <sup>b</sup>	2.1	0.13 U	5.3	21	0.06 U	0.06 U	0.13 U	1.1	13	0.06 U	0.06 U	1.26 U	0.06 U	0.13 U
B5-20	09/08/2011	20	2.9 U <sup>a</sup>	-	-	0.01 U	0.03 U	0.01 U	0.04 U	0.01 U	0.01 U	0.03 U	0.06 U	-	0.01 U	0.01 U	0.29 U	0.01 U	0.01 U
B6-3	09/08/2011	3	22 U	54 U	107 U	0.01 U	0.04 U	0.02 U	0.06 U	0.02 U	0.02 U	0.04 U	0.08 U	-	0.02 U	0.02 U	0.38 U	0.02 U	0.02 U
B6-9	09/08/2011	9	23 U	58 U	116 U	0.01 U	0.04 U	0.02 U	0.06 U	0.02 U	0.02 U	0.04 U	0.07 U	-	0.02 U	0.02 U	0.37 U	0.02 U	0.02 U
B6-12	09/09/2011	12	26 U	64 U	128 U	0.01 U	0.04 U	0.02 U	0.07 U	0.02 U	0.02 U	0.04 U	0.09 U	-	0.02 U	0.02 U	0.44 U	0.02 U	0.02 U
SVE-1/5.0	02/03/2012	5	22 U	55 U	110 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SVE-1/10.0	02/03/2012	10	2,750 <sup>a</sup>	>56.1 <sup>e</sup>	112 U	0.39	48	40	301	0.19 U	0.16 U	0.62 U	13	7.6	0.31 U	0.31 U	6.2 U	0.31 U	0.31 U
PIT S/1.5	02/14/2012	1.5	23 U	25 U <sup>b</sup>	116 <sup>b</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tank Sludge	02/14/2012	N/A	2,410 <sup>a</sup>	172 U <sup>e</sup>	345 U	0.04 J	1.9	2.7	19	0.090 U	0.090 U	0.19 U	7.1 <sup>g</sup>	-	0.09 U	0.09 U	2.8 U	0.09 U	0.09 U
PIT N/2	02/14/2012	2	21 U	52 U	104 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PIT N/6	02/14/2012	6	8.7 U <sup>a</sup>	57 <sup>e</sup>	113 U	0.02 U	0.09 U	0.04 U	0.14	0.04 U	0.04 U	0.09 U	0.17 U	-	0.04 U	0.04 U	0.87 U	0.04 U	0.04 U
PIT S/2	02/14/2012	2	1,320 <sup>a</sup>	54 <sup>e</sup>	109 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PIT S/6	02/14/2012	6	5,800 <sup>a</sup>	62 <sup>e</sup>	124 U	3.4	23	78	411	0.81 U	0.81 U	1.6 U	34	-	0.81 U	0.81 U	16 U	0.81 U	0.81 U
PIT E/2	02/14/2012	2	24 U	60 U	120 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PIT E/6	02/14/2012	6	64,200 <sup>a</sup>	62 <sup>e</sup>	123 U	93	3,570	1,350	9,090	6.5 U	6.5 U	13 U	241	-	6.5 U	6.5 U	182 U	6.5 U	6.5 U
PIT W/2	02/14/2012	2	1,210 <sup>a</sup>	59 <sup>e</sup>	118 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PIT W/6	02/14/2012	6	18,700 <sup>a</sup>	61 <sup>e</sup>	122 U	26	572	296	1,693	1.6 U	1.6 U	3.2 U	67	-	1.6 U	1.6 U	48 U	1.6 U	1.6 U
PIT Floor/6	02/14/2012	6	34,900 <sup>a</sup>	2,660 <sup>b</sup>	81 U <sup>b</sup>	56	1,460	609	3,605	0.81 U	0.81 U	1.6 U	27 <sup>g</sup>	-	0.81 U	0.81 U	105 U	0.81 U	0.81 U

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Plaid Pantry No. 112  
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Location	Date	Sample Depth (feet)	Gasoline	Diesel	Heavy Oil/Lube	Benzene	Toluene	Ethylbenzene	Xylenes	EDB	EDC	MTBE	Naphthalene	Lead	PCE	TCE	2-Butanone	Carbon Tetrachloride	1,1,1- Trichloroethane
MTCA Method A <sup>c</sup> Soil Cleanup Levels																			
Unrestricted Use			100,30 <sup>d</sup>	2,000	2,000	0.03	7	6	9	0.005	NA	0.1	5	250	0.05	0.03	NA	NA	2
B-7/6	08/16/2012	6	<b>473</b> <sup>a</sup>	-	-	0.21 U	0.86 U	2.1	<b>12</b>	0.01 U <sup>g</sup>	0.43 U	0.86 U	1.7 U	-	0.43 U	0.43 U	8.6 U	0.43 U	0.43 U
B-7/9	08/16/2012	9	<b>1,730</b> <sup>a</sup>	-	-	<b>0.80</b>	0.82 U	0.89	1.2 U	0.41 U	0.41 U	0.82 U	1.6 U	-	0.41 U	0.41 U	8.2 U	0.41 U	0.41 U
B-7/13	08/16/2012	13	<b>303</b> <sup>a</sup>	-	-	<b>0.15</b>	0.09 U	0.17	0.25	0.01 U <sup>g</sup>	0.04 U	0.09 U	0.30	-	0.04 U	0.04 U	0.89 U	0.04 U	0.04 U
B-7/14	08/16/2012	14	5.8 U <sup>a</sup>	-	-	0.01 U	0.06 U	0.03 U	0.09 U	0.01 U <sup>g</sup>	0.03 U	0.06 U	0.12 U	-	0.03 U	0.03 U	0.58 U	0.03 U	0.03 U
B-8/6	08/16/2012	6	8.4 U <sup>a</sup>	-	-	0.03	0.08 U	0.07	0.30	0.01 U <sup>g</sup>	0.04 U	0.08 U	0.17 U	-	0.04 U	0.04 U	0.84 U	0.04 U	0.04 U
B-8/9	08/16/2012	9	7.4 U <sup>a</sup>	-	-	<b>0.04</b>	0.07 U	0.04 U	0.25	0.04 U	0.04 U	0.07 U	0.15 U	-	0.04 U	0.04 U	0.74 U	0.04 U	0.04 U
B-8/13	08/16/2012	13	8.9 U <sup>a</sup>	-	-	0.02 U	0.09 U	0.04 U	0.13 U	0.01 U <sup>g</sup>	0.04 U	0.09 U	0.18 U	-	0.04 U	0.04 U	0.88 U	0.04 U	0.04 U
B-9/3	08/13/2012	3	5.7 U <sup>a</sup>	59 U	117 U	0.01 U	0.06 U	0.03 U	0.09 U	0.03 U	0.03 U	0.06 U	0.11 U	-	0.03 U	0.03 U	0.57 U	0.03 U	0.03 U
B-9/6	08/13/2012	6	5.2 U <sup>a</sup>	-	-	0.01 U	0.05 U	0.03 U	0.08 U	0.03 U	0.03 U	0.05 U	0.10 U	-	0.03 U	0.03 U	0.52 U	0.03 U	0.03 U
B-9/9	08/13/2012	9	8.2 U <sup>a</sup>	-	-	0.02 U	0.08 U	0.04 U	0.12 U	0.04 U	0.04 U	0.08 U	0.16 U	-	0.04 U	0.04 U	0.82 U	0.04 U	0.04 U
B-9/13	08/13/2012	13	5.9 U <sup>a</sup>	-	-	0.01 U	0.06 U	0.03 U	0.09 U	0.03 U	0.03 U	0.06 U	0.12 U	-	0.03 U	0.03 U	0.59 U	0.03 U	0.03 U
B-10/3	08/13/2012	3	5.4 U <sup>a</sup>	55 U	109 U	0.01 U	0.05 U	0.03 U	0.08 U	0.03 U	0.03 U	0.05 U	0.11 U	-	0.03 U	0.03 U	0.54 U	0.03 U	0.03 U
B-10/6	08/13/2012	6	9.2 U <sup>a</sup>	-	-	0.02 U	0.09 U	0.05 U	0.14 U	0.05 U	0.05 U	0.09 U	0.18 U	-	0.05 U	0.05 U	0.92 U	0.05 U	0.05 U
B-10/9	08/13/2012	9	11 U <sup>a</sup>	-	-	0.03 U	0.11 U	0.06 U	0.17 U	0.06 U	0.06 U	0.11 U	0.22 U	-	0.06 U	0.06 U	1.1 U	0.06 U	0.06 U
B-10/13	08/13/2012	13	4.7 U <sup>a</sup>	-	-	0.01 U	0.05 U	0.02 U	0.07 U	0.02 U	0.02 U	0.05 U	0.09 U	-	0.02 U	0.02 U	0.47 U	0.02 U	0.02 U
B-10/18	08/13/2012	18	20 U	51 U	102 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-11/3	08/14/2012	3	13 <sup>a</sup>	56 U	113 U	0.02 U	0.07 U	0.03 U	0.10 U	0.03 U	0.03 U	0.07 U	0.14 U	-	0.03 U	0.03 U	0.68 U	0.03 U	0.03 U
B-11/6	08/14/2012	6	<b>20,400</b> <sup>a</sup>	62 X	123 U	<b>3.7</b>	0.81 U	3.9	1.6 U	0.41 U	0.41 U	0.81 U	<b>57</b>	24	0.41 U	0.41 U	8.1 U	0.41 U	0.41 U
B-11/9	08/14/2012	9	<b>1,560</b> <sup>a</sup>	-	-	<b>0.47</b>	0.10 U	0.62	0.14 U	0.05 U	0.05 U	0.10 U	1.9	-	0.05 U	0.05 U	2.7 U	0.05 U	0.05 U
B-11/11	08/14/2012	11	5.7 U <sup>a</sup>	-	-	0.01 U	0.06 U	0.03 U	0.09 U	0.01 U <sup>g</sup>	0.03 U	0.06 U	0.11 U	3.3	0.03 U	0.03 U	0.57 U	0.03 U	0.03 U
B-11/17	08/14/2012	17	5.6 U <sup>a</sup>	-	-	0.01 U	0.06 U	0.03 U	0.08 U	0.03 U	0.03 U	0.06 U	0.11 U	-	0.03 U	0.03 U	0.56 U	0.03 U	0.03 U
B-11/23	08/14/2012	23	20 U	51 U	102 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-11/29	08/14/2012	29	20 U	51 U	102 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-12/3	08/14/2012	3	5.2 U <sup>a</sup>	58 U	116 U	0.01 U	0.05 U	0.03 U	0.08 U	0.03 U	0.03 U	0.05 U	0.10 U	-	0.03 U	0.03 U	0.52 U	0.03 U	0.03 U
B-12/6	08/14/2012	6	8.1 U <sup>a</sup>	-	-	0.02 U	0.08 U	0.04 U	0.12 U	0.04 U	0.04 U	0.08 U	0.16 U	-	0.04 U	0.04 U	0.81 U	0.04 U	0.04 U
B-12/9	08/14/2012	9	9.6 U <sup>a</sup>	-	-	0.02 U	0.10 U	0.05 U	0.14 U	0.05 U	0.05 U	0.10 U	0.19 U	-	0.05 U	0.05 U	0.96 U	0.05 U	0.05 U
B-12/13	08/14/2012	13	8.1 U <sup>a</sup>	-	-	0.02 U	0.08 U	0.04 U	0.12 U	0.04 U	0.04 U	0.08 U	0.16 U	-	0.04 U	0.04 U	0.81 U	0.04 U	0.04 U
B-12/18	08/14/2012	18	20 U	50 U	100 U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-13/3	08/15/2012	3	7.8 U <sup>a</sup>	-	-	0.02 U	0.08 U	0.04 U	0.12 U	0.04 U	0.04 U	0.08 U	0.16 U	-	0.04 U	0.04 U	0.78 U	0.04 U	0.04 U
B-13/6	08/15/2012	6	6.5 U <sup>a</sup>	-	-	0.02 U	0.06 U	0.03 U	0.10 U	0.03 U	0.03 U	0.06 U	0.13 U	-	0.03 U	0.03 U	0.65 U	0.03 U	0.03 U
B-13/9	08/15/2012	9	6.9 U <sup>a</sup>	-	-	0.02 U	0.07 U	0.03 U	0.10 U	0.03 U	0.03 U	0.07 U	0.14 U	-	0.03 U	0.03 U	0.69 U	0.03 U	0.03 U
B-13/13	08/15/2012	13	8.0 U <sup>a</sup>	-	-	0.02 U	0.08 U	0.04 U	0.12 U	0.04 U	0.04 U	0.08 U	0.16 U	-	0.04 U	0.04 U	0.80 U	0.04 U	0.04 U
B-14/3	08/15/2012	3	6.6 U <sup>a</sup>	-	-	0.02 U	0.07 U	0.03 U	0.10 U	0.03 U	0.03 U	0.07 U	0.13 U	-	0.03 U	0.03 U	0.66 U	0.03 U	0.03 U
B-14/6	08/15/2012	6	7.0 U <sup>a</sup>	-	-	0.02 U	0.07 U	0.04 U	0.11 U	0.04 U	0.04 U	0.07 U	0.14 U	-	0.04 U	0.04 U	0.70 U	0.04 U	0.04 U
B-14/9	08/15/2012	9	7.6 U <sup>a</sup>	-	-	0.02 U	0.08 U	0.04 U	0.11 U	0.04 U	0.04 U	0.08 U	0.15 U	-	0.04 U	0.04 U	0.76 U	0.04 U	0.04 U
B-14/13	08/15/2012	13	6.2 U <sup>a</sup>	-	-	0.02 U	0.06 U	0.03 U	0.09 U	0.03 U	0.03 U	0.06 U	0.13 U	-	0.03 U	0.03 U	0.62 U	0.03 U	0.03 U
B-15/3	08/15/2012	3	6.6 U <sup>a</sup>	-	-	0.02 U	0.07 U	0.03 U	0.10 U	0.03 U	0.03 U	0.07 U	0.13 U	-	0.03 U	0.03 U	0.66 U	0.03 U	0.03 U
B-15/6	08/15/2012	6	7.9 U <sup>a</sup>	-	-	0.02 U	0.08 U	0.04 U	0.12 U	0.04 U	0.04 U	0.08 U	0.16 U	-	0.04 U	0.04 U	0.79 U	0.04 U	0.04 U
B-15/9	08/15/2012	9	7.6 U <sup>a</sup>	-	-	0.02 U	0.08 U	0.04 U	0.11 U	0.04 U	0.04 U	0.08 U	0.15 U	-	0.04 U	0.04 U	0.76 U	0.04 U	0.04 U
B-15/13	08/15/2012	13	6.2 U <sup>a</sup>	-	-	0.02 U	0.06 U	0.03 U	0.09 U	0.03 U	0.03 U	0.06 U	0.12 U	-	0.03 U	0.03 U	0.62 U	0.03 U	0.03 U
B-16/6	08/16/2012	6	5.8 U <sup>a</sup>	-	-	0.01 U	0.06 U	0.03 U	0.09 U	0.01 U <sup>g</sup>	0.03 U	0.06 U	0.17 U	11	0.03 U	0.03 U	0.58 U	0.03 U	0.03 U
B-16/9	08/16/2012	9	8.0 U <sup>a</sup>	-	-	0.02 U	0.08 U	0.04 U	1.2 U	0.04 U	0.04 U	0.08 U	0.16 U	12	0.04 U	0.04 U	0.80 U	0.04 U	0.04 U
B-16/13	08/16/2012	13	5.9 U <sup>a</sup>	-	-	0.01 U	0.06 U	0.03 U	0.09 U	0.01 U <sup>g</sup>	0.03 U	0.06 U	0.12 U	-	0.03 U	0.03 U	0.59 U	0.03 U	0.03 U

TABLE 1 Soil Analytical Results - Gasoline, Diesel, and Related Constituents (mg/kg) Plaid Pantry No. 112 Vancouver, Washington																			
Location	Date	Sample Depth (feet)	Gasoline	Diesel	Heavy Oil/Lube	Benzene	Toluene	Ethylbenzene	Xylenes	EDB	EDC	MTBE	Naphthalene	Lead	PCE	TCE	2-Butanone	Carbon Tetrachloride	1,1,1- Trichloroethane
MTCA Method A <sup>c</sup> Soil Cleanup Levels																			
Unrestricted Use			100,30 <sup>d</sup>	2,000	2,000	0.03	7	6	9	0.005	NA	0.1	5	250	0.05	0.03	NA	NA	2
SVE-2/8	08/16/2012	8	6,800 <sup>a</sup>	-	-	14	48	96	436	0.45 U	0.45 U	0.90 U	27	11	0.45 U	0.45 U	9.0 U	0.45 U	0.45 U
SVE-2/12	08/16/2012	12	5.7 U <sup>a</sup>	-	-	0.01 U	0.06 U	0.03 U	0.09 U	0.01 U <sup>g</sup>	0.03 U	0.06 U	0.11 U	2.8	0.03 U	0.03 U	0.57 U	0.03 U	0.03 U
SVE-2/16	08/16/2012	16	7.0 U <sup>a</sup>	-	-	0.02 U	0.07 U	0.04 U	0.11 U	0.01 U <sup>g</sup>	0.04 U	0.07 U	0.14 U	-	0.04 U	0.04 U	0.70 U	0.04 U	0.04 U
SVE-2/20	08/16/2012	20	5.9 U <sup>a</sup>	-	-	0.01 U	0.06 U	0.03 U	0.09 U	0.03 U	0.03 U	0.06 U	0.12 U	-	0.03 U	0.03 U	0.59 U	0.03 U	0.03 U
SVE-3/5	08/16/2012	5	-	-	-	-	-	-	-	-	-	-	-	13	-	-	-	-	-
SVE-3/8	08/16/2012	8	3,820 <sup>a</sup>	-	-	6.5	117	70	389	0.60 U	0.60 U	1.2 U	16	10	0.60 U	0.60 U	12 U	0.60 U	0.60 U
SVE-3/12.5	08/16/2012	12.5	216 <sup>a</sup>	-	-	1.5	4.8	3.9	21	0.01 U <sup>g</sup>	0.36 U	0.72 U	1.4 U	-	0.36 U	0.36 U	7.2 U	0.36 U	0.36 U
SVE-3/14	08/16/2012	14	6.3 U <sup>a</sup>	-	-	0.02 U	0.06 U	0.03 U	0.09 U	0.01 U <sup>g</sup>	0.03 U	0.06 U	0.13 U	-	0.03 U	0.03 U	0.63 U	0.03 U	0.03 U
SVE-3/20	08/16/2012	20	6.0 U <sup>a</sup>	-	-	0.01 U	0.06 U	0.03 U	0.09 U	0.03 U	0.03 U	0.06 U	0.12 U	-	0.03 U	0.03 U	0.60 U	0.03 U	0.03 U
SVE-4/6	08/16/2012	6	8.1 U <sup>a</sup>	-	-	0.02 U	0.08 U	0.04 U	0.12 U	0.01 U <sup>g</sup>	0.04 U	0.08 U	0.16 U	-	0.04 U	0.04 U	0.81 U	0.04 U	0.04 U
SVE-4/9	08/16/2012	9	97 <sup>a</sup>	-	-	0.02	0.07 U	0.30	0.58	0.04 U	0.04 U	0.07 U	1.4	-	0.04 U	0.04 U	0.72 U	0.04 U	0.04 U
SVE-4/11	08/16/2012	11	54 <sup>a</sup>	-	-	0.03	0.15	0.82	1.5	0.01 U <sup>g</sup>	0.04 U	0.08 U	1.4	-	0.04 U	0.04 U	0.76 U	0.04 U	0.04 U
SVE-4/14	08/16/2012	14	6.0 U <sup>a</sup>	-	-	0.02 U	0.06 U	0.03 U	0.09 U	0.01 U <sup>g</sup>	0.03 U	0.06 U	0.12 U	-	0.03 U	0.03 U	0.60 U	0.03 U	0.03 U
SVE-5/5	08/16/2012	5	6.1 U <sup>a</sup>	-	-	0.02 U	0.06 U	0.03 U	0.09 U	0.01 U <sup>g</sup>	0.03 U	0.06 U	0.12 U	7.5	0.03 U	0.03 U	0.61 U	0.03 U	0.03 U
SVE-5/7.5	08/16/2012	7.5	793 <sup>a</sup>	-	-	0.15	9.0	7.4	57	0.16 U	0.16 U	0.32 U	21	11	0.16 U	0.16 U	3.2 U	0.16 U	0.16 U

**Notes:**  
Gasoline, Diesel, and Heavy Oil/Lube by Method by NWTPH-HCID unless otherwise noted.  
Volatiles by EPA Method 8260B  
<sup>a</sup> Gasoline by Method NWTPH-Gx/EPA 8260B  
<sup>b</sup> Diesel and Heavy Oil/Lube by Method NWTPH-Dx  
<sup>b1</sup> Diesel and Heavy Oil/Lube by Method NWTPH-Dx with silica-gel cleanup  
<sup>c</sup> Model Toxics Control Act (MTCA) Cleanup Amendments, Method A Soil Cleanup Levels (WDOE, October 12, 2007)  
<sup>d</sup> Per MTCA, the cleanup value for gasoline is 30 mg/kg if benzene is detected and/or if the sum of the toluene, ethylbenzene, and xylenes is greater than one percent of the gasoline concentration, and 100 mg/kg for all other gasoline mixtures.  
<sup>e</sup> Results in the diesel organics range are due to overlap from a gasoline range product.  
<sup>f</sup> Naphthalene analyzed by EPA Method 8270D SIM. No detections were reported for any of the PAH compounds.  
<sup>g</sup> 1,2-Dibromoethane (EDB) analyzed by EPA 8260B SIM.  
MTBE = Methyl tert-butyl ether  
EDB = 1,2-Dibromoethane  
EDC = 1,2-Dichloroethane  
PCE = Tetrachloroethene  
TCE = Trichloroethene  
mg/kg = milligrams per kilogram  
U = Undetected at method limit shown  
J = Estimated value. Result was below the method reporting limit, but above the method detection limit.  
X = The detection in the diesel range is due to overlap from a gasoline range product.  
- = Not analyzed for this parameter  
**Values in bold** indicate compound was detected at a concentration exceeding the most stringent MTCA Method A standard

TABLE 2																	
Soil Vapor Analytical Results - Volatile Organic Compounds (µg/m³)																	
Plaid Pantry No. 112																	
Vancouver, Washington																	
Location	Sample Depth (feet bgs)	Date	Gasoline	Benzene	Toluene	Ethylbenzene	m,p-Xylene	o-Xylene	EDB	EDC	MTBE	Naphthalene	PCE	TCE	2-Butanone	Carbon Tetrachloride	1,1,1- Trichloroethane
WDOE Soil Gas Screening Levels <sup>a</sup>																	
	Method B		-	3.2/32	7	4,600/46,000	460/4,600 <sup>b</sup>	460/4,600	0.11/1.1	0.96/9.6	96/960	14/140	4.2/42	1/10	NA	1.7/17	48,000/480,000
	Method C		-	32/320	49,000/490,000	10,000/100,000	1,000/10,000 <sup>b</sup>	1,000/10,000	1.1/11	9.6/96	960/9,600	30/300	42/420	10/100	NA	17/170	110,000/1,100,000
August 2012 Soil Vapor Sampling																	
S-1	5	08/14/2012	-	6.1	50	9.6	37	12	1.3 U	0.68 U	0.60 U	4.4	3.7	0.90 U	30	3.8	0.92 U
S-2	5	08/15/2012	-	8.7	72	31	120	43	1.2 U	0.65 U	0.58 U	4.4	32	0.86 U	52	10	0.88 U
S-3	5	08/15/2012	-	3.8	18	2.6	8.2	3.3	1.2 U	0.62 U	0.55 U	4.4	28	0.82 U	16	8.4	0.83 U
S-4	5	08/14/2012	-	10	130	49	180	66	1.2 U	0.63 U	0.56 U	6.2	2.5	0.83 U	38	0.98 U	0.84 U
S-5 (SVE-3)	5-10	08/17/2012	-	82,000	860,000	210,000	900,000	340,000	2,000 U	1,100 U	950 U	5,500 U	2,200	1,400 U	3,100 U	1,600 U	1,400 U
S-6	5	08/14/2012	-	2.9	11	2.0	6.6	2.6	1.4 U	0.74 U	0.66 U	4.8 U	1.7	0.98 U	33	1.2 U	1.0 U
S-7	5	08/16/2012	-	7.7	14	3.1	9.0	5.0	1.3 U	0.71 U	0.63 U	19	2.0	0.94 U	32	1.1 U	0.95 U
S-8 (SVE-8)	5-10	08/17/2012	-	7,900	220,000	86,000	340,000	160,000	1,000 U	530 U	470 U	7,700	2,500	710 U	1,600 U	830 U	720 U
S-9	5	08/15/2012	-	2.1	8.1	1.7	6.0	2.5	1.3 U	0.66 U	0.59 U	4.3 U	6.8	0.88 U	16	1.2	0.89 U
S-10	5	08/14/2012	-	1.7	7.0	1.8	7.1	2.6	1.1 U	0.59 U	0.53 U	6.4	22	0.78 U	19	0.92 U	0.80 U
S-11	15	08/14/2012	-	1.3	9.7	2.2	6.6	2.1	1.3 U	0.69 U	0.62 U	4.5 U	100	0.92 U	12	3.5	1.1
S-12 (SVE-2)	15-20	08/20/2012	-	3,900	22,000	1,400	25,000	17,000	120 U	65 U	75	340 U	130	17 U	47 U	20 U	17 U
S-13	15	08/15/2012	-	1.1	11	0.71	3.1	1.2	1.2 U	0.65 U	0.58 U	4.2 U	230	0.86 U	5.9	52	0.88 U
SVE-4	15-20	08/17/2012	-	560	12,000	4,800	22,000	9,300	130 U	66 U	59 U	620	170	88 U	190 U	100 U	89 U
October 2012 Pilot Test																	
SVE-1 START	5-10	10/04/2012	59,000,000	240,000	2,100,000	200,000	1,100,000	380,000	14,000 U	7,300 U	6,500 U	-	12,000 U	9,700 U	21,000 U	11,000 U	9,800 U
SVE-1 STOP	5-10	10/04/2012	74,000,000	330,000	3,400,000	490,000	2,800,000	1,000,000	19,000 U	10,000 U	8,900 U	-	17,000 U	13,000 U	29,000 U	16,000 U	13,000 U
SVE-2 START	15-20	10/05/2012	20,000	50	1,100	230	1,200	460	91 U	48 U	43 U	-	120	64 U	140 U	75 U	65 U
SVE-2 STOP	15-20	10/05/2012	42,000	36	1,300	410	3,000	1,200	18 U	9.3 U	8.3 U	-	130	12 U	27 U	18	12 U

Notes:

<sup>a</sup> Washington Department of Ecology (WDOE) Soil Vapor Intrusion DRAFT Guidance, Method B and Method C Soil Gas Screening Levels (WDOE, October 2009)

<sup>b</sup> Screening levels for m-xylene

Volatiles by EPA Method TO-15

MTBE = Methyl tert-butyl ether

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

PCE = Tetrachloroethene

TCE = Trichloroethene

µg/m³ = Micrograms per cubic meter

**bold** values indicate concentrations above a listed screening level

U = Undetected at method reporting limit shown

NA = not applicable

bgs - below ground surface

- = not analyzed for this parameter

**TABLE 3**  
**Soil Vapor Extraction Pilot Test**

Plaid Pantry #112  
Vancouver, Washington

Sample Point Collection Date	SVE-1 10/4/2012				
Elapsed Time (minutes)	Applied Vacuum (inches of water)	TPH Exhaust Concentration (ppmv) PID <sup>a</sup>	Exhaust Velocity (feet/minute)	Flow (cfm)	Exhaust Temperature at Stack (F)
0	45	2,548	325	23	58.4
15	45	2,119	275	20	61.7
30	45	1,866	275	20	70.6
45	43	1,782	285	20	72.6
60	43	1,968	275	20	72.8
75	43	1,917	265	19	75.6
90 <sup>c</sup>	42	1,812	255	18	80.0
90 <sup>d</sup>	48	2,551	35	3	80.0
105	46	2,695	30	2	81.6
120	45	2,944	35	3	84.9
135	45	3,292	30	2	85.8
150	45	3,148	30	2	85.5
165	45	3,475	30	2	87.9
180	45	3,569	30	2	89.4
195	45	2,883	25	2	89.9
210	45	2,919	25	2	89.6
225	45	3,179	25	2	92.4
240	45	3,084	25	2	92.6
255	45	3,105	25	2	91.2
270	45	2,987	25	2	91.6
285	45	2,797	20	1	89.8
300	45	2,828	20	1	90.0
315	45	3,134	20	1	90.4
330	45	3,173	20	1	90.9

**Notes:**

TPH = Total Petroleum Hydrocarbons

cfm = cubic feet per minute

ppmv = parts per million volume

ug/m<sup>3</sup> = Micrograms per cubic meter

<sup>a</sup> Field-measured total volatiles using a photo-ionization detector (PID).

<sup>b</sup> Laboratory-reported gasoline-range TPH by USEPA Method TO-3.

<sup>c</sup> At 90 minutes the air pressure relief valve at knockout tank was tightened. (air dilution)

<sup>d</sup> At 90 minutes the air pressure relief valve at knockout tank was tightened. (air dilution)



**TABLE 4**  
**Soil Vapor Extraction Pilot Test Vacuum Influence (inches of water vacuum)**

Plaid Pantry #112  
Vancouver, Washington

Sample Point Collection Date	SVE-1 10/4/2012			
Elapsed Time (minutes)	SVE-2	SVE-3	SVE-4	SVE-5
0	0.00	0.14	0.00	0.00
15	0.00	0.15	0.00	0.00
30	0.00	0.13	0.00	0.00
45	0.00	0.13	0.00	0.00
60	0.00	0.12	0.00	0.00
75	0.00	0.12	0.00	0.00
90*	0.00	0.12	0.00	0.00
105	0.00	0.15	0.03	0.04
120	0.01	0.15	0.00	0.02
135	0.00	0.13	0.00	0.00
150	0.00	0.13	0.00	0.00
165	0.01	0.13	0.00	0.00
180	0.00	0.14	0.00	0.00
195	0.00	0.15	0.01	0.00
210	0.00	0.14	0.00	0.00
225	0.00	0.13	0.00	0.00
240	0.00	0.14	0.00	0.00
255	0.01	0.13	0.00	0.00
270	0.00	0.14	0.00	0.00
285	0.00	0.14	0.00	0.00
300	0.00	0.14	0.00	0.00
315	0.00	0.14	0.00	0.01
330	0.00	0.13	0.00	0.00

**Notes:**

\* At 90 minutes the air dilution pressure relief valve on knockout tank was closed.

**TABLE 5**  
**Soil Vapor Extraction Pilot Test**

Plaid Pantry #112  
Vancouver, Washington

Sample Point Collection Date	SVE-2 10/5/2012				
Elapsed Time (minutes)	Applied Vacuum (inches of water)	TPH Exhaust Concentration (ppmv) PID <sup>a</sup>	Exhaust Velocity (feet/minute)	Flow (cfm)	Exhaust Temperature at Stack (F)
0	8	31.3	600	43	52.6
15	12	12.1	590	42	56.8
30	8	7.2	590	42	69.1
45	8	5.0	590	42	72.3
60	8	4.7	570	41	73.6
75	8	3.8	570	41	73.5
90	8	3.6	520	37	74.2
105	8	4.3	560	40	75.5
120	8	4.0	550	39	76.3
135	8	3.4	510	37	78.1
150	8	3.4	530	38	77.6
165	8	2.7	520	37	78.5
180	8	2.7	520	37	79.3
195	8	1.9	520	37	80.0
210	8	1.9	530	38	80.3
225	8	2.0	530	38	80.4
240	8	2.0	540	39	80.2

**Notes:**

TPH = Total Petroleum Hydrocarbons

cfm = cubic feet per minute

ppmv = parts per million volume

ug/m<sup>3</sup> = Micrograms per cubic meter

<sup>a</sup> Field-measured total volatiles using a photo-ionization detector (PID).

<sup>b</sup> Laboratory-reported gasoline-range TPH by USEPA Method TO-3.

**TABLE 6**  
**Soil Vapor Extraction Pilot Test Vacuum Influence (inches of water vacuum)**

Plaid Pantry #112  
Vancouver, Washington

Sample Point Collection Date	SVE-2 10/5/2012			
Elapsed Time (minutes)	SVE-1	SVE-3	SVE-4	SVE-5
0	0.02	0.06	0.06	0.04
15	0.02	0.06	0.06	0.06
30	0.01	0.05	0.05	0.04
45	0.01	0.05	0.05	0.04
60	0.01	0.05	0.05	0.04
75	0.00	0.04	0.03	0.02
90	0.00	0.03	0.04	0.02
105	0.00	0.02	0.03	0.02
120	0.01	0.04	0.03	0.04
135	0.00	0.02	0.02	0.05
150	0.01	0.04	0.04	0.03
165	0.01	0.05	0.03	0.02
180	0.02	0.04	0.05	0.04
195	0.04	0.03	0.02	0.02
210	0.04	0.05	0.05	0.04
225	0.02	0.04	0.04	0.02
240	0.01	0.04	0.02	0.02

# Figures

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<b>Figure 1</b>	<b>Site Location Map</b>
<b>Figure 2</b>	<b>Site Features</b>
<b>Figure 3</b>	<b>2011 Site Assessment Boring Locations</b>
<b>Figure 4</b>	<b>Site Upgrade Sample and Excavation Locations</b>
<b>Figure 5</b>	<b>On-Site Boring Locations</b>
<b>Figure 6</b>	<b>Right-of-Way Boring Locations</b>
<b>Figure 7</b>	<b>Maximum Gasoline Concentrations in Soil</b>
<b>Figure 8</b>	<b>Benzene Concentrations in Soil Vapor</b>
<b>Figure 9</b>	<b>South-North Cross-Section A-A'</b>
<b>Figure 10</b>	<b>Approximate Radius of Influence, Preliminary SVE Testing</b>





**NOTE:** USGS, Vancouver Quadrangle  
Washington-Oregon  
7.5 Minute Series (Topographic)

APPROXIMATE SCALE IN FEET



**EES**

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PLAID PANTRY #112  
1002 W. FOURTH PLAIN BLVD.  
VANCOUVER, WA.

SITE LOCATION MAP

DATE:	12-4-12	PROJECT NO.
FILE:	1179-01	1179-01
DRAWN:	JJT	FIGURE NO.
APPROVED:	PE	1



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Z:\EES-Autocad\1179-01 Plaid Pantry #112\1179-01 Base-Master.dwg Boring Location: 7/13/2012 10:09:00 AM

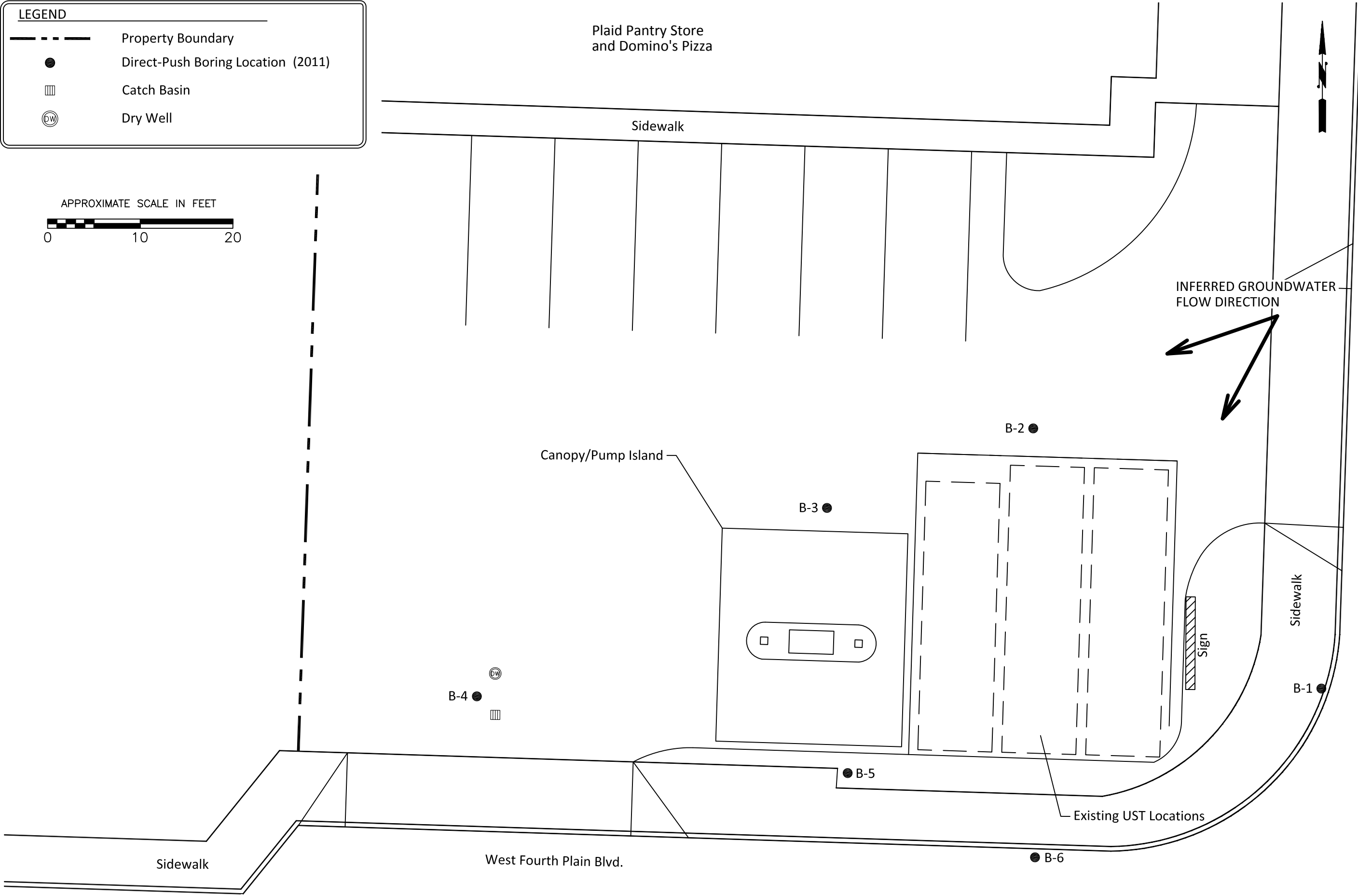
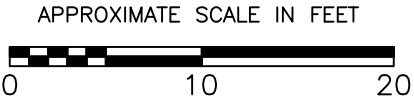
LEGEND

Property Boundary

Direct-Push Boring Location (2011)

Catch Basin

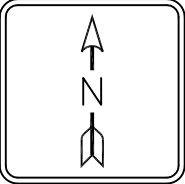
Dry Well



PROJECT NO.	1179-01
DATE: 7-13-12	FILE: 1179-01
DRAWN: JIT	FIGURE NO. 3
APPROVED: PE	

INITIAL SAMPLING LOCATIONS  
(SEPTEMBER 2011)

PLAID PANTRY #112  
1002 W. FOURTH PLAIN BLVD.  
VANCOUVER, WA.



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Z:\EES-Autocad\1179-01 Plaid Pantry #112\1179-01\_Base-Master.dwg, Excavation, 7/13/2012 10:02:27 AM

LEGEND

- Direct-Push Boring Location (Sept 2011)
- ▤ Catch Basin
- ⊙ DW Dry Well
- ⊗ Bollards
- - - Electric Controls
- ⊕ Excavation Sample Locations
- ⊙ Soil Vapor Extraction and Monitoring Well Location
- ⊙ Proposed Soil Vapor Extraction and Monitoring Well Location



- ⊙ B-4
- ▤

Canopy/Pump Island

B-3

Fuel Dispenser

UST Vent Pipes

SVE-1

Pit-N

Pit-E

Pit-Floor

Pit-W

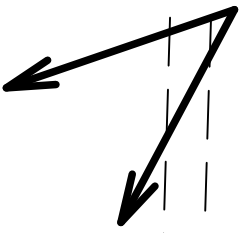
Pit-S

B-5

Abandoned UST

Excavation Area

INFERRED GROUNDWATER FLOW DIRECTION



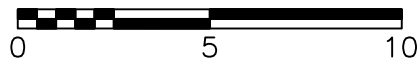
Fuel Supply Lines

Existing UST Locations

West Fourth Plain Blvd.

B-6

APPROXIMATE SCALE IN FEET



PROJECT NO.	1179-01
FIGURE NO.	4
DATE:	7-13-12
FILE:	1179-01
DRAWN:	JJT
APPROVED:	PE

SOIL SAMPLE AND EXCAVATION LOCATIONS (FEBRUARY 2012)














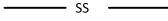

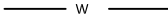
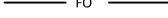
PLAID PANTRY #112  
1002 W. FOURTH PLAIN BLVD.  
VANCOUVER, WA.

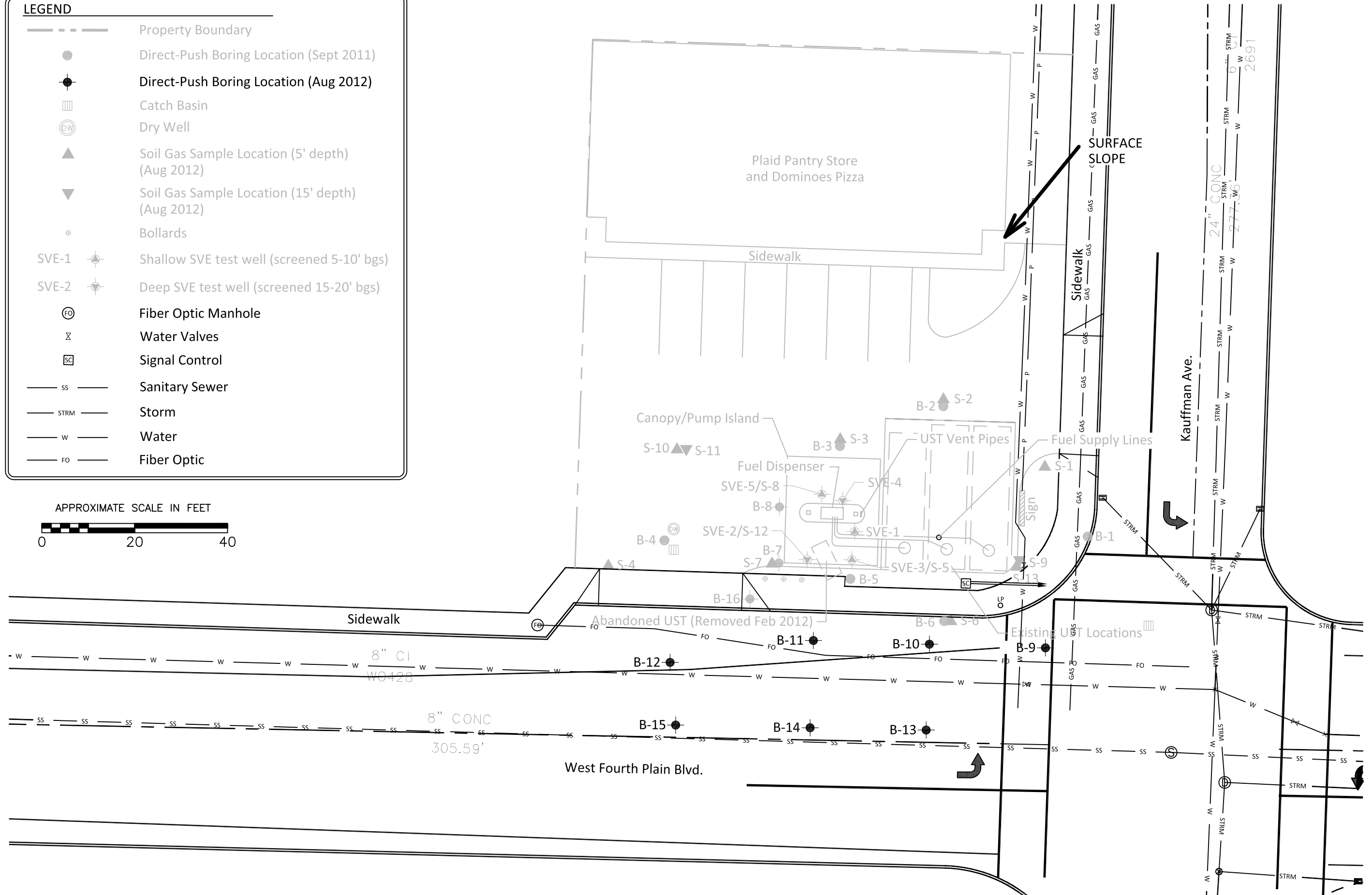


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- |   |  |
|---|--|
|        | Property Boundary                                  |
|        | Direct-Push Boring Location (Sept 2011)            |
|        | Direct-Push Boring Location (Aug 2012)             |
|        | Catch Basin  |
|        | Dry Well   |
|        | Soil Gas Sample Location (5' depth)<br>(Aug 2012)  |
|        | Soil Gas Sample Location (15' depth)<br>(Aug 2012) |
|        | Bollards   |
| SVE-1  | Shallow SVE test well (screened 5-10' bgs)         |
| SVE-2  | Deep SVE test well (screened 15-20' bgs)           |
|        | Fiber Optic Manhole                                |
|        | Water Valves                                       |
|        | Signal Control                                     |
|        | Sanitary Sewer                                     |
|        | Storm  |
|        | Water  |
|      | Fiber Optic  |



DATE:	9-23-12	PROJECT NO.	1179-01
FILE:	1179-01	FIGURE NO.	6
DRAWN:	JJT		
APPROVED:	PE		

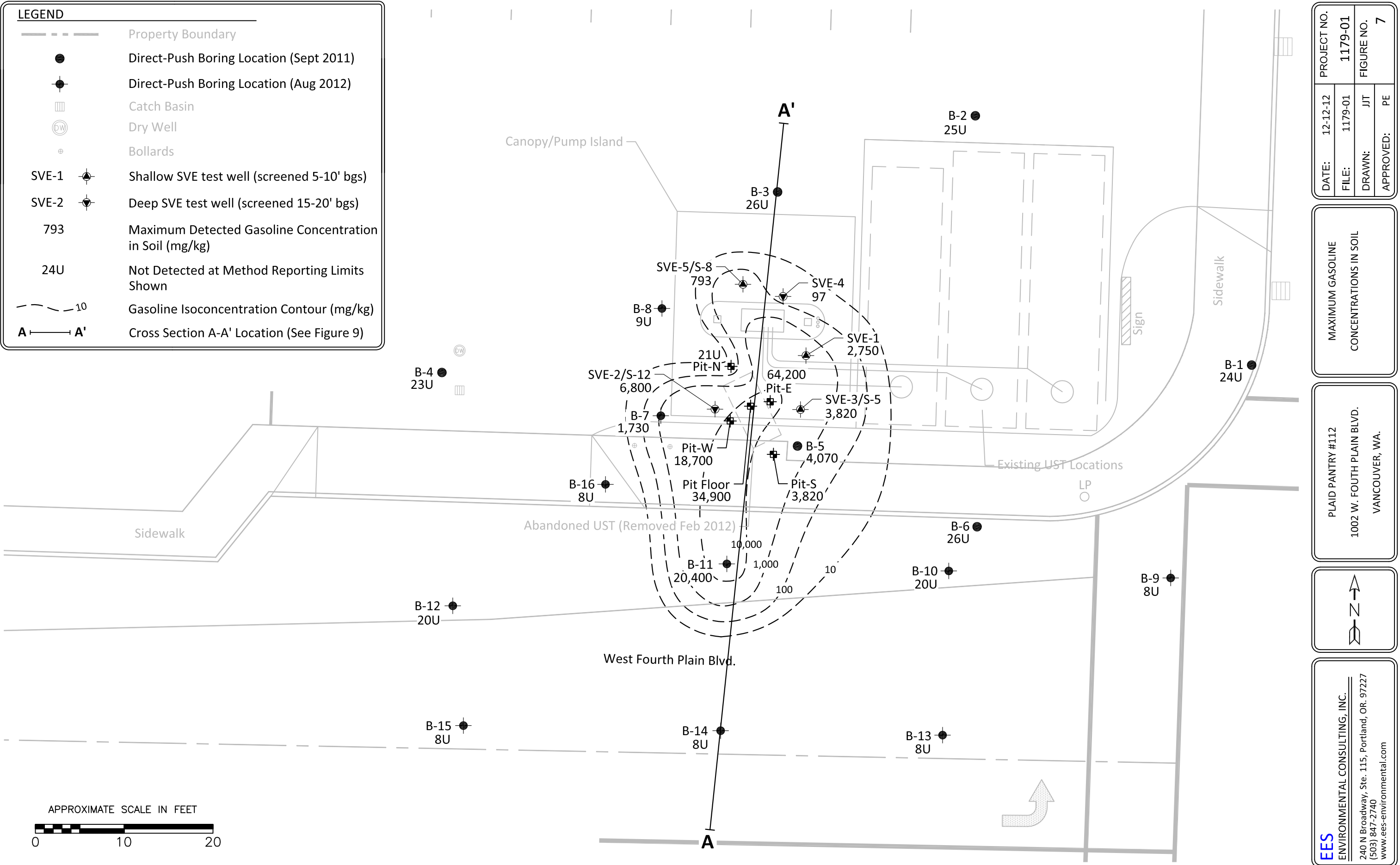
# RIGHT-OF-WAY BORING LOCATIONS (AUGUST 2012)

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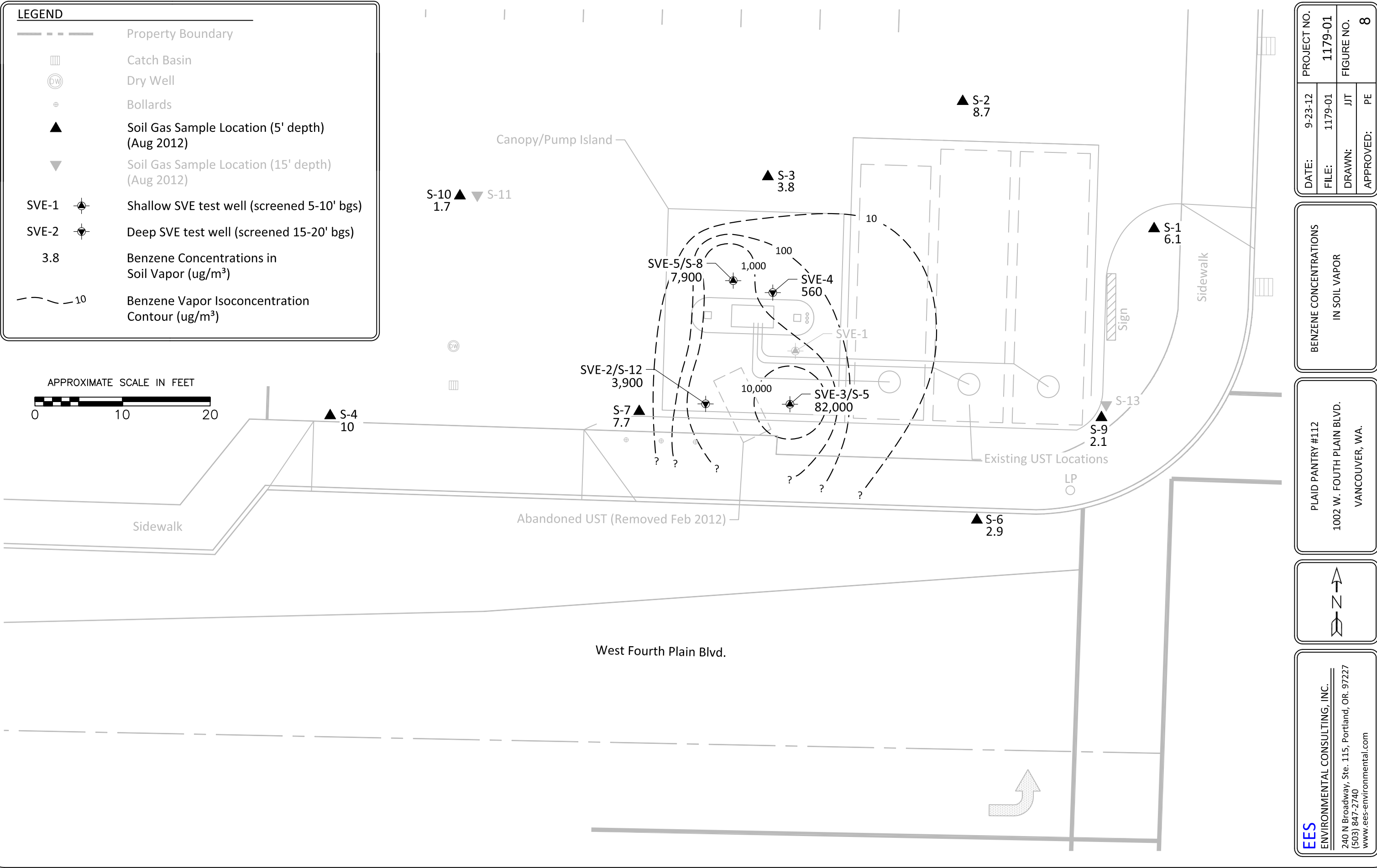


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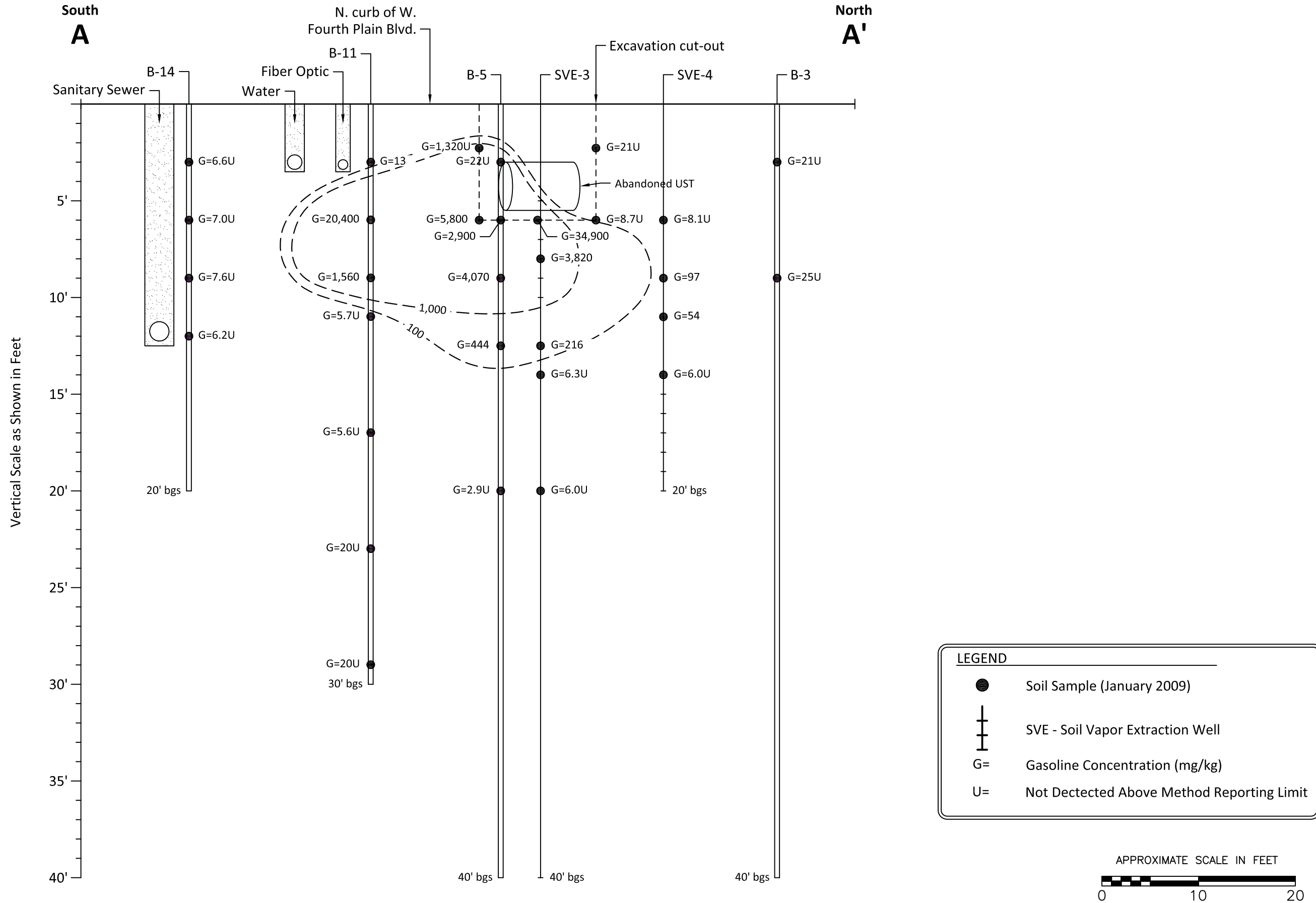
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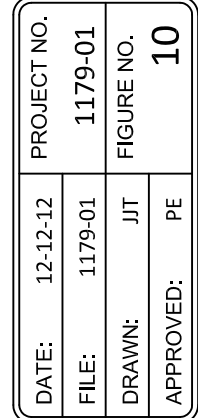
PROJECT NO.	1179-01
FIGURE NO.	9
DATE:	12-27-12
FILE:	1179-01
DRAWN:	JIT
APPROVED:	PE

SOUTH-NORTH CROSS SECTION A-A'

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1002 W. FOURTH PLAIN BLVD.  
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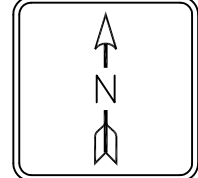


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APPROXIMATE RADIUS  
OF INFLUENCE  
SHALLOW-ZONE SVE TESTING

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# Appendix A

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## Boring Logs

DIRECT PUSH BORING 1179-01.GPJ AMEC PORTLAND.GDT 8/31/12

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0		ML	Asphalt (2 inches), no gravel base. SANDY SILT: light brown, damp, sandy SILT, low plasticity.						
3.3					3.3				■ B7/3
5			Petroleum-like odor and gray staining at 5.5 feet bgs.		25				■ B7/6
10		SM	SILTY SAND: dark gray, damp, silty SAND, non-plastic. Petroleum-like odor and staining.		543				■ B7/9
13.5			Petroleum-like odor and staining from 10 to 13.5 feet bgs.		608				■ B7/13
15			GRAVELLY SAND: orangish-gray and brown, damp, fine to coarse gravelly SAND. Gravels are up to coarse, subrounded. No noticeable impact. Decreasing gravel percentage 15 to 20 feet bgs.		1.5				■ B7/14
20			End of boring at 20 feet bgs. Borehole backfilled with bentonite chips and capped with asphalt.		0.6				■ B7/18
25									
30									
BORING METHOD: Direct Push BOREHOLE DIAMETER: DRILL RIG: NA CONTRACTOR: Pacific Soil & Water LOGGED BY: AC					ELEVATION REFERENCE: NA GROUND SURFACE ELEVATION: NA START CARD/TAG ID: NA DRILLING DATES: 8/16/2012 - 8/16/2012				
					REMARKS:				

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**LOG OF BORING  
B7**

PAGE 1 OF 1



DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA	
0		ML	Asphalt (2 inches), no gravel base. SANDY SILT: light brown, damp, sandy SILT, low plasticity.							
					1.6				■ B8/3	
5				Petroleum-like odor and gray staining at 6 feet bgs.		7.8				■ B8/6
			SM	SILTY SAND: light brown, damp, silty SAND, non-plastic. Hydrocarbon-like odor and gray staining.		5.7				■ B8/9
10				Petroleum-like odor and gray staining from 10 to 13.5 feet bgs.						
						2.2				■ B8/13
						1.0				■ B8/14
15				GRAVELLY SAND: orangish-brown and gray, damp, fine to coarse gravelly SAND. Gravels are up to coarse, subrounded. PVC conduit (4-inch) at 14 feet bgs. ??? Decreasing gravel content, moist from 15 to 20 feet bgs.						
						0.7				■ B8/18
20			End of boring at 20 feet bgs.  Borehole backfilled with bentonite chips and capped with asphalt.							
25										
30										
BORING METHOD: Direct Push						REMARKS:				
BOREHOLE DIAMETER:										
DRILL RIG: NA										
CONTRACTOR: Pacific Soil & Water/NK										
LOGGED BY: AC										
ELEVATION REFERENCE: NA										
GROUND SURFACE ELEVATION: NA										
START CARD/TAG ID: NA										
DRILLING DATES: 8/16/2012 - 8/16/2012										

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






















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**LOG OF BORING  
B8**

PAGE 1 OF 1

DIRECT PUSH BORING 1179-01.GPJ AMEC PORTLAND.GDT 8/31/12











DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0			Asphalt (0.75 feet) over gravel base (2 inches).						
		ML	SANDY SILT: light brown, damp, sandy SILT, low plasticity.						
					0.4				 B9/3
5									
		SM	SILTY SAND: light brown with gray mottling, damp, silty SAND, low plasticity.		0.2				 B9/6
									
		SM	SILTY SAND: light brown, damp, silty SAND, trace fine gravel, low plasticity to non-plastic. Increasing sand content.		0.4				 B9/9
10									
		SM	SILTY SAND: light brown, damp, silty SAND with trace gravel, non-plastic.		0.2				 B9/13
									
15			GRAVELLY SAND: light brown, damp, gravelly SAND. Gravels are up to medium-grained, subrounded to rounded.						
					0.3				 B9/18
20			End of boring at 20 feet bgs. Borehole backfilled with bentonite chips and capped with asphalt.						
25									
30									
BORING METHOD: Direct Push						REMARKS:			
ELEVATION REFERENCE: NA									
BOREHOLE DIAMETER:									
DRILL RIG: NA									
CONTRACTOR: Pacific Soil & Water/NK						REMARKS:			
START CARD/TAG ID: NA									
LOGGED BY: AC						REMARKS:			
DRILLING DATES: 8/13/2012 - 8/13/2012									

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## LOG OF BORING B9

DIRECT PUSH BORING 1179-01.GPJ AMEC PORTLAND.GDT 8/31/12

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0			Asphalt (0.75 feet) over gravel base (6 inches).						
		ML	SANDY SILT: light brown, damp, sandy SILT, low plasticity.						
					0.5				■ B10/3
5					1.2				■ B10/6
		SM	SILTY SAND: light brown, damp, silty SAND, low plasticity to non-plastic. Increasing sand content.		4.4				■ B10/9
		SP	SAND: light brown and gray, damp, fine to medium SAND, trace fine gravel.		1.9				■ B10/13
			GRAVEL: gray, fine to coarse subrounded GRAVEL, trace sand and fines.						
15			GRAVEL: light brown and gray, damp GRAVEL with sand.		1.5				■ B10/18
		SP	SAND: light brown and gray, damp, fine to coarse SAND with trace medium to coarse subrounded gravel.						
20			End of boring at 20 feet bgs. Borehole backfilled with bentonite chips and capped with asphalt.						
25									
30									
BORING METHOD: Direct Push      ELEVATION REFERENCE: NA BOREHOLE DIAMETER: DRILL RIG: NA      GROUND SURFACE ELEVATION: NA CONTRACTOR: Pacific Soil & Water/NK      START CARD/TAG ID: NA LOGGED BY: AC      DRILLING DATES: 8/13/2012 - 8/13/2012						REMARKS:			

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## LOG OF BORING B10

DIRECT PUSH BORING 1179-01.GPJ AMEC PORTLAND.GDT 8/31/12

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0			Asphalt (1.1 feet) over gravel base (~6 inches).						
		ML	SANDY SILT: dark gray, damp, sandy SILT, low plasticity to non-plastic. Hydrocarbon-like odor and staining.		11				■ B11/3
5					1152				■ B11/6
		SM	SILTY SAND: dark gray, damp, silty SAND, low plasticity to non-plastic. Hydrocarbon-like odor and staining.		603				■ B11/9
10			Hydrocarbon-like odor and gray staining from 10 to 10.5 feet bgs.		4.9				■ B11/11
			GRAVELLY SAND: orangish-brown to grayish-brown, damp, gravelly SAND. Gravels are fine to medium, subrounded. Decreasing hydrocarbon-like odor and no visible staining.						
15		SP	SAND: brownish-gray, damp SAND with trace fine to medium subrounded gravel. Decreasing hydrocarbon-like odor, no visible staining.		1.7				■ B11/17
20			Decreasing gravel content from 20 to 25 feet bgs.		2.4				■ B11/23
					2.2				■ B11/29
25			SAND: dark gray, fine to coarse SAND, trace coarse subrounded gravel.						
30			End of boring at 30 feet bgs.						
BORING METHOD: Direct Push BOREHOLE DIAMETER: DRILL RIG: NA CONTRACTOR: Pacific Soil & Water/NK LOGGED BY: AC						ELEVATION REFERENCE: NA GROUND SURFACE ELEVATION: NA START CARD/TAG ID: NA DRILLING DATES: 8/14/2012 - 8/14/2012			
						REMARKS:			

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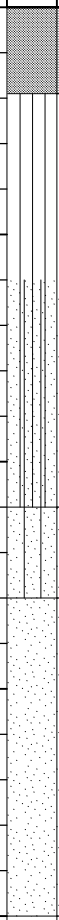





**LOG OF BORING  
B11**

PAGE 1 OF 2

DIRECT PUSH BORING 1179-01.GPJ AMEC PORTLAND.GDT 8/31/12

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
30			Borehole backfilled with bentonite chips and capped with asphalt.						
35									
40									
45									
50									
55									
60									
BORING METHOD: Direct Push					ELEVATION REFERENCE: NA		REMARKS:		
BOREHOLE DIAMETER:									
DRILL RIG: NA					GROUND SURFACE ELEVATION: NA				
CONTRACTOR: Pacific Soil & Water/NK					START CARD/TAG ID: NA				
LOGGED BY: AC					DRILLING DATES: 8/14/2012 - 8/14/2012				
Plaid Pantry #112 1002 W. Fourth Plain Blvd Vancouver, WA  EES Project Number: 1179-01				EES Environmental Consulting, Inc. 240 N Broadway, Suite 115 Portland, Oregon USA 97227 Tel (503) 847-2740				LOG OF BORING B11  PAGE 2 OF 2	

DIRECT PUSH BORING 1179-01.GPJ AMEC PORTLAND.GDT 8/31/12










DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0			Asphalt (~1.3 feet) over gravel base (~6 inches).						
		ML	SANDY SILT: light brown, damp, sandy SILT, low plasticity.		1.8				■ B12/3
5		SM	SILTY SAND: light brown, damp, silty SAND, non-plastic. Increasing sand percentage.		2.1				■ B12/6
					0.3				■ B12/9
10					1.0				■ B12/13
		SP	SAND: light brownish-gray, damp to moist, fine to medium SAND with trace fine subrounded gravel.						
15			Increasing gravel percentage. Gravels are fine to medium, moist.		1.2				■ B12/18
20			End of boring at 20 feet bgs. Borehole backfilled with bentonite chips and capped with asphalt.						
25									
30									
BORING METHOD: Direct Push      ELEVATION REFERENCE: NA BOREHOLE DIAMETER: DRILL RIG: NA      GROUND SURFACE ELEVATION: NA CONTRACTOR: Pacific Soil & Water/NK      START CARD/TAG ID: NA LOGGED BY: AC      DRILLING DATES: 8/14/2012 - 8/14/2012						REMARKS:			

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## LOG OF BORING B12

DIRECT PUSH BORING 1179-01.GPJ AMEC PORTLAND.GDT 8/31/12

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0			Asphalt (~1.1 feet) over gravel base (~4 inches).						
		ML	SANDY SILT: light brown, damp, sandy SILT, trace subangular fine gravel, low plasticity to non-plastic.		0.5				■ B13/3
5									
		SM	SILTY SAND: light brown, damp, silty SAND, non-plastic. Increasing sand percentage.		1.5				■ B13/6
			Low plasticity to non-plastic.		1.8				■ B13/9
10			Moist.						
		SP	SAND: light orangish-brown, moist, fine to coarse SAND with trace gravel up to medium-grained.		1.3				■ B13/13
15					0.6				■ B13/18
			Increased gravel percentage. Gravels are up to coarse-grained.						
20			End of boring at 20 feet bgs. Borehole backfilled with bentonite chips and capped with asphalt.						
25									
30									
BORING METHOD: Direct Push BOREHOLE DIAMETER: DRILL RIG: NA CONTRACTOR: Pacific Soil & Water/NK LOGGED BY: AC					ELEVATION REFERENCE: NA GROUND SURFACE ELEVATION: NA START CARD/TAG ID: NA DRILLING DATES: 8/15/2012 - 8/15/2012				
					REMARKS:				

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## LOG OF BORING B13

DIRECT PUSH BORING 1179-01.GPJ AMEC PORTLAND.GDT 8/31/12

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0			Asphalt (1.2 feet) over gravel base (6 inches).						
		ML	SANDY SILT: light brown, damp, sandy SILT, non-plastic.		0.9				■ B14/3
5			Low plasticity to non-plastic, damp.		0.3				■ B14/6
		SM	SILTY SAND: light brown, damp, silty SAND, low plasticity to non-plastic. Damp to moist.		0.6				■ B14/9
10					0.4				■ B14/13
15			GRAVELLY SAND: light orangish-brown, moist, fine to coarse gravelly SAND. Gravels are subangular to subrounded. Increased gravel percentage. Gravels are up to coarse-grained from 15 to 20 feet bgs.		0.8				■ B14/18
20			End of boring at 20 feet bgs. Borehole backfilled with bentonite chips and capped with asphalt.						
25									
30									
BORING METHOD: Direct Push      ELEVATION REFERENCE: NA BOREHOLE DIAMETER: DRILL RIG: NA      GROUND SURFACE ELEVATION: NA CONTRACTOR: Pacific Soil & Water/NK      START CARD/TAG ID: NA LOGGED BY: AC      DRILLING DATES: 8/15/2012 - 8/15/2012						REMARKS:			














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## LOG OF BORING B14















DIRECT PUSH BORING 1179-01.GPJ AMEC PORTLAND.GDT 8/31/12

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0			Asphalt (1.0 foot) over gravel base (6 inches).						
		ML	SANDY SILT: light brown, damp, sandy SILT, low plasticity.						
					1.9				 B15/3
5			Non-plastic.		2.8				 B15/6
		SM	SILTY SAND: light brown, damp, silty SAND, low plasticity.		2.4				 B15/9
10			Increasing sand percentage, moist at 10 to 13.5 feet bgs.						
					1.4				 B15/13
15			GRAVELLY SAND: light orangish-brown, moist, fine to coarse gravelly SAND. Gravels are fine to coarse, subrounded to rounded.						
			Increased gravel percentage from 15 to 20 feet bgs.		1.5				 B15/18
20			End of boring at 20 feet bgs. Borehole backfilled with bentonite chips and capped with asphalt.						
25									
30									
BORING METHOD: Direct Push						ELEVATION REFERENCE: NA		REMARKS:	
BOREHOLE DIAMETER:									
DRILL RIG: NA						GROUND SURFACE ELEVATION: NA			
CONTRACTOR: Pacific Soil & Water/NK						START CARD/TAG ID: NA			
LOGGED BY: AC						DRILLING DATES: 8/15/2012 - 8/15/2012			

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## LOG OF BORING B15

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0		ML	Concrete (0.4 feet). No base layer. SANDY SILT: light brown, damp, sandy SILT, trace organics, low plasticity.						
5			With orange mottling.		2.5				■ B16/3
					1.7				■ B16/6
10		SM	SILTY SAND: light brownish-gray with orange mottling, damp, silty SAND, non-plastic.		1.9				■ B16/9
			GRAVELLY SAND: grayish-brown, damp, fine to coarse gravelly SAND. Gravels are up to medium-grained, subrounded.		2.1				■ B16/13
15			Gravel percentage increases, damp to moist from 15 to 20 feet bgs.		2.7				■ B16/18
20			End of boring at 20 feet bgs. Borehole backfilled with bentonite chips and capped with concrete.						
25									
30									
BORING METHOD: Direct Push      ELEVATION REFERENCE: NA BOREHOLE DIAMETER: DRILL RIG: NA      GROUND SURFACE ELEVATION: NA CONTRACTOR: Pacific Soil & Water/NK      START CARD/TAG ID: NA LOGGED BY: AC      DRILLING DATES: 8/16/2012 - 8/16/2012						REMARKS:			

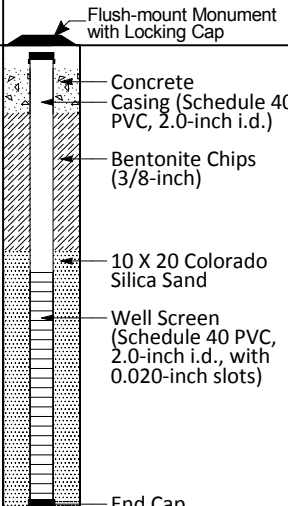



Plaid Pantry #112  
1002 W. Fourth Plain Blvd  
Vancouver, WA

EES Project Number: 1179-01

EES Environmental Consulting, Inc.  
240 N Broadway, Suite 115  
Portland, Oregon  
USA 97227  
Tel (503) 847-2740

**LOG OF BORING  
B16**

PAGE 1 OF 1

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	BLOW COUNT SPT N VALUE	VOLATILE READING (ppmV)	GROUNDWATER	SAMPLE NUMBER / FIELD AND LABORATORY TESTING	WELL SCHEMATIC
0			Removed for UST upgrade.						
		SP	SAND: brown, loose, dry, medium SAND, no odor, sheen or discoloration.			0.0			
5		SM	SILTY SAND: reddish brown, moist to dry, medium silty SAND, some fines, low plasticity, no odor, sheen or discoloration.			1.1		■ SVE-1/5 NWTPH-Gx, NWTPH-Dx and EPA 8260B	
10			End of boring at 10 feet bgs.			5,000+		■ SVE-1/10 NWTPH-Gx, NWTPH-Dx and EPA 8260B	
15									
20									
25									
30									
BORING METHOD: Direct Push						ELEVATION REFERENCE: NA		NOTES:	
BOREHOLE DIAMETER:						GROUND SURFACE ELEVATION: NA			
DRILL RIG: NA						CASING ELEVATION: NA			
CONTRACTOR: Major Drilling/KV						START CARD/TAG ID: NA			
LOGGED BY/REVIEWED BY: JG/LF						DRILLING DATES: 2/3/2012 - 2/3/2012			

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## LOG OF BORING SVE-1

PAGE 1 OF 1






DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	BLOW COUNT SPT N VALUE	VOLATILE READING (ppmV)	GROUNDWATER	SAMPLE NUMBER / FIELD AND LABORATORY TESTING	WELL SCHEMATIC
0			Existing well monument box.						Flush-mount Monument with Locking Cap
			CONCRETE and PEA GRAVEL (Fill) No recovery.						Concrete Casing (Schedule 40 PVC, 2.0-inch i.d.)
			PEA GRAVEL (Fill)			717			Bentonite Chips (3/8-inch)
5									
	SM		SILTY SAND: dark gray (stained), damp to moist, silty SAND, non-plastic. Petroleum-like odor and staining.			2284		■ SVE-2/6 Hold	
						3127		■ SVE-2/8 NWTPH-Gx and EPA 8260B	
10						1360		■ SVE-2/10 Hold	
	SW		GRAVELLY SAND: orangish-brown, damp to moist, gravelly SAND, trace cobbles. Gravels are fine to coarse. No odor or staining.			6.8		■ SVE-2/12 NWTPH-Gx and EPA 8260B	
			Decreased gravel percentage from 13 to 15 feet bgs.						10 X 20 Colorado Silica Sand
15						4.6		■ SVE-2/16 NWTPH-Gx and EPA 8260B	Well Screen (Schedule 40 PVC, 2.0-inch i.d., with 0.010-inch slots)
20						2.7		■ SVE-2/20 NWTPH-Gx	End Cap
									Bentonite Chips (3/8-inch)
25						2.5		■ SVE-2/24 Hold	
30						1.9		■ SVE-2/28 Hold	
BORING METHOD: Direct Push					ELEVATION REFERENCE: NA		NOTES:		
BOREHOLE DIAMETER:					GROUND SURFACE ELEVATION: NA				
DRILL RIG: NA					CASING ELEVATION: NA				
CONTRACTOR: Pacific Soil & Water/NK					START CARD/TAG ID: NA				
LOGGED BY/REVIEWED BY: AC/LF					DRILLING DATES: 8/17/2012 - 8/17/2012				

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## LOG OF BORING SVE-2

PAGE 1 OF 2

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	BLOW COUNT SPT N VALUE	VOLATILE READING (ppmV)	GROUNDWATER	SAMPLE NUMBER / FIELD AND LABORATORY TESTING	WELL SCHEMATIC
30		SW							
		SP	SAND: light brown, dry to damp, fine SAND, trace fines.			1.7		■ SVE-2/32 Hold	 Bentonite Chips (3/8-inch)
35			No recovery. Sample liner melted in sampler.						
40			End of boring at 39 feet bgs due to refusal.						
45									
50									
55									
60									
BORING METHOD: Direct Push					ELEVATION REFERENCE: NA		NOTES:		
BOREHOLE DIAMETER:					GROUND SURFACE ELEVATION: NA				
DRILL RIG: NA					CASING ELEVATION: NA				
CONTRACTOR: Pacific Soil & Water/NK					START CARD/TAG ID: NA				
LOGGED BY/REVIEWED BY: AC/LF					DRILLING DATES: 8/17/2012 - 8/17/2012				

Plaid Pantry #112 1002 W. Fourth Plain Blvd Vancouver, WA E-1179-01	EES Environmental Consulting, Inc. 240 N Broadway, Suite 115 Portland, Oregon 97227 Tel (503) 847-2740	<b>LOG OF BORING SVE-2</b>  PAGE 2 OF 2
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DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	BLOW COUNT SPT N VALUE	VOLATILE READING (ppmV)	GROUNDWATER	SAMPLE NUMBER / FIELD AND LABORATORY TESTING	WELL SCHEMATIC
0			Existing well monument box.						Flush-mount Monument with Locking Cap
			CONCRETE and PEA GRAVEL (Fill)						Concrete Casing (Schedule 40 PVC, 2.0-inch i.d.)
									Bentonite Chips (3/8-inch)
5	ML		SANDY SILT: light brown to light gray, damp, sandy SILT. Petroleum-like odor and staining. Increasing petroleum-like odor and gray staining.			717		SVE-3/5 Hold	10 X 20 Colorado Silica Sand
									Well Screen (Schedule 40 PVC, 2.0-inch i.d., with 0.010-inch slots)
10			Increasing sand percentage.			1329		SVE-3/8 NWTPH-Gx and EPA 8260B	End Cap
15	SW		GRAVELLY SAND: light brownish-gray, damp SAND with trace gravel. Decreasing petroleum-like odor and staining.			577		SVE-3/12.5 NWTPH-Gx and EPA 8260B	
			No recovery from 15 to 20 feet bgs.			19		SVE-3/14 NWTPH-Gx and EPA 8260B	Bentonite Chips (3/8-inch)
20									
						1.8		SVE-3/20 NWTPH-Gx	
25			Damp to moist with decreasing gravel percentage.			1.3		SVE-3/25 Hold	
30									
BORING METHOD: Direct Push						ELEVATION REFERENCE: NA		NOTES:	
BOREHOLE DIAMETER:						GROUND SURFACE ELEVATION: NA			
DRILL RIG: NA						CASING ELEVATION: NA			
CONTRACTOR: Pacific Soil & Water/NK						START CARD/TAG ID: NA			
LOGGED BY/REVIEWED BY: AC/LF						DRILLING DATES: 8/16/2012 - 8/16/2012			

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## LOG OF BORING SVE-3

PAGE 1 OF 2

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	BLOW COUNT SPT N VALUE	VOLATILE READING (ppmV)	GROUNDWATER	SAMPLE NUMBER / FIELD AND LABORATORY TESTING	WELL SCHEMATIC
30		SW	Increased grain-size up to coarse and trace fine subrounded gravel.			17		SVE-3/31 Hold	 Bentonite Chips (3/8-inch)
35						3.7		SVE-3/37 Hold	
40				End of boring at 40 feet bgs due to refusal.					
45									
50									
55									
60									
BORING METHOD: Direct Push						ELEVATION REFERENCE: NA		NOTES:	
BOREHOLE DIAMETER:						GROUND SURFACE ELEVATION: NA			
DRILL RIG: NA						CASING ELEVATION: NA			
CONTRACTOR: Pacific Soil & Water/NK						START CARD/TAG ID: NA			
LOGGED BY/REVIEWED BY: AC/LF						DRILLING DATES: 8/16/2012 - 8/16/2012			

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**LOG OF BORING**  
**SVE-3**

PAGE 2 OF 2

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	BLOW COUNT SPT N VALUE	VOLATILE READING (ppmV)	GROUNDWATER	SAMPLE NUMBER / FIELD AND LABORATORY TESTING	WELL SCHEMATIC
0			Existing well monument box.						Flush-mount Monument with Locking Cap
		SP	SAND, PEA GRAVEL and CONCRETE (Fill)						Concrete Casing (Schedule 40 PVC, 2.0-inch i.d.)
			Metal object found at 3 feet bgs.			2.3		SVE-4/3 Hold	Bentonite Chips (3/8-inch)
		SM	SILTY SAND: light orangish-brown, damp, silty SAND, trace gravel up to medium-grained, trace organics, non-plastic.						
5						0.5		SVE-4/6 NWTPH-Gx and EPA 8260B	
			Petroleum-like odor and staining at 9 feet bgs.			33		SVE-4/9 NWTPH-Gx	
10			Petroleum-like odor and gray staining to 11.5 feet bgs.			57		SVE-4/11 NWTPH-Gx and EPA 8260B	
		SW	GRAVELLY SAND: light brownish-gray, damp GRAVELLY SAND, trace cobbles. Gravels are fine to coarse, subrounded to rounded. No odor or staining.			2.3		SVE-4/14 NWTPH-Gx and EPA 8260B	10 X 20 Colorado Silica Sand
15									Well Screen (Schedule 40 PVC, 2.0-inch i.d., with 0.010-inch slots)
			Decreasing gravel at 18 feet bgs.			1.2		SVE-4/18 Hold	
20			End of boring at 20 feet bgs.						End Cap
25									
30									
BORING METHOD: Direct Push						ELEVATION REFERENCE: NA		NOTES:	
BOREHOLE DIAMETER:						GROUND SURFACE ELEVATION: NA			
DRILL RIG: NA						CASING ELEVATION: NA			
CONTRACTOR: Pacific Soil & Water/NK						START CARD/TAG ID: NA			
LOGGED BY/REVIEWED BY: AC/LF						DRILLING DATES: 8/17/2012 - 8/17/2012			

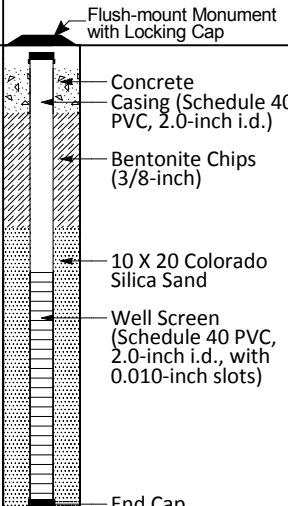
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## LOG OF BORING SVE-4

PAGE 1 OF 1



DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	BLOW COUNT SPT N VALUE	VOLATILE READING (ppmV)	GROUNDWATER	SAMPLE NUMBER / FIELD AND LABORATORY TESTING	WELL SCHEMATIC
0			Existing well monument box.						
		ML	SANDY SILT: light brown, damp, sandy SILT, low plasticity. Poor recovery.			12		■ SVE-5/5 NWTPH-Gx and EPA 8260B	
5			Petroleum-like odor and gray staining at 6 feet bgs.			1379		■ SVE-5/7.5 NWTPH-Gx and EPA 8260B	
		SM	SILTY SAND: gray, damp, silty SAND, non-plastic.			323			
10			End of boring at 10 feet bgs.						
15									
20									
25									
30									
BORING METHOD: Direct Push						ELEVATION REFERENCE: NA		NOTES:	
BOREHOLE DIAMETER:						GROUND SURFACE ELEVATION: NA			
DRILL RIG: NA						CASING ELEVATION: NA			
CONTRACTOR: Pacific Soil & Water/d						START CARD/TAG ID: NA			
LOGGED BY/REVIEWED BY: AC/LF						DRILLING DATES: 8/16/2012 - 8/16/2012			

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## LOG OF BORING SVE-5

PAGE 1 OF 1

# Appendix B

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## Investigation-Derived Waste Disposal Documentation



Hillsboro Landfill, Inc  
3205 SE Minter Bridge  
Hillsboro, OR, 97123  
Ph: (503)-640-9427

Original  
Ticket# 1306176

Customer Name	STRATUSCORP STRATUS CORPORATI	Carrier	STRATUS CORPORATION
Ticket Date	12/19/2012	Vehicle#	12
Payment Type	Credit Account	Container	
Manual Ticket#		Driver	Brent
Hauling Ticket#		Check#	
Route		Billing #	0000371
State Waste Code		Gen EPA ID	N/A
Manifest	na		
Destination		Grid	
PO	P12141.01W		
Profile	105852WA (PCS-GASOLINE)		
Generator	OR-PLAID PANTRIES INC PLAIN PANTRIES INC		

	Time	Scale	Operator	Inbound	Gross	
In	12/19/2012 12:08:55	Inbound_1	KMD		Tare	40940 lb
Out	12/19/2012 12:27:37	Outbound	KMD		Net	34740 lb
					Tons	6200 lb
						3.10

Comments

Consumer Comments? We want to know. Please call.

Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1 Special Misc-Tons-	100	3.10	Tons				CLARK
2 13% FEA-13% FEA FE	100		%				CLARK

*B*  
*P12141*

Total Tax  
Total Ticket

ver's Signature



# Appendix C

---

## Laboratory Reports and Chain-of-Custody Documents

# Apex Labs

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323 Phone  
503-718-0333 Fax

Thursday, August 30, 2012

Paul Ecker  
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

RE: Plaid Pantry #112 / 1179

Enclosed are the results of analyses for work order A12H227, which was received by the laboratory on 8/13/2012 at 4:48:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [pnerenberg@apex-labs.com](mailto:pnerenberg@apex-labs.com), or by phone at 503-718-2323.

---

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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

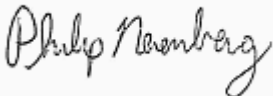
Reported:  
08/30/12 22:57

## ANALYTICAL REPORT FOR SAMPLES

### SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-9/3	A12H227-01	Soil	08/13/12 10:58	08/13/12 16:48
B-9/6	A12H227-02	Soil	08/13/12 11:20	08/13/12 16:48
B-9/9	A12H227-03	Soil	08/13/12 11:50	08/13/12 16:48
B-9/13	A12H227-04	Soil	08/13/12 13:09	08/13/12 16:48
B-10/3	A12H227-06	Soil	08/13/12 14:06	08/13/12 16:48
B-10/6	A12H227-07	Soil	08/13/12 14:25	08/13/12 16:48
B-10/9	A12H227-08	Soil	08/13/12 14:45	08/13/12 16:48
B-10/13	A12H227-09	Soil	08/13/12 15:15	08/13/12 16:48
B-10/18	A12H227-10	Soil	08/13/12 15:24	08/13/12 16:48

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Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

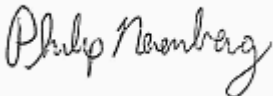
Reported:  
08/30/12 22:57

## ANALYTICAL SAMPLE RESULTS

### Hydrocarbon Identification (HCID) Screen by NWTPH

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-9/3 (A12H227-01)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208356</b>				
Gasoline Range Organics	ND	---	23.5	mg/kg dry	1	08/17/12 23:23	NWTPH-HCID	
Diesel Range Organics	ND	---	58.7	"	"	"	"	
Oil Range Organics	ND	---	117	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 108 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>B-10/3 (A12H227-06)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208356</b>				
Gasoline Range Organics	ND	---	21.8	mg/kg dry	1	08/18/12 00:22	NWTPH-HCID	
Diesel Range Organics	ND	---	54.6	"	"	"	"	
Oil Range Organics	ND	---	109	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 95 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>B-10/18 (A12H227-10)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208356</b>				
Gasoline Range Organics	ND	---	20.4	mg/kg dry	1	08/18/12 00:52	NWTPH-HCID	
Diesel Range Organics	ND	---	51.0	"	"	"	"	
Oil Range Organics	ND	---	102	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 98 %</i>	<i>Limits: 50-150 %</i>	"	"	"	

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Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 22:57

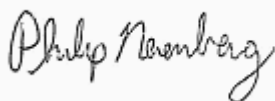
## ANALYTICAL SAMPLE RESULTS

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-9/3 (A12H227-01)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208330</b>				
Gasoline Range Organics	ND	---	5.71	mg/kg dry	50	08/16/12 14:40	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 95 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			87 %	Limits: 50-150 %	"	"	"	
<b>B-9/6 (A12H227-02)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208265</b>				
Gasoline Range Organics	ND	---	5.17	mg/kg dry	50	08/14/12 12:24	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 95 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			88 %	Limits: 50-150 %	"	"	"	
<b>B-9/9 (A12H227-03)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208265</b>				
Gasoline Range Organics	ND	---	8.15	mg/kg dry	50	08/14/12 13:16	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 99 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			91 %	Limits: 50-150 %	"	"	"	
<b>B-9/13 (A12H227-04)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208265</b>				
Gasoline Range Organics	ND	---	5.85	mg/kg dry	50	08/14/12 13:41	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 101 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			90 %	Limits: 50-150 %	"	"	"	
<b>B-10/3 (A12H227-06)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Gasoline Range Organics	ND	---	5.35	mg/kg dry	50	08/16/12 04:06	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 84 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			88 %	Limits: 50-150 %	"	"	"	
<b>B-10/6 (A12H227-07)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208265</b>				
Gasoline Range Organics	ND	---	9.18	mg/kg dry	50	08/14/12 14:08	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 98 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			89 %	Limits: 50-150 %	"	"	"	
<b>B-10/9 (A12H227-08)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208265</b>				
Gasoline Range Organics	ND	---	11.2	mg/kg dry	50	08/14/12 14:34	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 98 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			90 %	Limits: 50-150 %	"	"	"	
<b>B-10/13 (A12H227-09)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208265</b>				
Gasoline Range Organics	ND	---	4.72	mg/kg dry	50	08/14/12 15:00	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 105 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			92 %	Limits: 50-150 %	"	"	"	

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Philip Nerenberg, Lab Director



EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 22:57

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-9/3 (A12H227-01)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208330</b>				
Benzene	ND	---	14.3	ug/kg dry	50	08/16/12 14:40	5035/8260B	
Toluene	ND	---	57.1	"	"	"	"	
Ethylbenzene	ND	---	28.5	"	"	"	"	
Xylenes, total	ND	---	85.6	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 116 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>104 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-9/6 (A12H227-02)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208265</b>				
Benzene	ND	---	12.9	ug/kg dry	50	08/14/12 12:24	5035/8260B	
Toluene	ND	---	51.7	"	"	"	"	
Ethylbenzene	ND	---	25.9	"	"	"	"	
Xylenes, total	ND	---	77.6	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 107 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>105 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>88 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>91 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-9/9 (A12H227-03)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208265</b>				
Benzene	ND	---	20.4	ug/kg dry	50	08/14/12 13:16	5035/8260B	
Toluene	ND	---	81.5	"	"	"	"	
Ethylbenzene	ND	---	40.8	"	"	"	"	
Xylenes, total	ND	---	122	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 108 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>91 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-9/13 (A12H227-04)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208265</b>				
Benzene	ND	---	14.6	ug/kg dry	50	08/14/12 13:41	5035/8260B	
Toluene	ND	---	58.5	"	"	"	"	
Ethylbenzene	ND	---	29.2	"	"	"	"	
Xylenes, total	ND	---	87.7	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 110 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>89 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-10/3 (A12H227-06RE1)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208330</b>				

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 22:57

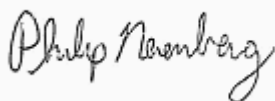
## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-10/3 (A12H227-06RE1)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208330</b>				
Benzene	ND	---	13.4	ug/kg dry	50	08/16/12 14:13	5035/8260B	
Toluene	ND	---	53.5	"	"	"	"	
Ethylbenzene	ND	---	26.7	"	"	"	"	
Xylenes, total	ND	---	80.2	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 117 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>116 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-10/6 (A12H227-07)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208265</b>				
Benzene	ND	---	23.0	ug/kg dry	50	08/14/12 14:08	5035/8260B	
Toluene	ND	---	91.8	"	"	"	"	
Ethylbenzene	ND	---	45.9	"	"	"	"	
Xylenes, total	ND	---	138	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 108 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>93 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-10/9 (A12H227-08)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208265</b>				
Benzene	ND	---	28.0	ug/kg dry	50	08/14/12 14:34	5035/8260B	
Toluene	ND	---	112	"	"	"	"	
Ethylbenzene	ND	---	56.0	"	"	"	"	
Xylenes, total	ND	---	168	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 111 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>91 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-10/13 (A12H227-09)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208265</b>				
Benzene	ND	---	11.8	ug/kg dry	50	08/14/12 15:00	5035/8260B	
Toluene	ND	---	47.2	"	"	"	"	
Ethylbenzene	ND	---	23.6	"	"	"	"	
Xylenes, total	ND	---	70.9	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 117 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>82 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 70-130 %</i>	"	"	"	

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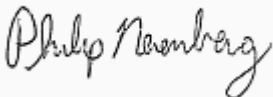
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 22:57

## ANALYTICAL SAMPLE RESULTS

## Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-9/3 (A12H227-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208394</b>			
% Solids	82.9	---	1.00	% by Weight	1	08/21/12 10:29	Apex SOP	
<b>B-9/6 (A12H227-02)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208274</b>			
% Solids	78.2	---	1.00	% by Weight	1	08/15/12 08:26	Apex SOP	
<b>B-9/9 (A12H227-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208274</b>			
% Solids	83.7	---	1.00	% by Weight	1	08/15/12 08:26	Apex SOP	
<b>B-9/13 (A12H227-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208274</b>			
% Solids	91.9	---	1.00	% by Weight	1	08/15/12 08:26	Apex SOP	
<b>B-10/3 (A12H227-06)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208394</b>			
% Solids	84.4	---	1.00	% by Weight	1	08/21/12 10:29	Apex SOP	
<b>B-10/6 (A12H227-07)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208274</b>			
% Solids	73.4	---	1.00	% by Weight	1	08/15/12 08:26	Apex SOP	
<b>B-10/9 (A12H227-08)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208274</b>			
% Solids	79.1	---	1.00	% by Weight	1	08/15/12 08:26	Apex SOP	
<b>B-10/13 (A12H227-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208274</b>			
% Solids	92.1	---	1.00	% by Weight	1	08/15/12 08:26	Apex SOP	
<b>B-10/18 (A12H227-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208375</b>			
% Solids	93.6	---	1.00	% by Weight	1	08/20/12 09:53	Apex SOP	

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Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 22:57

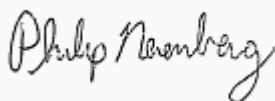
## QUALITY CONTROL (QC) SAMPLE RESULTS

## Hydrocarbon Identification (HCID) Screen by NWTPH

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208356 - NWTPH-HCID (Soil)						Soil						
Blank (1208356-BLK1)						Prepared: 08/17/12 16:05    Analyzed: 08/17/12 22:53						
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	"	"	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	"	"	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 104 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (1208356-DUP1)						Prepared: 08/17/12 16:05    Analyzed: 08/17/12 23:53						
QC Source Sample: B-9/3 (A12H227-01)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	22.9	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	57.3	"	"	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	115	"	"	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 85 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (1208356-DUP2)						Prepared: 08/17/12 16:05    Analyzed: 08/20/12 14:24						
QC Source Sample: Other (A12H310-02)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	25.8	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	64.4	"	"	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	129	"	"	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 101 %		Limits: 50-150 %		Dilution: 1x						

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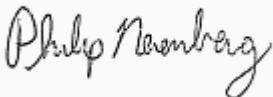
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08/30/12 22:57

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208265 - EPA 5035A						Soil						
Blank (1208265-BLK1)						Prepared: 08/14/12 09:00		Analyzed: 08/14/12 11:59				
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 91 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			85 %	50-150 %		"						
LCS (1208265-BS2)						Prepared: 08/14/12 09:00		Analyzed: 08/14/12 11:33				
NWTPH-Gx (MS)												
Gasoline Range Organics	20.2	---	5.00	mg/kg wet	50	25.0	---	81	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 89 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			87 %	50-150 %		"						
Duplicate (1208265-DUP1)						Prepared: 08/13/12 11:20		Analyzed: 08/14/12 12:50				
QC Source Sample: B-9/6 (A12H227-02)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	11.0	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 99 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			87 %	50-150 %		"						

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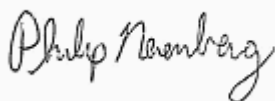
## QUALITY CONTROL (QC) SAMPLE RESULTS

## Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208321 - EPA 5035A						Soil						
Blank (1208321-BLK1)						Prepared: 08/15/12 16:30		Analyzed: 08/15/12 19:31				
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 84 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			76 %	50-150 %		"						
LCS (1208321-BS2)						Prepared: 08/15/12 16:30		Analyzed: 08/15/12 19:05				
NWTPH-Gx (MS)												
Gasoline Range Organics	21.0	---	5.00	mg/kg wet	50	25.0	---	84	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 76 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			82 %	50-150 %		"						
Duplicate (1208321-DUP1)						Prepared: 08/15/12 08:58		Analyzed: 08/15/12 21:41				
QC Source Sample: Other (A12H268-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	8.45	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 86 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			80 %	50-150 %		"						
Duplicate (1208321-DUP2)						Prepared: 08/15/12 09:20		Analyzed: 08/15/12 22:32				
QC Source Sample: Other (A12H268-02)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	6.15	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 77 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			86 %	50-150 %		"						

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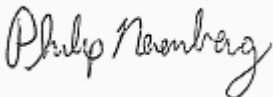
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08/30/12 22:57

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208330 - EPA 5035A						Soil						
Blank (1208330-BLK1)						Prepared: 08/16/12 08:00		Analyzed: 08/16/12 12:29				
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 92 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		85 %		50-150 %		"						
LCS (1208330-BS2)						Prepared: 08/16/12 08:00		Analyzed: 08/16/12 12:03				
NWTPH-Gx (MS)												
Gasoline Range Organics	21.5	---	5.00	mg/kg wet	50	25.0	---	86	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 92 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		84 %		50-150 %		"						
Duplicate (1208330-DUP1)						Prepared: 08/13/12 10:58		Analyzed: 08/16/12 15:06				
QC Source Sample: B-9/3 (A12H227-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	11.3	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 87 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		72 %		50-150 %		"						

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Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 22:57

## QUALITY CONTROL (QC) SAMPLE RESULTS

## BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208265 - EPA 5035A						Soil						
Blank (1208265-BLK1)						Prepared: 08/14/12 09:00    Analyzed: 08/14/12 11:59						
5035/8260B												
Benzene	ND	---	8.33	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	50.0	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)												
			Recovery:	98 %	Limits:	70-130 %	Dilution: 1x					
1,4-Difluorobenzene (Surr)				100 %		70-130 %	"					
Toluene-d8 (Surr)				93 %		70-130 %	"					
4-Bromofluorobenzene (Surr)				95 %		70-130 %	"					
LCS (1208265-BS1)						Prepared: 08/14/12 09:00    Analyzed: 08/14/12 11:07						
5035/8260B												
Benzene	940	---	12.5	ug/kg wet	50	1000	---	94	65-135%	---	---	
Toluene	912	---	50.0	"	"	"	---	91	"	---	---	
Ethylbenzene	967	---	25.0	"	"	"	---	97	"	---	---	
Xylenes, total	3010	---	75.0	"	"	3000	---	100	"	---	---	
Surr: Dibromofluoromethane (Surr)												
			Recovery:	104 %	Limits:	70-130 %	Dilution: 1x					
1,4-Difluorobenzene (Surr)				102 %		70-130 %	"					
Toluene-d8 (Surr)				89 %		70-130 %	"					
4-Bromofluorobenzene (Surr)				87 %		70-130 %	"					
Duplicate (1208265-DUP1)						Prepared: 08/13/12 11:20    Analyzed: 08/14/12 12:50						
QC Source Sample: B-9/6 (A12H227-02)												
5035/8260B												
Benzene	ND	---	27.5	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	110	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	55.0	"	"	---	ND	---	---	---	30%	
Xylenes, total	ND	---	165	"	"	---	ND	---	---	---	30%	
Surr: Dibromofluoromethane (Surr)												
			Recovery:	108 %	Limits:	70-130 %	Dilution: 1x					
1,4-Difluorobenzene (Surr)				100 %		70-130 %	"					
Toluene-d8 (Surr)				89 %		70-130 %	"					
4-Bromofluorobenzene (Surr)				93 %		70-130 %	"					
Matrix Spike (1208265-MS1)						Prepared: 08/13/12 15:39    Analyzed: 08/14/12 15:51						
QC Source Sample: Other (A12H221-01)												
5035/8260B												

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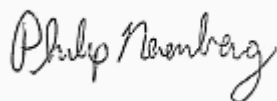
EES Environmental Inc  
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Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 22:57

## QUALITY CONTROL (QC) SAMPLE RESULTS

## BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208265 - EPA 5035A						Soil						
Matrix Spike (1208265-MS1)					Prepared: 08/13/12 15:39		Analyzed: 08/14/12 15:51					
QC Source Sample: Other (A12H221-01)												
Benzene	37200	---	321	ug/kg wet	1000	25700	9070	110	65-135%	---	---	
Toluene	95400	---	1280	"	"	"	65200	118	"	---	---	
Ethylbenzene	67100	---	642	"	"	"	43700	91	"	---	---	
Xylenes, total	334000	---	1930	"	"	77100	293000	52	"	---	---	Q-01
Surr: Dibromofluoromethane (Surr)			Recovery: 96 %		Limits: 70-130 %		Dilution: 1x					
1,4-Difluorobenzene (Surr)			109 %		70-130 %		"					
Toluene-d8 (Surr)			93 %		70-130 %		"					
4-Bromofluorobenzene (Surr)			95 %		70-130 %		"					

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Project Number: 1179  
Project Manager: Paul EckerReported:  
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## QUALITY CONTROL (QC) SAMPLE RESULTS

## BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208321 - EPA 5035A						Soil						
Blank (1208321-BLK1)			Prepared: 08/15/12 16:30    Analyzed: 08/15/12 19:31									
5035/8260B												
Benzene	ND	---	8.33	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	50.0	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery: 95 %		Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		97 %		70-130 %		"						
Toluene-d8 (Surr)		97 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		94 %		70-130 %		"						
LCS (1208321-BS1)			Prepared: 08/15/12 16:30    Analyzed: 08/15/12 18:39									
5035/8260B												
Benzene	1130	---	12.5	ug/kg wet	50	1000	---	113	65-135%	---	---	
Toluene	1090	---	50.0	"	"	"	---	109	"	---	---	
Ethylbenzene	1090	---	25.0	"	"	"	---	109	"	---	---	
Xylenes, total	3330	---	75.0	"	"	3000	---	111	"	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery: 96 %		Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		103 %		70-130 %		"						
Toluene-d8 (Surr)		97 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		94 %		70-130 %		"						
Duplicate (1208321-DUP1)			Prepared: 08/15/12 08:58    Analyzed: 08/15/12 21:41									
QC Source Sample: Other (A12H268-01)												
5035/8260B												
Benzene	ND	---	21.1	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	84.5	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	42.2	"	"	---	ND	---	---	---	30%	
Xylenes, total	ND	---	127	"	"	---	ND	---	---	---	30%	
Surr: Dibromofluoromethane (Surr)		Recovery: 100 %		Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		97 %		70-130 %		"						
Toluene-d8 (Surr)		91 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		95 %		70-130 %		"						
Duplicate (1208321-DUP2)			Prepared: 08/15/12 09:20    Analyzed: 08/15/12 22:32									
QC Source Sample: Other (A12H268-02)												
5035/8260B												

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Project Number: 1179  
Project Manager: Paul EckerReported:  
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## QUALITY CONTROL (QC) SAMPLE RESULTS

## BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208321 - EPA 5035A							Soil					
Duplicate (1208321-DUP2)					Prepared: 08/15/12 09:20		Analyzed: 08/15/12 22:32					
QC Source Sample: Other (A12H268-02)												
Benzene	ND	---	15.4	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	61.5	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	30.7	"	"	---	ND	---	---	---	30%	
Xylenes, total	ND	---	92.2	"	"	---	ND	---	---	---	30%	
Surr: Dibromofluoromethane (Surr)			Recovery: 104 %	Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)			99 %	70-130 %		"						
Toluene-d8 (Surr)			92 %	70-130 %		"						
4-Bromofluorobenzene (Surr)			92 %	70-130 %		"						

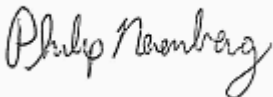
**Matrix Spike (1208321-MS1)**

Prepared: 08/13/12 14:06 Analyzed: 08/16/12 04:31

**QC Source Sample: B-10/3 (A12H227-06)**

<b>5035/8260B</b>												
Benzene	1350	---	17.4	ug/kg dry	50	1390	ND	97	65-135%	---	---	
Toluene	1410	---	69.4	"	"	"	ND	102	"	---	---	
Ethylbenzene	1390	---	34.7	"	"	"	ND	100	"	---	---	
Xylenes, total	4280	---	104	"	"	4160	ND	103	"	---	---	
<i>Surr: Dibromofluoromethane (Surr)</i>			<i>Recovery: 113 %</i>	<i>Limits: 70-130 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Surr)</i>			<i>102 %</i>	<i>70-130 %</i>		<i>"</i>						
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>70-130 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>			<i>84 %</i>	<i>70-130 %</i>		<i>"</i>						

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Project Number: 1179  
Project Manager: Paul EckerReported:  
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## QUALITY CONTROL (QC) SAMPLE RESULTS

## BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208330 - EPA 5035A						Soil						
Blank (1208330-BLK1)						Prepared: 08/16/12 08:00 Analyzed: 08/16/12 12:29						
5035/8260B												
Benzene	ND	---	8.33	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	50.0	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery:		110 %	Limits: 70-130 %		Dilution: 1x					
1,4-Difluorobenzene (Surr)				95 %	70-130 %		"					
Toluene-d8 (Surr)				98 %	70-130 %		"					
4-Bromofluorobenzene (Surr)				98 %	70-130 %		"					
LCS (1208330-BS1)						Prepared: 08/16/12 08:00 Analyzed: 08/16/12 11:37						
5035/8260B												
Benzene	824	---	12.5	ug/kg wet	50	1000	---	82	65-135%	---	---	
Toluene	914	---	50.0	"	"	"	---	91	"	---	---	
Ethylbenzene	1030	---	25.0	"	"	"	---	103	"	---	---	
Xylenes, total	3180	---	75.0	"	"	3000	---	106	"	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery:		100 %	Limits: 70-130 %		Dilution: 1x					
1,4-Difluorobenzene (Surr)				92 %	70-130 %		"					
Toluene-d8 (Surr)				95 %	70-130 %		"					
4-Bromofluorobenzene (Surr)				89 %	70-130 %		"					
Duplicate (1208330-DUP1)						Prepared: 08/13/12 10:58 Analyzed: 08/16/12 15:06						
QC Source Sample: B-9/3 (A12H227-01)												
5035/8260B												
Benzene	ND	---	28.1	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	113	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	56.3	"	"	---	ND	---	---	---	30%	
Xylenes, total	ND	---	169	"	"	---	ND	---	---	---	30%	
Surr: Dibromofluoromethane (Surr)		Recovery:		125 %	Limits: 70-130 %		Dilution: 1x					
1,4-Difluorobenzene (Surr)				79 %	70-130 %		"					
Toluene-d8 (Surr)				95 %	70-130 %		"					
4-Bromofluorobenzene (Surr)				104 %	70-130 %		"					
Matrix Spike (1208330-MS1)						Prepared: 08/15/12 18:00 Analyzed: 08/16/12 16:01						
QC Source Sample: Other (A12H278-01)												
5035/8260B												

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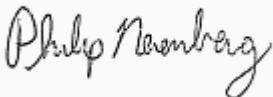
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Project Number: 1179  
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## QUALITY CONTROL (QC) SAMPLE RESULTS

## BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208330 - EPA 5035A						Soil						
Matrix Spike (1208330-MS1)				Prepared: 08/15/12 18:00		Analyzed: 08/16/12 16:01						
QC Source Sample: Other (A12H278-01)												
Benzene	1280	---	16.7	ug/kg dry	50	1340	ND	96	65-135%	---	---	
Toluene	1240	---	66.8	"	"	"	ND	93	"	---	---	
Ethylbenzene	1290	---	33.4	"	"	"	ND	96	"	---	---	
Xylenes, total	3890	---	100	"	"	4010	ND	97	"	---	---	
Surr: Dibromofluoromethane (Surr)			Recovery: 101 %	Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)			103 %	70-130 %		"						
Toluene-d8 (Surr)			93 %	70-130 %		"						
4-Bromofluorobenzene (Surr)			101 %	70-130 %		"						

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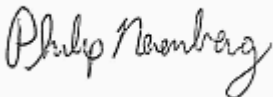
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## QUALITY CONTROL (QC) SAMPLE RESULTS

## Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208274 - Total Solids (Dry Weight)						Soil						
Duplicate (1208274-DUP1)						Prepared: 08/14/12 09:57		Analyzed: 08/15/12 08:26				
QC Source Sample: Other (A12H229-03)												
Apex SOP												
% Solids	78.2	---	1.00	% by Weight	1	---	76.0	---	---	3	20%	
Duplicate (1208274-DUP2)						Prepared: 08/14/12 11:15		Analyzed: 08/15/12 08:26				
QC Source Sample: B-9/6 (A12H227-02)												
Apex SOP												
% Solids	78.4	---	1.00	% by Weight	1	---	78.2	---	---	0.3	20%	
Duplicate (1208274-DUP3)						Prepared: 08/14/12 17:57		Analyzed: 08/15/12 08:26				
QC Source Sample: Other (A12H240-08)												
Apex SOP												
% Solids	89.8	---	1.00	% by Weight	1	---	90.4	---	---	0.7	20%	
Batch 1208375 - Total Solids (Dry Weight)						Soil						
Duplicate (1208375-DUP1)						Prepared: 08/17/12 16:47		Analyzed: 08/20/12 09:53				
QC Source Sample: Other (A12H295-02)												
Apex SOP												
% Solids	99.8	---	1.00	% by Weight	1	---	99.8	---	---	0	20%	
Duplicate (1208375-DUP2)						Prepared: 08/17/12 16:47		Analyzed: 08/20/12 09:53				
QC Source Sample: Other (A12H328-02)												
Apex SOP												
% Solids	93.5	---	1.00	% by Weight	1	---	92.3	---	---	1	20%	
Duplicate (1208375-DUP3)						Prepared: 08/17/12 16:47		Analyzed: 08/20/12 09:53				
QC Source Sample: Other (A12H332-01)												
Apex SOP												
% Solids	84.7	---	1.00	% by Weight	1	---	86.1	---	---	2	20%	
Batch 1208394 - Total Solids (Dry Weight)						Soil						

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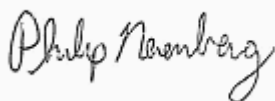
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208394 - Total Solids (Dry Weight)						Soil						
Duplicate (1208394-DUP1)						Prepared: 08/20/12 12:22		Analyzed: 08/21/12 10:29				
QC Source Sample: Other (A12H246-08)												
Apex SOP												
% Solids	84.3	---	1.00	% by Weight	1	---	84.5	---	---	0.2	20%	
Duplicate (1208394-DUP2)						Prepared: 08/20/12 12:22		Analyzed: 08/21/12 10:29				
QC Source Sample: Other (A12H287-10)												
Apex SOP												
% Solids	78.0	---	1.00	% by Weight	1	---	77.7	---	---	0.4	20%	
Duplicate (1208394-DUP3)						Prepared: 08/20/12 12:22		Analyzed: 08/21/12 10:29				
QC Source Sample: Other (A12H318-05)												
Apex SOP												
% Solids	82.8	---	1.00	% by Weight	1	---	83.6	---	---	1	20%	
Duplicate (1208394-DUP4)						Prepared: 08/20/12 12:22		Analyzed: 08/21/12 10:29				
QC Source Sample: Other (A12H318-14)												
Apex SOP												
% Solids	86.7	---	1.00	% by Weight	1	---	88.7	---	---	2	20%	
Duplicate (1208394-DUP5)						Prepared: 08/20/12 12:22		Analyzed: 08/21/12 10:29				
QC Source Sample: Other (A12H329-07)												
Apex SOP												
% Solids	62.9	---	1.00	% by Weight	1	---	63.7	---	---	1	20%	
Duplicate (1208394-DUP6)						Prepared: 08/20/12 12:22		Analyzed: 08/21/12 10:29				
QC Source Sample: Other (A12H342-02)												
Apex SOP												
% Solids	90.3	---	1.00	% by Weight	1	---	90.2	---	---	0.1	20%	
Duplicate (1208394-DUP7)						Prepared: 08/20/12 18:17		Analyzed: 08/21/12 10:29				
QC Source Sample: Other (A12H343-08)												
Apex SOP												
% Solids	78.0	---	1.00	% by Weight	1	---	78.1	---	---	0.1	20%	
Duplicate (1208394-DUP8)						Prepared: 08/20/12 18:17		Analyzed: 08/21/12 10:29				

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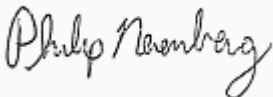
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Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 22:57

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208394 - Total Solids (Dry Weight)							Soil					
Duplicate (1208394-DUP8)					Prepared: 08/20/12 18:17		Analyzed: 08/21/12 10:29					
QC Source Sample: Other (A12H353-05)												
Apex SOP												
% Solids	81.9	---	1.00	% by Weight	1	---	81.3	---	---	0.7	20%	
Duplicate (1208394-DUP9)					Prepared: 08/20/12 18:17		Analyzed: 08/21/12 10:29					
QC Source Sample: Other (A12H359-04)												
Apex SOP												
% Solids	75.2	---	1.00	% by Weight	1	---	75.1	---	---	0.1	20%	

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Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 22:57

## SAMPLE PREPARATION INFORMATION

### Hydrocarbon Identification (HCID) Screen by NWTPH

#### Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 1208356							
A12H227-01	Soil	NWTPH-HCID	08/13/12 10:58	08/17/12 16:05	10.27g/10mL	10g/10mL	0.97
A12H227-06	Soil	NWTPH-HCID	08/13/12 14:06	08/17/12 16:05	10.86g/10mL	10g/10mL	0.92
A12H227-10	Soil	NWTPH-HCID	08/13/12 15:24	08/17/12 16:05	10.48g/10mL	10g/10mL	0.95

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

#### Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 1208265							
A12H227-02	Soil	NWTPH-Gx (MS)	08/13/12 11:20	08/13/12 11:20	8.46g/5mL	10g/10mL	0.59
A12H227-03	Soil	NWTPH-Gx (MS)	08/13/12 11:50	08/13/12 11:50	4.16g/5mL	10g/10mL	1.20
A12H227-04	Soil	NWTPH-Gx (MS)	08/13/12 13:09	08/13/12 13:09	5.03g/5mL	10g/10mL	0.99
A12H227-07	Soil	NWTPH-Gx (MS)	08/13/12 14:25	08/13/12 14:25	4.62g/5mL	10g/10mL	1.08
A12H227-08	Soil	NWTPH-Gx (MS)	08/13/12 14:45	08/13/12 14:45	3.2g/5mL	10g/10mL	1.56
A12H227-09	Soil	NWTPH-Gx (MS)	08/13/12 15:15	08/13/12 15:15	6.32g/5mL	10g/10mL	0.79
Batch: 1208321							
A12H227-06	Soil	NWTPH-Gx (MS)	08/13/12 14:06	08/13/12 14:06	6.7g/5mL	10g/10mL	0.75
Batch: 1208330							
A12H227-01	Soil	NWTPH-Gx (MS)	08/13/12 10:58	08/13/12 10:58	6.45g/5mL	10g/10mL	0.78

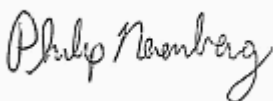
### BTEX Compounds by EPA 8260B

#### Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 1208265							
A12H227-02	Soil	5035/8260B	08/13/12 11:20	08/13/12 11:20	8.46g/5mL	10g/10mL	0.59
A12H227-03	Soil	5035/8260B	08/13/12 11:50	08/13/12 11:50	4.16g/5mL	10g/10mL	1.20
A12H227-04	Soil	5035/8260B	08/13/12 13:09	08/13/12 13:09	5.03g/5mL	10g/10mL	0.99
A12H227-07	Soil	5035/8260B	08/13/12 14:25	08/13/12 14:25	4.62g/5mL	10g/10mL	1.08
A12H227-08	Soil	5035/8260B	08/13/12 14:45	08/13/12 14:45	3.2g/5mL	10g/10mL	1.56
A12H227-09	Soil	5035/8260B	08/13/12 15:15	08/13/12 15:15	6.32g/5mL	10g/10mL	0.79
Batch: 1208330							
A12H227-01	Soil	5035/8260B	08/13/12 10:58	08/13/12 10:58	6.45g/5mL	10g/10mL	0.78
A12H227-06RE1	Soil	5035/8260B	08/13/12 14:06	08/15/12 13:15	6.7g/5mL	10g/10mL	0.75

Apex Laboratories

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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 22:57

## Notes and Definitions

### Qualifiers:

Q-01 Percent recovery and/or RPD is outside acceptance limits.

### Notes and Conventions:

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.  
RPD Relative Percent Difference  
MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.  
WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.  
Batch In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS  
QC Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.

Blank Apex assesses blank data for potential high bias down to a level equal to ½ the method reporting limit (MRL), except for conventional  
Policy chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses.

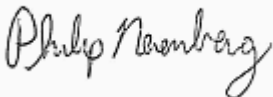
For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor.

Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.

--- QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

\*\*\* Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories



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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 22:57

**APEX LABS**  
CHAIN OF CUSTODY  
Lab # 1212007 For Lab 1

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Company: EES Environmental Project Mgr: Paul Ecker Project Name: Plaid Pantry #112 Project # 1179

Address: 340 N. Broadway #115, Portland, OR 97227 Phone: 503-784-1093 Email:

Sampled by: Kay Greiner

SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	ANALYSIS REQUEST														
						NWTPH-ACID	NWTPH-DA	NWTPH-GS	8260 VOC	8260 RBBM VOC	8260 BTEX	8270 SVOC	8270 SIM PAHs	8082 PCBs	409 TFO	RCRA Metals (B)	TCLP Metals (B)	AL, SI, AS, BA, BR, CA, CR, CU, NI, PB, R, SE, AG, NA, TL, V, ZN	1200-COLS	1200-Z
B-9/13		08-13-2012	1058	S	3															
B-9/16			1120																	
B-9/19			1150																	
B-9/13			1309																	
B-9/18			1314																	
B-10/3			1406																	
B-10/6			1425																	
B-10/9			1445																	
B-10/13			1508																	
B-10/18			1524																	

Normal Turn Around Time (TAT) = 7-10 Business Days

TAT Requested (circle): 2 Day 3 Day 4 DAY 5 DAY Other:

SPECIAL INSTRUCTIONS:

RELINQUISHED BY:		RECEIVED BY:	
Signature: <u>Anthony Greiner</u>	Date: <u>8-13-12</u>	Signature: <u>Kyle Greiner</u>	Date: <u>8-13-12</u>
Printed Name: <u>Anthony Greiner</u>	Printed Name: <u>Kyle Greiner</u>	Signature: <u>Paul Ecker</u>	Date: <u>8-30-12</u>
Company: <u>EES</u>	Company: <u>EES</u>	Signature: <u>Paul Ecker</u>	Date: <u>8-30-12</u>

Apex Laboratories

*Philip Nerenberg*

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

# Apex Labs

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323 Phone  
503-718-0333 Fax

Thursday, August 30, 2012

Paul Ecker  
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

RE: Plaid Pantry #112 / 1179

Enclosed are the results of analyses for work order A12H246, which was received by the laboratory on 8/14/2012 at 2:20:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [pnerenberg@apex-labs.com](mailto:pnerenberg@apex-labs.com), or by phone at 503-718-2323.

---

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---

Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

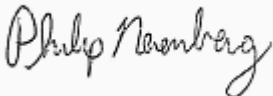
Reported:  
08/30/12 23:04

## ANALYTICAL REPORT FOR SAMPLES

### SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-11/3'	A12H246-01	Soil	08/14/12 08:51	08/14/12 14:20
B-11/6'	A12H246-02	Soil	08/14/12 09:08	08/14/12 14:20
B-11/9'	A12H246-03	Soil	08/14/12 09:26	08/14/12 14:20
B-11/11	A12H246-04	Soil	08/14/12 10:15	08/14/12 14:20
B-11/17	A12H246-05	Soil	08/14/12 10:26	08/14/12 14:20
B-11/23	A12H246-06	Soil	08/14/12 10:44	08/14/12 14:20
B-11/29	A12H246-07	Soil	08/14/12 11:09	08/14/12 14:20
B-12/3	A12H246-08	Soil	08/14/12 10:41	08/14/12 14:20
B-12/6	A12H246-09	Soil	08/14/12 10:58	08/14/12 14:20
B-12/9	A12H246-10	Soil	08/14/12 11:18	08/14/12 14:20
B-12/13	A12H246-11	Soil	08/14/12 12:47	08/14/12 14:20
B-12/18	A12H246-12	Soil	08/14/12 12:54	08/14/12 14:20

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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

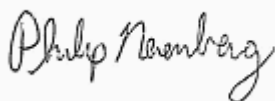
## ANALYTICAL SAMPLE RESULTS

## Hydrocarbon Identification (HCID) Screen by NWTPH

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-11/3' (A12H246-01)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208356</b>				
Gasoline Range Organics	ND	---	22.6	mg/kg dry	1	08/18/12 01:21	NWTPH-HCID	
Diesel Range Organics	ND	---	56.4	"	"	"	"	
Oil Range Organics	ND	---	113	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		"	"	"
<b>B-11/6' (A12H246-02)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208356</b>				
Gasoline Range Organics	DET	---	24.6	mg/kg dry	1	08/18/12 01:51	NWTPH-HCID	
Diesel Range Organics	DET	---	61.5	"	"	"	"	F-06
Oil Range Organics	ND	---	123	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		"	"	"
<b>B-11/23 (A12H246-06)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208356</b>				
Gasoline Range Organics	ND	---	20.4	mg/kg dry	1	08/18/12 02:20	NWTPH-HCID	
Diesel Range Organics	ND	---	51.0	"	"	"	"	
Oil Range Organics	ND	---	102	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 50-150 %</i>		"	"	"
<b>B-11/29 (A12H246-07)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208356</b>				
Gasoline Range Organics	ND	---	20.3	mg/kg dry	1	08/18/12 02:50	NWTPH-HCID	
Diesel Range Organics	ND	---	50.8	"	"	"	"	
Oil Range Organics	ND	---	102	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 50-150 %</i>		"	"	"
<b>B-12/3 (A12H246-08)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208356</b>				
Gasoline Range Organics	ND	---	23.2	mg/kg dry	1	08/20/12 11:58	NWTPH-HCID	
Diesel Range Organics	ND	---	58.0	"	"	"	"	
Oil Range Organics	ND	---	116	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 50-150 %</i>		"	"	"
<b>B-12/18 (A12H246-12)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208356</b>				
Gasoline Range Organics	ND	---	20.1	mg/kg dry	1	08/20/12 12:27	NWTPH-HCID	
Diesel Range Organics	ND	---	50.2	"	"	"	"	
Oil Range Organics	ND	---	100	"	"	"	"	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 50-150 %</i>		"	"	"

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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

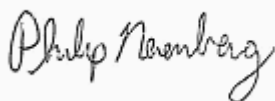
## ANALYTICAL SAMPLE RESULTS

## Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-11/3' (A12H246-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208321</b>			
<b>Gasoline Range Organics</b>	<b>13.2</b>	---	6.79	mg/kg dry	50	08/16/12 03:14	NWTPH-Gx (MS)	F-05
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 95 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			79 %	Limits: 50-150 %	"	"	"	
<b>B-11/6' (A12H246-02RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208287</b>			
<b>Gasoline Range Organics</b>	<b>20400</b>	---	814	mg/kg dry	5000	08/15/12 10:25	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 130 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			88 %	Limits: 50-150 %	"	"	"	
<b>B-11/9' (A12H246-03RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208287</b>			
<b>Gasoline Range Organics</b>	<b>1560</b>	---	95.4	mg/kg dry	500	08/15/12 10:51	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 115 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			90 %	Limits: 50-150 %	"	"	"	
<b>B-11/11 (A12H246-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208298</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	5.70	mg/kg dry	50	08/14/12 21:25	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 93 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			85 %	Limits: 50-150 %	"	"	"	
<b>B-11/17 (A12H246-05)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208298</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	5.62	mg/kg dry	50	08/14/12 21:50	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 85 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			82 %	Limits: 50-150 %	"	"	"	
<b>B-12/3 (A12H246-08)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208321</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	5.20	mg/kg dry	50	08/16/12 03:40	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 87 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			85 %	Limits: 50-150 %	"	"	"	
<b>B-12/6 (A12H246-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208298</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	8.06	mg/kg dry	50	08/14/12 22:16	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 91 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			86 %	Limits: 50-150 %	"	"	"	
<b>B-12/9 (A12H246-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208265</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	9.55	mg/kg dry	50	08/14/12 17:10	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 92 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			86 %	Limits: 50-150 %	"	"	"	
<b>B-12/13 (A12H246-11)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208265</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	8.07	mg/kg dry	50	08/14/12 17:36	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 88 %	Limits: 50-150 %	1	"	"	

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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

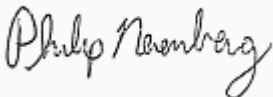
Reported:  
08/30/12 23:04

## ANALYTICAL SAMPLE RESULTS

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-12/13 (A12H246-11)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208265</b>			
<i>Surrogate: 1,4-Difluorobenzene (Sur)</i>			<i>Recovery: 87 %</i>	<i>Limits: 50-150 %</i>	1	"	NWTPH-Gx (MS)	

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Philip Nerenberg, Lab Director



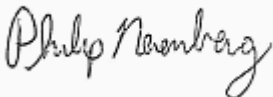
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

## ANALYTICAL SAMPLE RESULTS

## RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-11/6' (A12H246-02)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208298</b>			
<b>Benzene</b>	<b>3700</b>	---	204	ug/kg dry	500	08/14/12 22:42	5035/8260B	
Toluene	ND	---	814	"	"	"	"	
<b>Ethylbenzene</b>	<b>3870</b>	---	407	"	"	"	"	
Xylenes, total	ND	---	1630	"	"	"	"	R-01
<b>Naphthalene</b>	<b>57400</b>	---	1630	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	814	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	407	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	407	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 100 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>112 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>112 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>91 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-11/11 (A12H246-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208298</b>			
Benzene	ND	---	14.3	ug/kg dry	50	08/14/12 21:25	5035/8260B	
Toluene	ND	---	57.0	"	"	"	"	
Ethylbenzene	ND	---	28.5	"	"	"	"	
Xylenes, total	ND	---	85.6	"	"	"	"	
Naphthalene	ND	---	114	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	57.0	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	28.5	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 95 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>106 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 70-130 %</i>	"	"	"	

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:04

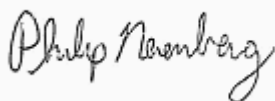
## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-11/3' (A12H246-01)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Benzene	ND	---	17.0	ug/kg dry	50	08/16/12 03:14	5035/8260B	
Toluene	ND	---	67.9	"	"	"	"	
Ethylbenzene	ND	---	33.9	"	"	"	"	
Xylenes, total	ND	---	102	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 116 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>89 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>90 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-11/6' (A12H246-02)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208298</b>				
<b>Benzene</b>	<b>3700</b>	---	204	ug/kg dry	500	08/14/12 22:42	5035/8260B	
Toluene	ND	---	814	"	"	"	"	
<b>Ethylbenzene</b>	<b>3870</b>	---	407	"	"	"	"	
Xylenes, total	ND	---	1630	"	"	"	"	R-01
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 100 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>112 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>112 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>91 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-11/9' (A12H246-03)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208298</b>				
<b>Benzene</b>	<b>468</b>	---	23.9	ug/kg dry	50	08/14/12 20:59	5035/8260B	
Toluene	ND	---	95.4	"	"	"	"	
<b>Ethylbenzene</b>	<b>620</b>	---	47.7	"	"	"	"	
Xylenes, total	ND	---	143	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 97 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>106 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>109 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>94 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-11/11 (A12H246-04)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208298</b>				
Benzene	ND	---	14.3	ug/kg dry	50	08/14/12 21:25	5035/8260B	
Toluene	ND	---	57.0	"	"	"	"	
Ethylbenzene	ND	---	28.5	"	"	"	"	
Xylenes, total	ND	---	85.6	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 95 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>106 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-11/17 (A12H246-05)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208298</b>				

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:04

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-11/17 (A12H246-05)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208298</b>				
Benzene	ND	---	14.0	ug/kg dry	50	08/14/12 21:50	5035/8260B	
Toluene	ND	---	56.2	"	"	"	"	
Ethylbenzene	ND	---	28.1	"	"	"	"	
Xylenes, total	ND	---	84.3	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 95 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>104 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>93 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-12/3 (A12H246-08)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Benzene	ND	---	13.0	ug/kg dry	50	08/16/12 03:40	5035/8260B	
Toluene	ND	---	52.0	"	"	"	"	
Ethylbenzene	ND	---	26.0	"	"	"	"	
Xylenes, total	ND	---	78.0	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 123 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>96 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>94 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-12/6 (A12H246-09)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208298</b>				
Benzene	ND	---	20.1	ug/kg dry	50	08/14/12 22:16	5035/8260B	
Toluene	ND	---	80.6	"	"	"	"	
Ethylbenzene	ND	---	40.3	"	"	"	"	
Xylenes, total	ND	---	121	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 100 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>104 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-12/9 (A12H246-10)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208265</b>				
Benzene	ND	---	23.9	ug/kg dry	50	08/14/12 17:10	5035/8260B	
Toluene	ND	---	95.5	"	"	"	"	
Ethylbenzene	ND	---	47.7	"	"	"	"	
Xylenes, total	ND	---	143	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 94 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>110 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>93 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>93 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-12/13 (A12H246-11)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208265</b>				

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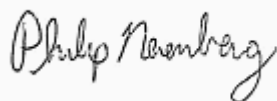
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

## ANALYTICAL SAMPLE RESULTS

## BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-12/13 (A12H246-11)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208265</b>				
Benzene	ND	---	20.2	ug/kg dry	50	08/14/12 17:36	5035/8260B	
Toluene	ND	---	80.7	"	"	"	"	
Ethylbenzene	ND	---	40.4	"	"	"	"	
Xylenes, total	ND	---	121	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 94 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>110 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>90 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>87 %</i>	<i>Limits: 70-130 %</i>	"	"	"	

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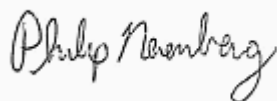
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Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260B SIM

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-11/11 (A12H246-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208500</b>			
1,2-Dibromoethane (EDB)	ND	---	5.70	ug/kg dry	50	08/23/12 15:47	5035/8260B SIM	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 105 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>104 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 70-130 %</i>	"	"	"	

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

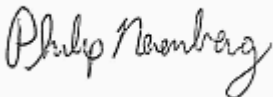
Reported:  
08/30/12 23:04

## ANALYTICAL SAMPLE RESULTS

### Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
B-11/6' (A12H246-02)			Matrix: Soil					
Batch: 1208409								
Lead	23.6	---	1.22	mg/kg dry	10	08/21/12 14:01	EPA 6020	
B-11/11 (A12H246-04)			Matrix: Soil					
Batch: 1208409								
Lead	3.26	---	1.17	mg/kg dry	10	08/21/12 14:04	EPA 6020	

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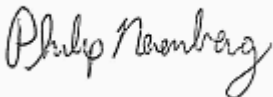
Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

## ANALYTICAL SAMPLE RESULTS

Percent Dry Weight								
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-11/3' (A12H246-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208394</b>			
% Solids	84.0	---	1.00	% by Weight	1	08/21/12 10:29	Apex SOP	
<b>B-11/6' (A12H246-02)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208274</b>			
% Solids	78.1	---	1.00	% by Weight	1	08/15/12 08:26	Apex SOP	
<b>B-11/9' (A12H246-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208274</b>			
% Solids	75.8	---	1.00	% by Weight	1	08/15/12 08:26	Apex SOP	
<b>B-11/11 (A12H246-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208274</b>			
% Solids	92.5	---	1.00	% by Weight	1	08/15/12 08:26	Apex SOP	
<b>B-11/17 (A12H246-05)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208274</b>			
% Solids	92.8	---	1.00	% by Weight	1	08/15/12 08:26	Apex SOP	
<b>B-11/23 (A12H246-06)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208346</b>			
% Solids	93.4	---	1.00	% by Weight	1	08/17/12 10:50	Apex SOP	
<b>B-11/29 (A12H246-07)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208346</b>			
% Solids	93.7	---	1.00	% by Weight	1	08/17/12 10:50	Apex SOP	
<b>B-12/3 (A12H246-08)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208394</b>			
% Solids	84.5	---	1.00	% by Weight	1	08/21/12 10:29	Apex SOP	
<b>B-12/6 (A12H246-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208274</b>			
% Solids	82.1	---	1.00	% by Weight	1	08/15/12 08:26	Apex SOP	
<b>B-12/9 (A12H246-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208274</b>			
% Solids	76.4	---	1.00	% by Weight	1	08/15/12 08:26	Apex SOP	
<b>B-12/13 (A12H246-11)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208274</b>			
% Solids	92.9	---	1.00	% by Weight	1	08/15/12 08:26	Apex SOP	
<b>B-12/18 (A12H246-12)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208346</b>			
% Solids	94.5	---	1.00	% by Weight	1	08/17/12 10:50	Apex SOP	

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240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

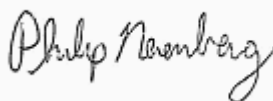
## QUALITY CONTROL (QC) SAMPLE RESULTS

## Hydrocarbon Identification (HCID) Screen by NWTPH

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208356 - NWTPH-HCID (Soil)						Soil						
Blank (1208356-BLK1)						Prepared: 08/17/12 16:05    Analyzed: 08/17/12 22:53						
NWTPH-HCID												
Gasoline Range Organics	ND	---	18.2	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	45.5	"	"	---	---	---	---	---	---	
Oil Range Organics	ND	---	90.9	"	"	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 104 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (1208356-DUP1)						Prepared: 08/17/12 16:05    Analyzed: 08/17/12 23:53						
QC Source Sample: Other (A12H227-01)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	22.9	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	57.3	"	"	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	115	"	"	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 85 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (1208356-DUP2)						Prepared: 08/17/12 16:05    Analyzed: 08/20/12 14:24						
QC Source Sample: Other (A12H310-02)												
NWTPH-HCID												
Gasoline Range Organics	ND	---	25.8	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	64.4	"	"	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	129	"	"	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 101 %		Limits: 50-150 %		Dilution: 1x						

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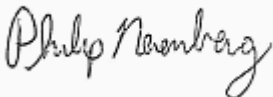
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208265 - EPA 5035A						Soil						
Blank (1208265-BLK1)						Prepared: 08/14/12 09:00		Analyzed: 08/14/12 11:59				
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 91 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		85 %		50-150 %		"						
LCS (1208265-BS2)						Prepared: 08/14/12 09:00		Analyzed: 08/14/12 11:33				
NWTPH-Gx (MS)												
Gasoline Range Organics	20.2	---	5.00	mg/kg wet	50	25.0	---	81	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 89 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		87 %		50-150 %		"						
Duplicate (1208265-DUP1)						Prepared: 08/13/12 11:20		Analyzed: 08/14/12 12:50				
QC Source Sample: Other (A12H227-02)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	11.0	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 99 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		87 %		50-150 %		"						

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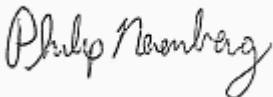
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208287 - EPA 5035A						Soil						
Blank (1208287-BLK1)						Prepared: 08/15/12 08:00		Analyzed: 08/15/12 09:59				
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 85 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		82 %		50-150 %		"						
LCS (1208287-BS2)						Prepared: 08/15/12 08:00		Analyzed: 08/15/12 09:34				
NWTPH-Gx (MS)												
Gasoline Range Organics	22.4	---	5.00	mg/kg wet	50	25.0	---	90	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 82 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		87 %		50-150 %		"						
Duplicate (1208287-DUP1)						Prepared: 08/15/12 08:30		Analyzed: 08/15/12 12:33				
QC Source Sample: Other (A12H039-02)												
NWTPH-Gx (MS)												
Gasoline Range Organics	683	---	17.1	mg/kg dry	100	---	683	---	---	0.03	30%	F-09
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 133 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		86 %		50-150 %		"						

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Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

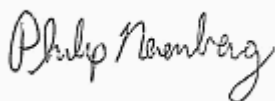
## QUALITY CONTROL (QC) SAMPLE RESULTS

## Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208298 - EPA 5035A						Soil						
Blank (1208298-BLK1)						Prepared: 08/14/12 17:00		Analyzed: 08/14/12 20:33				
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 86 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			87 %	50-150 %		"						
LCS (1208298-BS2)						Prepared: 08/14/12 17:00		Analyzed: 08/14/12 20:07				
NWTPH-Gx (MS)												
Gasoline Range Organics	22.5	---	5.00	mg/kg wet	50	25.0	---	90	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 81 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			86 %	50-150 %		"						
Duplicate (1208298-DUP1)						Prepared: 08/14/12 09:08		Analyzed: 08/14/12 23:07				
QC Source Sample: B-11/6' (A12H246-02)												
NWTPH-Gx (MS)												
Gasoline Range Organics	16400	---	77.5	mg/kg dry	500	---	17100	---	---	4	30%	E
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 364 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			149 %	50-150 %		"						
Duplicate (1208298-DUP2)						Prepared: 08/14/12 17:40		Analyzed: 08/15/12 04:16				
QC Source Sample: Other (A12H240-11)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	5.96	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 89 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			89 %	50-150 %		"						

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EES Environmental Inc  
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Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

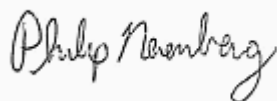
## QUALITY CONTROL (QC) SAMPLE RESULTS

## Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208321 - EPA 5035A						Soil						
Blank (1208321-BLK1)						Prepared: 08/15/12 16:30		Analyzed: 08/15/12 19:31				
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 84 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			76 %	50-150 %		"						
LCS (1208321-BS2)						Prepared: 08/15/12 16:30		Analyzed: 08/15/12 19:05				
NWTPH-Gx (MS)												
Gasoline Range Organics	21.0	---	5.00	mg/kg wet	50	25.0	---	84	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 76 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			82 %	50-150 %		"						
Duplicate (1208321-DUP1)						Prepared: 08/15/12 08:58		Analyzed: 08/15/12 21:41				
QC Source Sample: Other (A12H268-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	8.45	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 86 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			80 %	50-150 %		"						
Duplicate (1208321-DUP2)						Prepared: 08/15/12 09:20		Analyzed: 08/15/12 22:32				
QC Source Sample: Other (A12H268-02)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	6.15	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 77 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			86 %	50-150 %		"						

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

## QUALITY CONTROL (QC) SAMPLE RESULTS

## RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208298 - EPA 5035A						Soil						
Blank (1208298-BLK1)			Prepared: 08/14/12 17:00 Analyzed: 08/14/12 20:33									
5035/8260B												
Benzene	ND	---	8.33	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	33.3	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	16.7	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	50.0	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	66.7	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	33.3	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	16.7	"	"	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	16.7	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)			Recovery: 97 %	Limits: 70-130 %	Dilution: 1x							
1,4-Difluorobenzene (Surr)			106 %	70-130 %	"							
Toluene-d8 (Surr)			96 %	70-130 %	"							
4-Bromofluorobenzene (Surr)			97 %	70-130 %	"							

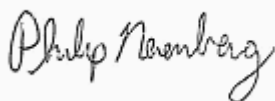
## LCS (1208298-BS1)

Prepared: 08/14/12 17:00 Analyzed: 08/14/12 19:41

<b>5035/8260B</b>												
Benzene	1130	---	12.5	ug/kg wet	50	1000	---	113	65-135%	---	---	
Toluene	1060	---	50.0	"	"	"	---	106	"	---	---	
Ethylbenzene	1040	---	25.0	"	"	"	---	104	"	---	---	
m,p-Xylene	2200	---	50.0	"	"	2000	---	110	"	---	---	
o-Xylene	1060	---	25.0	"	"	1000	---	106	"	---	---	
Xylenes, total	3260	---	75.0	"	"	3000	---	109	"	---	---	
Naphthalene	1250	---	100	"	"	1000	---	125	"	---	---	
Methyl tert-butyl ether (MTBE)	1030	---	50.0	"	"	"	---	103	"	---	---	
Isopropylbenzene	1100	---	50.0	"	"	"	---	110	"	---	---	
n-Propylbenzene	1210	---	25.0	"	"	"	---	121	"	---	---	
1,2,4-Trimethylbenzene	1160	---	50.0	"	"	"	---	116	"	---	---	
1,3,5-Trimethylbenzene	1120	---	50.0	"	"	"	---	112	"	---	---	
1,2-Dibromoethane (EDB)	1060	---	25.0	"	"	"	---	106	"	---	---	
1,2-Dichloroethane (EDC)	882	---	25.0	"	"	"	---	88	"	---	---	

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Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

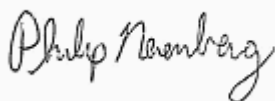
## QUALITY CONTROL (QC) SAMPLE RESULTS

## RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208298 - EPA 5035A						Soil						
LCS (1208298-BS1)						Prepared: 08/14/12 17:00 Analyzed: 08/14/12 19:41						
Surr: Dibromofluoromethane (Surr)		Recovery: 96 %		Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		107 %		70-130 %		"						
Toluene-d8 (Surr)		98 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		98 %		70-130 %		"						
Duplicate (1208298-DUP1)						Prepared: 08/14/12 09:08 Analyzed: 08/14/12 23:07						
QC Source Sample: B-11/6' (A12H246-02)												
5035/8260B												
Benzene	3740	---	194	ug/kg dry	500	---	3700	---	---	0.9	30%	
Toluene	ND	---	775	"	"	---	ND	---	---	---	30%	
Ethylbenzene	3890	---	388	"	"	---	3870	---	---	0.6	30%	
m,p-Xylene	ND	---	1550	"	"	---	ND	---	---	---	30%	R-01
o-Xylene	ND	---	388	"	"	---	ND	---	---	---	30%	
Xylenes, total	ND	---	1940	"	"	---	ND	---	---	---	30%	R-01
Naphthalene	57200	---	1550	"	"	---	57400	---	---	0.4	30%	
Methyl tert-butyl ether (MTBE)	ND	---	775	"	"	---	ND	---	---	---	30%	
Isopropylbenzene	18300	---	775	"	"	---	18800	---	---	3	30%	
n-Propylbenzene	39800	---	388	"	"	---	40100	---	---	0.9	30%	
1,2,4-Trimethylbenzene	257000	---	775	"	"	---	269000	---	---	4	30%	E
1,3,5-Trimethylbenzene	ND	---	775	"	"	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	388	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	388	"	"	---	ND	---	---	---	30%	
Surr: Dibromofluoromethane (Surr)		Recovery: 93 %		Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		108 %		70-130 %		"						
Toluene-d8 (Surr)		119 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		90 %		70-130 %		"						
Duplicate (1208298-DUP2)						Prepared: 08/14/12 17:40 Analyzed: 08/15/12 04:16						
QC Source Sample: Other (A12H240-11)												
5035/8260B												
Benzene	ND	---	14.9	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	59.6	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	29.8	"	"	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	59.6	"	"	---	ND	---	---	---	30%	
o-Xylene	ND	---	29.8	"	"	---	ND	---	---	---	30%	
Xylenes, total	ND	---	89.5	"	"	---	ND	---	---	---	30%	

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

## QUALITY CONTROL (QC) SAMPLE RESULTS

## RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208298 - EPA 5035A							Soil					
Duplicate (1208298-DUP2)				Prepared: 08/14/12 17:40		Analyzed: 08/15/12 04:16						
QC Source Sample: Other (A12H240-11)												
Naphthalene	ND	---	119	ug/kg dry	"	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	59.6	"	"	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	59.6	"	"	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	29.8	"	"	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	59.6	"	"	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	59.6	"	"	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	29.8	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	29.8	"	"	---	ND	---	---	---	30%	

Surr: Dibromofluoromethane (Surr) Recovery: 96 % Limits: 70-130 % Dilution: 1x  
 1,4-Difluorobenzene (Surr) 109 % 70-130 % "  
 Toluene-d8 (Surr) 98 % 70-130 % "  
 4-Bromofluorobenzene (Surr) 94 % 70-130 % "

**Matrix Spike (1208298-MS1)** Prepared: 08/14/12 16:25 Analyzed: 08/15/12 05:32

QC Source Sample: Other (A12H247-01)

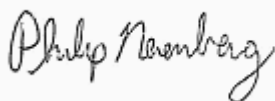
5035/8260B

Benzene	1420	---	15.4	ug/kg dry	50	1230	ND	115	65-135%	---	---	
Toluene	1260	---	61.6	"	"	"	ND	103	"	---	---	
Ethylbenzene	1250	---	30.8	"	"	"	ND	101	"	---	---	
m,p-Xylene	2540	---	61.6	"	"	2460	ND	103	"	---	---	
o-Xylene	1280	---	30.8	"	"	1230	ND	104	"	---	---	
Xylenes, total	3830	---	92.5	"	"	3700	ND	103	"	---	---	
Naphthalene	1690	---	123	"	"	1230	214	120	"	---	---	
Methyl tert-butyl ether (MTBE)	1220	---	61.6	"	"	"	ND	99	"	---	---	
Isopropylbenzene	1250	---	61.6	"	"	"	ND	101	"	---	---	
n-Propylbenzene	1410	---	30.8	"	"	"	ND	114	"	---	---	
1,2,4-Trimethylbenzene	1330	---	61.6	"	"	"	47.9	104	"	---	---	
1,3,5-Trimethylbenzene	1380	---	61.6	"	"	"	ND	112	"	---	---	
1,2-Dibromoethane (EDB)	1240	---	30.8	"	"	"	ND	100	"	---	---	
1,2-Dichloroethane (EDC)	1070	---	30.8	"	"	"	ND	87	"	---	---	

Surr: Dibromofluoromethane (Surr) Recovery: 98 % Limits: 70-130 % Dilution: 1x  
 1,4-Difluorobenzene (Surr) 108 % 70-130 % "  
 Toluene-d8 (Surr) 98 % 70-130 % "  
 4-Bromofluorobenzene (Surr) 95 % 70-130 % "

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

## QUALITY CONTROL (QC) SAMPLE RESULTS

## BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208265 - EPA 5035A						Soil						
Blank (1208265-BLK1)						Prepared: 08/14/12 09:00		Analyzed: 08/14/12 11:59				
5035/8260B												
Benzene	ND	---	8.33	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	50.0	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery:		98 %	Limits:		70-130 %	Dilution:		1x		
1,4-Difluorobenzene (Surr)				100 %			70-130 %			"		
Toluene-d8 (Surr)				93 %			70-130 %			"		
4-Bromofluorobenzene (Surr)				95 %			70-130 %			"		
LCS (1208265-BS1)						Prepared: 08/14/12 09:00		Analyzed: 08/14/12 11:07				
5035/8260B												
Benzene	940	---	12.5	ug/kg wet	50	1000	---	94	65-135%	---	---	
Toluene	912	---	50.0	"	"	"	---	91	"	---	---	
Ethylbenzene	967	---	25.0	"	"	"	---	97	"	---	---	
Xylenes, total	3010	---	75.0	"	"	3000	---	100	"	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery:		104 %	Limits:		70-130 %	Dilution:		1x		
1,4-Difluorobenzene (Surr)				102 %			70-130 %			"		
Toluene-d8 (Surr)				89 %			70-130 %			"		
4-Bromofluorobenzene (Surr)				87 %			70-130 %			"		
Duplicate (1208265-DUP1)						Prepared: 08/13/12 11:20		Analyzed: 08/14/12 12:50				
QC Source Sample: Other (A12H227-02)												
5035/8260B												
Benzene	ND	---	27.5	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	110	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	55.0	"	"	---	ND	---	---	---	30%	
Xylenes, total	ND	---	165	"	"	---	ND	---	---	---	30%	
Surr: Dibromofluoromethane (Surr)		Recovery:		108 %	Limits:		70-130 %	Dilution:		1x		
1,4-Difluorobenzene (Surr)				100 %			70-130 %			"		
Toluene-d8 (Surr)				89 %			70-130 %			"		
4-Bromofluorobenzene (Surr)				93 %			70-130 %			"		
Matrix Spike (1208265-MS1)						Prepared: 08/13/12 15:39		Analyzed: 08/14/12 15:51				
QC Source Sample: Other (A12H221-01)												
5035/8260B												

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Philip Nerenberg

Philip Nerenberg, Lab Director



EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

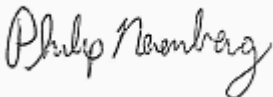
Reported:  
08/30/12 23:04

## QUALITY CONTROL (QC) SAMPLE RESULTS

### BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208265 - EPA 5035A						Soil						
Matrix Spike (1208265-MS1)						Prepared: 08/13/12 15:39		Analyzed: 08/14/12 15:51				
QC Source Sample: Other (A12H221-01)												
Benzene	37200	---	321	ug/kg wet	1000	25700	9070	110	65-135%	---	---	
Toluene	95400	---	1280	"	"	"	65200	118	"	---	---	
Ethylbenzene	67100	---	642	"	"	"	43700	91	"	---	---	
Xylenes, total	334000	---	1930	"	"	77100	293000	52	"	---	---	Q-01
Surr: Dibromofluoromethane (Surr)		Recovery: 96 %		Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		109 %		70-130 %		"						
Toluene-d8 (Surr)		93 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		95 %		70-130 %		"						

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

## QUALITY CONTROL (QC) SAMPLE RESULTS

## BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208298 - EPA 5035A						Soil						
Blank (1208298-BLK1)						Prepared: 08/14/12 17:00 Analyzed: 08/14/12 20:33						
5035/8260B												
Benzene	ND	---	8.33	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	50.0	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr) Recovery: 97 % Limits: 70-130 % Dilution: 1x												
1,4-Difluorobenzene (Surr) 106 % 70-130 % "												
Toluene-d8 (Surr) 96 % 70-130 % "												
4-Bromofluorobenzene (Surr) 97 % 70-130 % "												
LCS (1208298-BS1)						Prepared: 08/14/12 17:00 Analyzed: 08/14/12 19:41						
5035/8260B												
Benzene	1130	---	12.5	ug/kg wet	50	1000	---	113	65-135%	---	---	
Toluene	1060	---	50.0	"	"	"	---	106	"	---	---	
Ethylbenzene	1040	---	25.0	"	"	"	---	104	"	---	---	
Xylenes, total	3260	---	75.0	"	"	3000	---	109	"	---	---	
Surr: Dibromofluoromethane (Surr) Recovery: 96 % Limits: 70-130 % Dilution: 1x												
1,4-Difluorobenzene (Surr) 107 % 70-130 % "												
Toluene-d8 (Surr) 98 % 70-130 % "												
4-Bromofluorobenzene (Surr) 98 % 70-130 % "												
Duplicate (1208298-DUP1)						Prepared: 08/14/12 09:08 Analyzed: 08/14/12 23:07						
QC Source Sample: B-11/6' (A12H246-02)												
5035/8260B												
Benzene	3740	---	194	ug/kg dry	500	---	3700	---	---	0.9	30%	
Toluene	ND	---	775	"	"	---	ND	---	---	---	30%	
Ethylbenzene	3890	---	388	"	"	---	3870	---	---	0.6	30%	
Xylenes, total	ND	---	1940	"	"	---	ND	---	---	---	30%	R-01
Surr: Dibromofluoromethane (Surr) Recovery: 93 % Limits: 70-130 % Dilution: 1x												
1,4-Difluorobenzene (Surr) 108 % 70-130 % "												
Toluene-d8 (Surr) 119 % 70-130 % "												
4-Bromofluorobenzene (Surr) 90 % 70-130 % "												
Duplicate (1208298-DUP2)						Prepared: 08/14/12 17:40 Analyzed: 08/15/12 04:16						
QC Source Sample: Other (A12H240-11)												
5035/8260B												

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Philip Nerenberg

Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

## QUALITY CONTROL (QC) SAMPLE RESULTS

## BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208298 - EPA 5035A							Soil					
Duplicate (1208298-DUP2)					Prepared: 08/14/12 17:40		Analyzed: 08/15/12 04:16					
QC Source Sample: Other (A12H240-11)												
Benzene	ND	---	14.9	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	59.6	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	29.8	"	"	---	ND	---	---	---	30%	
Xylenes, total	ND	---	89.5	"	"	---	ND	---	---	---	30%	
Surr: Dibromofluoromethane (Surr)			Recovery: 96 %		Limits: 70-130 %		Dilution: 1x					
1,4-Difluorobenzene (Surr)			109 %		70-130 %		"					
Toluene-d8 (Surr)			98 %		70-130 %		"					
4-Bromofluorobenzene (Surr)			94 %		70-130 %		"					

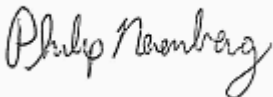
**Matrix Spike (1208298-MS1)**

Prepared: 08/14/12 16:25 Analyzed: 08/15/12 05:32

**QC Source Sample: Other (A12H247-01)**

<b>5035/8260B</b>												
Benzene	1420	---	15.4	ug/kg dry	50	1230	ND	115	65-135%	---	---	
Toluene	1260	---	61.6	"	"	"	ND	103	"	---	---	
Ethylbenzene	1250	---	30.8	"	"	"	ND	101	"	---	---	
Xylenes, total	3830	---	92.5	"	"	3700	ND	103	"	---	---	
<i>Surr: Dibromofluoromethane (Surr)</i>			<i>Recovery: 98 %</i>	<i>Limits: 70-130 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Surr)</i>			<i>108 %</i>	<i>70-130 %</i>		<i>"</i>						
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>	<i>70-130 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>			<i>95 %</i>	<i>70-130 %</i>		<i>"</i>						

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

## QUALITY CONTROL (QC) SAMPLE RESULTS

## BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208321 - EPA 5035A						Soil						
Blank (1208321-BLK1)						Prepared: 08/15/12 16:30    Analyzed: 08/15/12 19:31						
5035/8260B												
Benzene	ND	---	8.33	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	50.0	"	"	---	---	---	---	---	---	
Surr:    Dibromofluoromethane (Surr)												

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

## QUALITY CONTROL (QC) SAMPLE RESULTS

## BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208321 - EPA 5035A						Soil						
Duplicate (1208321-DUP2)						Prepared: 08/15/12 09:20		Analyzed: 08/15/12 22:32				
QC Source Sample: Other (A12H268-02)												
Benzene	ND	---	15.4	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	61.5	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	30.7	"	"	---	ND	---	---	---	30%	
Xylenes, total	ND	---	92.2	"	"	---	ND	---	---	---	30%	
Surr: Dibromofluoromethane (Surr)			Recovery: 104 %	Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)			99 %	70-130 %		"						
Toluene-d8 (Surr)			92 %	70-130 %		"						
4-Bromofluorobenzene (Surr)			92 %	70-130 %		"						

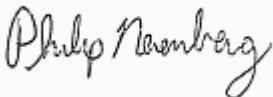
**Matrix Spike (1208321-MS1)**

Prepared: 08/13/12 14:06 Analyzed: 08/16/12 04:31

**QC Source Sample: Other (A12H227-06)****5035/8260B**

Benzene	1350	---	17.4	ug/kg dry	50	1390	ND	97	65-135%	---	---	
Toluene	1410	---	69.4	"	"	"	ND	102	"	---	---	
Ethylbenzene	1390	---	34.7	"	"	"	ND	100	"	---	---	
Xylenes, total	4280	---	104	"	"	4160	ND	103	"	---	---	
<i>Surr: Dibromofluoromethane (Surr)</i>			<i>Recovery: 113 %</i>	<i>Limits: 70-130 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Surr)</i>			<i>102 %</i>	<i>70-130 %</i>		<i>"</i>						
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>70-130 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>			<i>84 %</i>	<i>70-130 %</i>		<i>"</i>						

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260B SIM

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208500 - EPA 5035A						Soil						
Blank (1208500-BLK1)						Prepared: 08/23/12 12:00    Analyzed: 08/23/12 15:21						
5035/8260B SIM												
1,2-Dibromoethane (EDB)	ND	---	3.33	ug/kg wet	50	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery: 105 %		Limits: 70-130 %		Dilution: 50x						
1,4-Difluorobenzene (Surr)		104 %		70-130 %		"						
Toluene-d8 (Surr)		99 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		100 %		70-130 %		"						
LCS (1208500-BS1)						Prepared: 08/23/12 12:00    Analyzed: 08/23/12 14:55						
5035/8260B SIM												
1,2-Dibromoethane (EDB)	28.4	---	5.00	ug/kg wet	50	25.0	---	114	70-130%	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery: 105 %		Limits: 70-130 %		Dilution: 50x						
1,4-Difluorobenzene (Surr)		103 %		70-130 %		"						
Toluene-d8 (Surr)		99 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		100 %		70-130 %		"						
Duplicate (1208500-DUP1)						Prepared: 08/14/12 10:15    Analyzed: 08/23/12 16:13						
QC Source Sample: B-11/11 (A12H246-04)												
5035/8260B SIM												
1,2-Dibromoethane (EDB)	ND	---	7.13	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: Dibromofluoromethane (Surr)		Recovery: 106 %		Limits: 70-130 %		Dilution: 50x						
1,4-Difluorobenzene (Surr)		105 %		70-130 %		"						
Toluene-d8 (Surr)		99 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		101 %		70-130 %		"						
Matrix Spike (1208500-MS1)						Prepared: 08/17/12 10:47    Analyzed: 08/23/12 20:57						
QC Source Sample: Other (A12H337-38)												
5035/8260B SIM												
1,2-Dibromoethane (EDB)	24.9	---	6.80	ug/kg dry	50	34.1	ND	73	70-130%	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery: 111 %		Limits: 70-130 %		Dilution: 50x						
1,4-Difluorobenzene (Surr)		110 %		70-130 %		"						
Toluene-d8 (Surr)		100 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		100 %		70-130 %		"						

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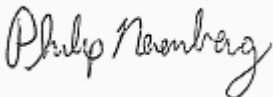
EES Environmental Inc  
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Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208409 - EPA 3051A						Soil						
Blank (1208409-BLK1)						Prepared: 08/21/12 07:34		Analyzed: 08/21/12 13:29				
EPA 6020												
Lead	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
LCS (1208409-BS1)						Prepared: 08/21/12 07:34		Analyzed: 08/21/12 13:32				
EPA 6020												
Lead	50.0	---	1.00	mg/kg wet	10	50.0	---	100	80-120%	---	---	
Duplicate (1208409-DUP1)						Prepared: 08/21/12 07:34		Analyzed: 08/21/12 14:10				
QC Source Sample: Other (A12H352-01)												
EPA 6020												
Lead	22.7	---	1.93	mg/kg dry	10	---	25.0	---	---	10	40%	
Matrix Spike (1208409-MS1)						Prepared: 08/21/12 07:34		Analyzed: 08/21/12 14:14				
QC Source Sample: Other (A12H352-01)												
EPA 6020												
Lead	116	---	1.99	mg/kg dry	10	99.7	25.0	91	75-125%	---	---	

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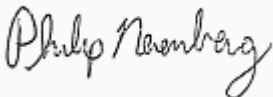
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208274 - Total Solids (Dry Weight)						Soil						
Duplicate (1208274-DUP1)						Prepared: 08/14/12 09:57		Analyzed: 08/15/12 08:26				
QC Source Sample: Other (A12H229-03)												
Apex SOP												
% Solids	78.2	---	1.00	% by Weight	1	---	76.0	---	---	3	20%	
Duplicate (1208274-DUP2)						Prepared: 08/14/12 11:15		Analyzed: 08/15/12 08:26				
QC Source Sample: Other (A12H227-02)												
Apex SOP												
% Solids	78.4	---	1.00	% by Weight	1	---	78.2	---	---	0.3	20%	
Duplicate (1208274-DUP3)						Prepared: 08/14/12 17:57		Analyzed: 08/15/12 08:26				
QC Source Sample: Other (A12H240-08)												
Apex SOP												
% Solids	89.8	---	1.00	% by Weight	1	---	90.4	---	---	0.7	20%	
Batch 1208346 - Total Solids (Dry Weight)						Soil						
Duplicate (1208346-DUP1)						Prepared: 08/16/12 13:42		Analyzed: 08/17/12 10:50				
QC Source Sample: Other (A12H248-01)												
Apex SOP												
% Solids	49.4	---	1.00	% by Weight	1	---	49.5	---	---	0.2	20%	
Duplicate (1208346-DUP2)						Prepared: 08/16/12 13:42		Analyzed: 08/17/12 10:50				
QC Source Sample: Other (A12H260-11)												
Apex SOP												
% Solids	82.7	---	1.00	% by Weight	1	---	83.2	---	---	0.6	20%	
Duplicate (1208346-DUP3)						Prepared: 08/16/12 13:42		Analyzed: 08/17/12 10:50				
QC Source Sample: Other (A12H262-15)												
Apex SOP												
% Solids	74.2	---	1.00	% by Weight	1	---	73.9	---	---	0.4	20%	
Duplicate (1208346-DUP4)						Prepared: 08/16/12 13:42		Analyzed: 08/17/12 10:50				
QC Source Sample: Other (A12H262-21)												
Apex SOP												

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240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:04

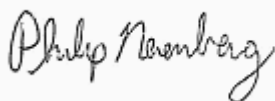
## QUALITY CONTROL (QC) SAMPLE RESULTS

## Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208346 - Total Solids (Dry Weight)						Soil						
Duplicate (1208346-DUP4)						Prepared: 08/16/12 13:42    Analyzed: 08/17/12 10:50						
QC Source Sample: Other (A12H262-21)												
% Solids	74.4	---	1.00	% by Weight	1	---	74.5	---	---	0.1	20%	
Duplicate (1208346-DUP5)						Prepared: 08/16/12 16:00    Analyzed: 08/17/12 10:50						
QC Source Sample: Other (A12H278-06)												
Apex SOP												
% Solids	81.1	---	1.00	% by Weight	1	---	81.8	---	---	0.9	20%	
Duplicate (1208346-DUP6)						Prepared: 08/16/12 18:53    Analyzed: 08/17/12 10:50						
QC Source Sample: Other (A12H315-02)												
Apex SOP												
% Solids	86.7	---	1.00	% by Weight	1	---	87.1	---	---	0.5	20%	
Batch 1208394 - Total Solids (Dry Weight)						Soil						
Duplicate (1208394-DUP1)						Prepared: 08/20/12 12:22    Analyzed: 08/21/12 10:29						
QC Source Sample: B-12/3 (A12H246-08)												
Apex SOP												
% Solids	84.3	---	1.00	% by Weight	1	---	84.5	---	---	0.2	20%	
Duplicate (1208394-DUP2)						Prepared: 08/20/12 12:22    Analyzed: 08/21/12 10:29						
QC Source Sample: Other (A12H287-10)												
Apex SOP												
% Solids	78.0	---	1.00	% by Weight	1	---	77.7	---	---	0.4	20%	
Duplicate (1208394-DUP3)						Prepared: 08/20/12 12:22    Analyzed: 08/21/12 10:29						
QC Source Sample: Other (A12H318-05)												
Apex SOP												
% Solids	82.8	---	1.00	% by Weight	1	---	83.6	---	---	1	20%	
Duplicate (1208394-DUP4)						Prepared: 08/20/12 12:22    Analyzed: 08/21/12 10:29						
QC Source Sample: Other (A12H318-14)												
Apex SOP												
% Solids	86.7	---	1.00	% by Weight	1	---	88.7	---	---	2	20%	

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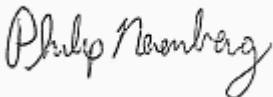
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
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08/30/12 23:04

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208394 - Total Solids (Dry Weight)						Soil						
Duplicate (1208394-DUP5)						Prepared: 08/20/12 12:22		Analyzed: 08/21/12 10:29				
QC Source Sample: Other (A12H329-07)												
Apex SOP												
% Solids	62.9	---	1.00	% by Weight	1	---	63.7	---	---	1	20%	
Duplicate (1208394-DUP6)						Prepared: 08/20/12 12:22		Analyzed: 08/21/12 10:29				
QC Source Sample: Other (A12H342-02)												
Apex SOP												
% Solids	90.3	---	1.00	% by Weight	1	---	90.2	---	---	0.1	20%	
Duplicate (1208394-DUP7)						Prepared: 08/20/12 18:17		Analyzed: 08/21/12 10:29				
QC Source Sample: Other (A12H343-08)												
Apex SOP												
% Solids	78.0	---	1.00	% by Weight	1	---	78.1	---	---	0.1	20%	
Duplicate (1208394-DUP8)						Prepared: 08/20/12 18:17		Analyzed: 08/21/12 10:29				
QC Source Sample: Other (A12H353-05)												
Apex SOP												
% Solids	81.9	---	1.00	% by Weight	1	---	81.3	---	---	0.7	20%	
Duplicate (1208394-DUP9)						Prepared: 08/20/12 18:17		Analyzed: 08/21/12 10:29				
QC Source Sample: Other (A12H359-04)												
Apex SOP												
% Solids	75.2	---	1.00	% by Weight	1	---	75.1	---	---	0.1	20%	

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Philip Nerenberg, Lab Director

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:04

## SAMPLE PREPARATION INFORMATION

### Hydrocarbon Identification (HCID) Screen by NWTPH

#### Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 1208356							
A12H246-01	Soil	NWTPH-HCID	08/14/12 08:51	08/17/12 16:05	10.55g/10mL	10g/10mL	0.95
A12H246-02	Soil	NWTPH-HCID	08/14/12 09:08	08/17/12 16:05	10.41g/10mL	10g/10mL	0.96
A12H246-06	Soil	NWTPH-HCID	08/14/12 10:44	08/17/12 16:05	10.49g/10mL	10g/10mL	0.95
A12H246-07	Soil	NWTPH-HCID	08/14/12 11:09	08/17/12 16:05	10.51g/10mL	10g/10mL	0.95
A12H246-08	Soil	NWTPH-HCID	08/14/12 10:41	08/17/12 16:05	10.2g/10mL	10g/10mL	0.98
A12H246-12	Soil	NWTPH-HCID	08/14/12 12:54	08/17/12 16:05	10.55g/10mL	10g/10mL	0.95

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

#### Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 1208265							
A12H246-10	Soil	NWTPH-Gx (MS)	08/14/12 11:18	08/14/12 11:18	4.09g/5mL	10g/10mL	1.22
A12H246-11	Soil	NWTPH-Gx (MS)	08/14/12 12:47	08/14/12 12:47	3.5g/5mL	10g/10mL	1.43
Batch: 1208287							
A12H246-02RE1	Soil	NWTPH-Gx (MS)	08/14/12 09:08	08/14/12 09:08	4.75g/5mL	10g/10mL	1.05
A12H246-03RE1	Soil	NWTPH-Gx (MS)	08/14/12 09:26	08/14/12 09:26	4.15g/5mL	10g/10mL	1.20
Batch: 1208298							
A12H246-04	Soil	NWTPH-Gx (MS)	08/14/12 10:15	08/14/12 10:15	5.1g/5mL	10g/10mL	0.98
A12H246-05	Soil	NWTPH-Gx (MS)	08/14/12 10:26	08/14/12 10:26	5.15g/5mL	10g/10mL	0.97
A12H246-09	Soil	NWTPH-Gx (MS)	08/14/12 10:58	08/14/12 10:58	4.37g/5mL	10g/10mL	1.14
Batch: 1208321							
A12H246-01	Soil	NWTPH-Gx (MS)	08/14/12 08:51	08/14/12 08:51	5.1g/5mL	10g/10mL	0.98
A12H246-08	Soil	NWTPH-Gx (MS)	08/14/12 10:41	08/14/12 10:41	6.91g/5mL	10g/10mL	0.72

### RBCA Compounds (BTEX+) by EPA 8260B

#### Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 1208298							
A12H246-02	Soil	5035/8260B	08/14/12 09:08	08/14/12 09:08	4.75g/5mL	10g/10mL	1.05
A12H246-04	Soil	5035/8260B	08/14/12 10:15	08/14/12 10:15	5.1g/5mL	10g/10mL	0.98

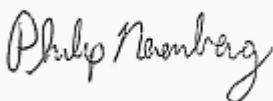
### BTEX Compounds by EPA 8260B

#### Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:04

## SAMPLE PREPARATION INFORMATION

### BTEX Compounds by EPA 8260B

**Batch: 1208265**

A12H246-10	Soil	5035/8260B	08/14/12 11:18	08/14/12 11:18	4.09g/5mL	10g/10mL	1.22
A12H246-11	Soil	5035/8260B	08/14/12 12:47	08/14/12 12:47	3.5g/5mL	10g/10mL	1.43

**Batch: 1208298**

A12H246-02	Soil	5035/8260B	08/14/12 09:08	08/14/12 09:08	4.75g/5mL	10g/10mL	1.05
A12H246-03	Soil	5035/8260B	08/14/12 09:26	08/14/12 09:26	4.15g/5mL	10g/10mL	1.20
A12H246-04	Soil	5035/8260B	08/14/12 10:15	08/14/12 10:15	5.1g/5mL	10g/10mL	0.98
A12H246-05	Soil	5035/8260B	08/14/12 10:26	08/14/12 10:26	5.15g/5mL	10g/10mL	0.97
A12H246-09	Soil	5035/8260B	08/14/12 10:58	08/14/12 10:58	4.37g/5mL	10g/10mL	1.14

**Batch: 1208321**

A12H246-01	Soil	5035/8260B	08/14/12 08:51	08/14/12 08:51	5.1g/5mL	10g/10mL	0.98
A12H246-08	Soil	5035/8260B	08/14/12 10:41	08/14/12 10:41	6.91g/5mL	10g/10mL	0.72

### Volatile Organic Compounds by EPA 8260B SIM

**Prep: EPA 5035A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 1208500</b>							
A12H246-04	Soil	5035/8260B SIM	08/14/12 10:15	08/14/12 10:15	5.1g/5mL	10g/10mL	0.98

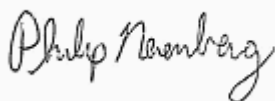
### Total Metals by EPA 6020 (ICPMS)

**Prep: EPA 3051A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 1208409</b>							
A12H246-02	Soil	EPA 6020	08/14/12 09:08	08/21/12 07:34	0.525g/50mL	0.5g/50mL	0.95
A12H246-04	Soil	EPA 6020	08/14/12 10:15	08/21/12 07:34	0.462g/50mL	0.5g/50mL	1.08

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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:04

## Notes and Definitions

### Qualifiers:

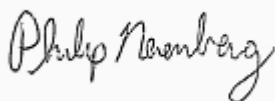
- E Estimated Value. The result is above the calibration range of the instrument.
- F-05 The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
- F-06 Results in the diesel organics range are primarily due to overlap from a gasoline range product.
- F-09 Results in the Gasoline Range are primarily due to overlap from a heavier fuel hydrocarbon product.
- Q-01 Percent recovery and/or RPD is outside acceptance limits.
- R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.
- S-02 Surrogate recovery cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

### Notes and Conventions:

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.
- RPD Relative Percent Difference
- MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
- WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
- Batch In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS
- QC Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
  
- Blank Policy Apex assesses blank data for potential high bias down to a level equal to ½ the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses.  
  
For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor.  
  
Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.
- QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- \*\*\* Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:04

COC 1 of 2

Lab # A12H246

## CHAIN OF CUSTODY

APEX LABS

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Company: <b>EES ENVIRONMENTAL</b>		Project Mgr: <b>PAUL ECKER</b>		Project Name: <b>Plaid Pantry #112</b>		Project # <b>1179</b>																			
Address: <b>240 N. Broadway, Apt. 115, OR</b>		Phone: <b>503 784 1093</b>		Fax: <b></b>		Email: <b></b>																			
Sampled by: <b>Anthony Christy - City Engineer</b>																									
Site Location: <b>OR</b>	OR <b>(WA)</b>																								
Other: <b></b>																									
SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-CHD	NWTPH-DB	NWTPH-CA	R260 VOC	R260 RDBM VOCs	R260 RTEX	R270 SVOC	R270 SIM PAHs	R082 PCBs	609 TIO	RCRA Metals (3)	TCLP Metals (3)	AT, SR, As, Ba, Be, Cd, Cr, Cu, Pb, Fe, Hg, Mn, Mo, Ni, Se, Si, Tl, V, Zn	TOTAL MSB TCLP	1300-COLS	1300-Z	Gas BTEX			
B-11/3'		9-11-12	851	S	3																				
B-11/6'			908																						
B-11/9'			926																						
B-11/11			1015																						
B-11/17			1026																						
B-11/33			1044																						
B-11/24			1109																						
B-12/3			1041																						
B-12/6			1058																						
B-12/9			1118																						
Normal Turn Around Time (TAT) = 3-10 Business Days		YES																							
TAT Requested (circle)		1 Day	2 Day	3 Day	4 DAY	5 DAY	Other																		
RESULTS BY *																									
SAMPLES ARE HELD FOR 30 DAYS																									
RELINQUISHED BY:		Signature: <b>[Signature]</b>		Date: <b>8/14/12</b>		Signature: <b>[Signature]</b>		Date: <b>8/14/12</b>		Signature: <b>[Signature]</b>		Date: <b>8/14/12</b>		Signature: <b>[Signature]</b>		Date: <b>8/14/12</b>		Signature: <b>[Signature]</b>		Date: <b>8/14/12</b>		Signature: <b>[Signature]</b>		Date: <b>8/14/12</b>	
Printed Name: <b>Anthony Christy</b>		Title: <b>City Engineer</b>		Printed Name: <b>[Signature]</b>		Title: <b>[Signature]</b>		Printed Name: <b>[Signature]</b>		Title: <b>[Signature]</b>		Printed Name: <b>[Signature]</b>		Title: <b>[Signature]</b>		Printed Name: <b>[Signature]</b>		Title: <b>[Signature]</b>		Printed Name: <b>[Signature]</b>		Title: <b>[Signature]</b>		Printed Name: <b>[Signature]</b>	
Company: <b>EES</b>		Company: <b>Apex</b>		Company: <b>Apex</b>		Company: <b>Apex</b>		Company: <b>Apex</b>		Company: <b>Apex</b>		Company: <b>Apex</b>		Company: <b>Apex</b>		Company: <b>Apex</b>		Company: <b>Apex</b>		Company: <b>Apex</b>		Company: <b>Apex</b>		Company: <b>Apex</b>	

Apex Laboratories

*Philip Nerenberg*

Philip Nerenberg, Lab Director

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**Reported:**  
08/30/12 23:04

Page 36 of 36

# Apex Labs

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323 Phone  
503-718-0333 Fax

Thursday, August 30, 2012

Paul Ecker  
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

RE: Plaid Pantry #112 / 1179

Enclosed are the results of analyses for work order A12H268, which was received by the laboratory on 8/15/2012 at 3:25:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [pnerenberg@apex-labs.com](mailto:pnerenberg@apex-labs.com), or by phone at 503-718-2323.

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---

Philip Nerenberg, Lab Director



EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

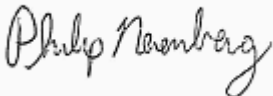
Reported:  
08/30/12 23:09

## ANALYTICAL REPORT FOR SAMPLES

### SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-13/3	A12H268-01	Soil	08/15/12 08:58	08/15/12 15:25
B-13/6	A12H268-02	Soil	08/15/12 09:20	08/15/12 15:25
B-13/9	A12H268-03	Soil	08/15/12 09:37	08/15/12 15:25
B-13/13	A12H268-04	Soil	08/15/12 10:56	08/15/12 15:25
B-14/3	A12H268-06	Soil	08/15/12 10:44	08/15/12 15:25
B-14/6	A12H268-07	Soil	08/15/12 11:07	08/15/12 15:25
B-14/9	A12H268-08	Soil	08/15/12 11:30	08/15/12 15:25
B-14/13	A12H268-09	Soil	08/15/12 11:57	08/15/12 15:25
B-15/3	A12H268-11	Soil	08/15/12 12:26	08/15/12 15:25
B-15/6	A12H268-12	Soil	08/15/12 13:05	08/15/12 15:25
B-15/9	A12H268-13	Soil	08/15/12 13:31	08/15/12 15:25
B-15/13	A12H268-14	Soil	08/15/12 14:01	08/15/12 15:25

Apex Laboratories



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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:09

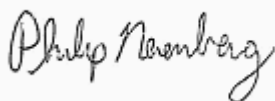
## ANALYTICAL SAMPLE RESULTS

## Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-13/3 (A12H268-01)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Gasoline Range Organics	ND	---	7.76	mg/kg dry	50	08/15/12 21:15	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 87 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			84 %	Limits: 50-150 %	"	"	"	
<b>B-13/6 (A12H268-02)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Gasoline Range Organics	ND	---	6.47	mg/kg dry	50	08/15/12 22:07	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 89 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			83 %	Limits: 50-150 %	"	"	"	
<b>B-13/9 (A12H268-03)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Gasoline Range Organics	ND	---	6.86	mg/kg dry	50	08/15/12 22:58	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 87 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			86 %	Limits: 50-150 %	"	"	"	
<b>B-13/13 (A12H268-04)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Gasoline Range Organics	ND	---	7.96	mg/kg dry	50	08/15/12 23:24	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 93 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			80 %	Limits: 50-150 %	"	"	"	
<b>B-14/3 (A12H268-06)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Gasoline Range Organics	ND	---	6.58	mg/kg dry	50	08/15/12 23:49	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 90 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			85 %	Limits: 50-150 %	"	"	"	
<b>B-14/6 (A12H268-07)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Gasoline Range Organics	ND	---	7.01	mg/kg dry	50	08/16/12 00:15	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 95 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			85 %	Limits: 50-150 %	"	"	"	
<b>B-14/9 (A12H268-08)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Gasoline Range Organics	ND	---	7.55	mg/kg dry	50	08/16/12 00:41	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 96 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			85 %	Limits: 50-150 %	"	"	"	
<b>B-14/13 (A12H268-09)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Gasoline Range Organics	ND	---	6.23	mg/kg dry	50	08/16/12 01:06	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 99 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			85 %	Limits: 50-150 %	"	"	"	
<b>B-15/3 (A12H268-11)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Gasoline Range Organics	ND	---	6.58	mg/kg dry	50	08/16/12 01:32	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 89 %	Limits: 50-150 %	1	"	"	

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Philip Nerenberg, Lab Director

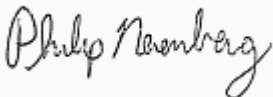
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:09

## ANALYTICAL SAMPLE RESULTS

## Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-15/3 (A12H268-11)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208321</b>			
Surrogate: 1,4-Difluorobenzene (Sur)			Recovery: 82 %	Limits: 50-150 %	1	"	NWTPH-Gx (MS)	
<b>B-15/6 (A12H268-12RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208330</b>			
Gasoline Range Organics	ND	---	7.92	mg/kg dry	50	08/16/12 12:54	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 90 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			83 %	Limits: 50-150 %	"	"	"	
<b>B-15/9 (A12H268-13)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208321</b>			
Gasoline Range Organics	ND	---	7.55	mg/kg dry	50	08/16/12 02:23	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 84 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			91 %	Limits: 50-150 %	"	"	"	
<b>B-15/13 (A12H268-14RE1)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208330</b>			
Gasoline Range Organics	ND	---	6.21	mg/kg dry	50	08/16/12 13:47	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 99 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			88 %	Limits: 50-150 %	"	"	"	

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Page 4 of 20

EES Environmental Inc  
 240 N Broadway Ste 115  
 Portland, OR 97227

Project: **Plaid Pantry #112**  
 Project Number: 1179  
 Project Manager: Paul Ecker

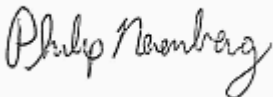
Reported:  
 08/30/12 23:09

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-13/3 (A12H268-01)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Benzene	ND	---	19.4	ug/kg dry	50	08/15/12 21:15	5035/8260B	
Toluene	ND	---	77.6	"	"	"	"	
Ethylbenzene	ND	---	38.8	"	"	"	"	
Xylenes, total	ND	---	116	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 99 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-13/6 (A12H268-02)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Benzene	ND	---	16.2	ug/kg dry	50	08/15/12 22:07	5035/8260B	
Toluene	ND	---	64.7	"	"	"	"	
Ethylbenzene	ND	---	32.4	"	"	"	"	
Xylenes, total	ND	---	97.1	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 112 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>95 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-13/9 (A12H268-03)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Benzene	ND	---	17.1	ug/kg dry	50	08/15/12 22:58	5035/8260B	
Toluene	ND	---	68.6	"	"	"	"	
Ethylbenzene	ND	---	34.3	"	"	"	"	
Xylenes, total	ND	---	103	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 105 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>95 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-13/13 (A12H268-04)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Benzene	ND	---	19.9	ug/kg dry	50	08/15/12 23:24	5035/8260B	
Toluene	ND	---	79.6	"	"	"	"	
Ethylbenzene	ND	---	39.8	"	"	"	"	
Xylenes, total	ND	---	119	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 106 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>96 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>104 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-14/3 (A12H268-06)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:09

## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-14/3 (A12H268-06)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Benzene	ND	---	16.5	ug/kg dry	50	08/15/12 23:49	5035/8260B	
Toluene	ND	---	65.8	"	"	"	"	
Ethylbenzene	ND	---	32.9	"	"	"	"	
Xylenes, total	ND	---	98.8	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>		<i>97 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>		<i>93 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>		<i>103 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<b>B-14/6 (A12H268-07)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Benzene	ND	---	17.5	ug/kg dry	50	08/16/12 00:15	5035/8260B	
Toluene	ND	---	70.1	"	"	"	"	
Ethylbenzene	ND	---	35.0	"	"	"	"	
Xylenes, total	ND	---	105	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 113 %</i>		<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<b>B-14/9 (A12H268-08)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Benzene	ND	---	18.9	ug/kg dry	50	08/16/12 00:41	5035/8260B	
Toluene	ND	---	75.5	"	"	"	"	
Ethylbenzene	ND	---	37.8	"	"	"	"	
Xylenes, total	ND	---	113	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 110 %</i>		<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>		<i>101 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<b>B-14/13 (A12H268-09)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Benzene	ND	---	15.6	ug/kg dry	50	08/16/12 01:06	5035/8260B	
Toluene	ND	---	62.3	"	"	"	"	
Ethylbenzene	ND	---	31.2	"	"	"	"	
Xylenes, total	ND	---	93.5	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 109 %</i>		<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>		<i>95 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>		<i>93 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<b>B-15/3 (A12H268-11)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				

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Philip Nerenberg, Lab Director

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:09

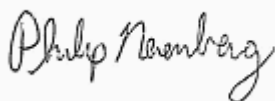
## ANALYTICAL SAMPLE RESULTS

### BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-15/3 (A12H268-11)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208321</b>				
Benzene	ND	---	16.5	ug/kg dry	50	08/16/12 01:32	5035/8260B	
Toluene	ND	---	65.8	"	"	"	"	
Ethylbenzene	ND	---	32.9	"	"	"	"	
Xylenes, total	ND	---	98.8	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 118 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>93 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>94 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>94 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-15/6 (A12H268-12RE1)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208330</b>				
Benzene	ND	---	19.8	ug/kg dry	50	08/16/12 12:54	5035/8260B	
Toluene	ND	---	79.2	"	"	"	"	
Ethylbenzene	ND	---	39.6	"	"	"	"	
Xylenes, total	ND	---	119	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 110 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>94 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-15/9 (A12H268-13RE1)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208330</b>				
Benzene	ND	---	18.9	ug/kg dry	50	08/16/12 13:20	5035/8260B	
Toluene	ND	---	75.5	"	"	"	"	
Ethylbenzene	ND	---	37.7	"	"	"	"	
Xylenes, total	ND	---	113	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 107 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>93 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>93 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>106 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-15/13 (A12H268-14RE1)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208330</b>				
Benzene	ND	---	15.5	ug/kg dry	50	08/16/12 13:47	5035/8260B	
Toluene	ND	---	62.1	"	"	"	"	
Ethylbenzene	ND	---	31.1	"	"	"	"	
Xylenes, total	ND	---	93.2	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 113 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>107 %</i>	<i>Limits: 70-130 %</i>	"	"	"	

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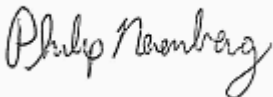
Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:09

## ANALYTICAL SAMPLE RESULTS

Percent Dry Weight								
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-13/3 (A12H268-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208346</b>			
% Solids	85.1	---	1.00	% by Weight	1	08/17/12 10:50	Apex SOP	
<b>B-13/6 (A12H268-02)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208324</b>			
% Solids	84.4	---	1.00	% by Weight	1	08/16/12 10:19	Apex SOP	
<b>B-13/9 (A12H268-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208324</b>			
% Solids	84.5	---	1.00	% by Weight	1	08/16/12 10:19	Apex SOP	
<b>B-13/13 (A12H268-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208324</b>			
% Solids	77.4	---	1.00	% by Weight	1	08/16/12 10:19	Apex SOP	
<b>B-14/3 (A12H268-06)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208346</b>			
% Solids	85.9	---	1.00	% by Weight	1	08/17/12 10:50	Apex SOP	
<b>B-14/6 (A12H268-07)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208324</b>			
% Solids	82.4	---	1.00	% by Weight	1	08/16/12 10:19	Apex SOP	
<b>B-14/9 (A12H268-08)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208324</b>			
% Solids	82.4	---	1.00	% by Weight	1	08/16/12 10:19	Apex SOP	
<b>B-14/13 (A12H268-09)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208324</b>			
% Solids	85.8	---	1.00	% by Weight	1	08/16/12 10:19	Apex SOP	
<b>B-15/3 (A12H268-11)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208346</b>			
% Solids	85.9	---	1.00	% by Weight	1	08/17/12 10:50	Apex SOP	
<b>B-15/6 (A12H268-12)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208324</b>			
% Solids	82.1	---	1.00	% by Weight	1	08/16/12 10:19	Apex SOP	
<b>B-15/9 (A12H268-13)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208324</b>			
% Solids	78.1	---	1.00	% by Weight	1	08/16/12 10:19	Apex SOP	
<b>B-15/13 (A12H268-14)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208324</b>			
% Solids	89.0	---	1.00	% by Weight	1	08/16/12 10:19	Apex SOP	

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:09

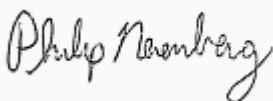
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208321 - EPA 5035A						Soil						
Blank (1208321-BLK1)						Prepared: 08/15/12 16:30		Analyzed: 08/15/12 19:31				
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 84 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		76 %		50-150 %		"						
LCS (1208321-BS2)						Prepared: 08/15/12 16:30		Analyzed: 08/15/12 19:05				
NWTPH-Gx (MS)												
Gasoline Range Organics	21.0	---	5.00	mg/kg wet	50	25.0	---	84	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 76 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		82 %		50-150 %		"						
Duplicate (1208321-DUP1)						Prepared: 08/15/12 08:58		Analyzed: 08/15/12 21:41				
QC Source Sample: B-13/3 (A12H268-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	8.45	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 86 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		80 %		50-150 %		"						
Duplicate (1208321-DUP2)						Prepared: 08/15/12 09:20		Analyzed: 08/15/12 22:32				
QC Source Sample: B-13/6 (A12H268-02)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	6.15	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 77 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		86 %		50-150 %		"						
Batch 1208330 - EPA 5035A						Soil						
Blank (1208330-BLK1)						Prepared: 08/16/12 08:00		Analyzed: 08/16/12 12:29				
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 92 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		85 %		50-150 %		"						
LCS (1208330-BS2)						Prepared: 08/16/12 08:00		Analyzed: 08/16/12 12:03				
NWTPH-Gx (MS)												
Gasoline Range Organics	21.5	---	5.00	mg/kg wet	50	25.0	---	86	70-130%	---	---	

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Philip Nerenberg, Lab Director



EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

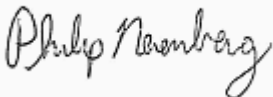
Reported:  
08/30/12 23:09

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208330 - EPA 5035A						Soil						
LCS (1208330-BS2)						Prepared: 08/16/12 08:00		Analyzed: 08/16/12 12:03				
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 92 %		Limits: 50-150 %		Dilution: 1x					
1,4-Difluorobenzene (Sur)			84 %		50-150 %		"					
Duplicate (1208330-DUP1)						Prepared: 08/13/12 10:58		Analyzed: 08/16/12 15:06				
QC Source Sample: Other (A12H227-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics		ND	---	11.3	mg/kg dry	50	---	ND	---	---	---	30%
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 87 %		Limits: 50-150 %		Dilution: 1x					
1,4-Difluorobenzene (Sur)			72 %		50-150 %		"					

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:09

## QUALITY CONTROL (QC) SAMPLE RESULTS

## BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208321 - EPA 5035A						Soil						
Blank (1208321-BLK1)						Prepared: 08/15/12 16:30    Analyzed: 08/15/12 19:31						
5035/8260B												
Benzene	ND	---	8.33	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	50.0	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)			Recovery:	95 %	Limits:	70-130 %	Dilution: 1x					
1,4-Difluorobenzene (Surr)				97 %		70-130 %	"					
Toluene-d8 (Surr)				97 %		70-130 %	"					
4-Bromofluorobenzene (Surr)				94 %		70-130 %	"					
LCS (1208321-BS1)						Prepared: 08/15/12 16:30    Analyzed: 08/15/12 18:39						
5035/8260B												
Benzene	1130	---	12.5	ug/kg wet	50	1000	---	113	65-135%	---	---	
Toluene	1090	---	50.0	"	"	"	---	109	"	---	---	
Ethylbenzene	1090	---	25.0	"	"	"	---	109	"	---	---	
Xylenes, total	3330	---	75.0	"	"	3000	---	111	"	---	---	
Surr: Dibromofluoromethane (Surr)			Recovery:	96 %	Limits:	70-130 %	Dilution: 1x					
1,4-Difluorobenzene (Surr)				103 %		70-130 %	"					
Toluene-d8 (Surr)				97 %		70-130 %	"					
4-Bromofluorobenzene (Surr)				94 %		70-130 %	"					
Duplicate (1208321-DUP1)						Prepared: 08/15/12 08:58    Analyzed: 08/15/12 21:41						
QC Source Sample: B-13/3 (A12H268-01)												
5035/8260B												
Benzene	ND	---	21.1	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	84.5	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	42.2	"	"	---	ND	---	---	---	30%	
Xylenes, total	ND	---	127	"	"	---	ND	---	---	---	30%	
Surr: Dibromofluoromethane (Surr)			Recovery:	100 %	Limits:	70-130 %	Dilution: 1x					
1,4-Difluorobenzene (Surr)				97 %		70-130 %	"					
Toluene-d8 (Surr)				91 %		70-130 %	"					
4-Bromofluorobenzene (Surr)				95 %		70-130 %	"					
Duplicate (1208321-DUP2)						Prepared: 08/15/12 09:20    Analyzed: 08/15/12 22:32						
QC Source Sample: B-13/6 (A12H268-02)												
5035/8260B												

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Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:09

## QUALITY CONTROL (QC) SAMPLE RESULTS

## BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208321 - EPA 5035A							Soil					
Duplicate (1208321-DUP2)				Prepared: 08/15/12 09:20		Analyzed: 08/15/12 22:32						
QC Source Sample: B-13/6 (A12H268-02)												
Benzene	ND	---	15.4	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	61.5	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	30.7	"	"	---	ND	---	---	---	30%	
Xylenes, total	ND	---	92.2	"	"	---	ND	---	---	---	30%	
Surr: Dibromofluoromethane (Surr)			Recovery: 104 %	Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)			99 %	70-130 %		"						
Toluene-d8 (Surr)			92 %	70-130 %		"						
4-Bromofluorobenzene (Surr)			92 %	70-130 %		"						

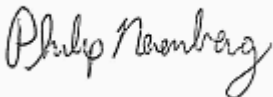
**Matrix Spike (1208321-MS1)**

Prepared: 08/13/12 14:06 Analyzed: 08/16/12 04:31

**QC Source Sample: Other (A12H227-06)**

<b>5035/8260B</b>												
Benzene	1350	---	17.4	ug/kg dry	50	1390	ND	97	65-135%	---	---	
Toluene	1410	---	69.4	"	"	"	ND	102	"	---	---	
Ethylbenzene	1390	---	34.7	"	"	"	ND	100	"	---	---	
Xylenes, total	4280	---	104	"	"	4160	ND	103	"	---	---	
<i>Surr: Dibromofluoromethane (Surr)</i>			<i>Recovery: 113 %</i>	<i>Limits: 70-130 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Surr)</i>			<i>102 %</i>	<i>70-130 %</i>		<i>"</i>						
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>70-130 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>			<i>84 %</i>	<i>70-130 %</i>		<i>"</i>						

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240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:09

## QUALITY CONTROL (QC) SAMPLE RESULTS

## BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208330 - EPA 5035A						Soil						
Blank (1208330-BLK1)						Prepared: 08/16/12 08:00    Analyzed: 08/16/12 12:29						
5035/8260B												
Benzene	ND	---	8.33	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	50.0	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery:		110 %	Limits: 70-130 %		Dilution: 1x					
1,4-Difluorobenzene (Surr)				95 %	70-130 %		"					
Toluene-d8 (Surr)				98 %	70-130 %		"					
4-Bromofluorobenzene (Surr)				98 %	70-130 %		"					
LCS (1208330-BS1)						Prepared: 08/16/12 08:00    Analyzed: 08/16/12 11:37						
5035/8260B												
Benzene	824	---	12.5	ug/kg wet	50	1000	---	82	65-135%	---	---	
Toluene	914	---	50.0	"	"	"	---	91	"	---	---	
Ethylbenzene	1030	---	25.0	"	"	"	---	103	"	---	---	
Xylenes, total	3180	---	75.0	"	"	3000	---	106	"	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery:		100 %	Limits: 70-130 %		Dilution: 1x					
1,4-Difluorobenzene (Surr)				92 %	70-130 %		"					
Toluene-d8 (Surr)				95 %	70-130 %		"					
4-Bromofluorobenzene (Surr)				89 %	70-130 %		"					
Duplicate (1208330-DUP1)						Prepared: 08/13/12 10:58    Analyzed: 08/16/12 15:06						
QC Source Sample: Other (A12H227-01)												
5035/8260B												
Benzene	ND	---	28.1	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	113	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	56.3	"	"	---	ND	---	---	---	30%	
Xylenes, total	ND	---	169	"	"	---	ND	---	---	---	30%	
Surr: Dibromofluoromethane (Surr)		Recovery:		125 %	Limits: 70-130 %		Dilution: 1x					
1,4-Difluorobenzene (Surr)				79 %	70-130 %		"					
Toluene-d8 (Surr)				95 %	70-130 %		"					
4-Bromofluorobenzene (Surr)				104 %	70-130 %		"					
Matrix Spike (1208330-MS1)						Prepared: 08/15/12 18:00    Analyzed: 08/16/12 16:01						
QC Source Sample: Other (A12H278-01)												
5035/8260B												

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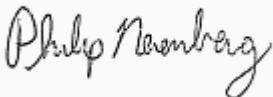
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Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:09

## QUALITY CONTROL (QC) SAMPLE RESULTS

## BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208330 - EPA 5035A						Soil						
Matrix Spike (1208330-MS1)				Prepared: 08/15/12 18:00		Analyzed: 08/16/12 16:01						
QC Source Sample: Other (A12H278-01)												
Benzene	1280	---	16.7	ug/kg dry	50	1340	ND	96	65-135%	---	---	
Toluene	1240	---	66.8	"	"	"	ND	93	"	---	---	
Ethylbenzene	1290	---	33.4	"	"	"	ND	96	"	---	---	
Xylenes, total	3890	---	100	"	"	4010	ND	97	"	---	---	
Surr: Dibromofluoromethane (Surr)			Recovery: 101 %	Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)			103 %	70-130 %		"						
Toluene-d8 (Surr)			93 %	70-130 %		"						
4-Bromofluorobenzene (Surr)			101 %	70-130 %		"						

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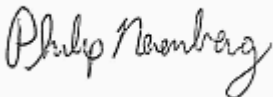
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Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:09

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208324 - Total Solids (Dry Weight)						Soil						
Duplicate (1208324-DUP1)						Prepared: 08/15/12 17:14    Analyzed: 08/16/12 10:19						
QC Source Sample: Other (A12H267-01)												
Apex SOP												
% Solids	69.0	---	1.00	% by Weight	1	---	69.6	---	---	0.9	20%	
Duplicate (1208324-DUP2)						Prepared: 08/15/12 17:14    Analyzed: 08/16/12 10:19						
QC Source Sample: Other (A12H269-02)												
Apex SOP												
% Solids	79.8	---	1.00	% by Weight	1	---	79.2	---	---	0.8	20%	
Duplicate (1208324-DUP3)						Prepared: 08/15/12 18:26    Analyzed: 08/16/12 10:19						
QC Source Sample: Other (A12H280-02)												
Apex SOP												
% Solids	89.4	---	1.00	% by Weight	1	---	89.4	---	---	0	20%	
Duplicate (1208324-DUP4)						Prepared: 08/15/12 19:31    Analyzed: 08/16/12 10:19						
QC Source Sample: Other (A12H286-02)												
Apex SOP												
% Solids	79.9	---	1.00	% by Weight	1	---	79.2	---	---	0.9	20%	
Batch 1208346 - Total Solids (Dry Weight)						Soil						
Duplicate (1208346-DUP1)						Prepared: 08/16/12 13:42    Analyzed: 08/17/12 10:50						
QC Source Sample: Other (A12H248-01)												
Apex SOP												
% Solids	49.4	---	1.00	% by Weight	1	---	49.5	---	---	0.2	20%	
Duplicate (1208346-DUP2)						Prepared: 08/16/12 13:42    Analyzed: 08/17/12 10:50						
QC Source Sample: Other (A12H260-11)												
Apex SOP												
% Solids	82.7	---	1.00	% by Weight	1	---	83.2	---	---	0.6	20%	
Duplicate (1208346-DUP3)						Prepared: 08/16/12 13:42    Analyzed: 08/17/12 10:50						
QC Source Sample: Other (A12H262-15)												
Apex SOP												

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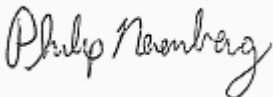
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Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:09

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208346 - Total Solids (Dry Weight)						Soil						
Duplicate (1208346-DUP3)						Prepared: 08/16/12 13:42    Analyzed: 08/17/12 10:50						
QC Source Sample: Other (A12H262-15)												
% Solids	74.2	---	1.00	% by Weight	1	---	73.9	---	---	0.4	20%	
Duplicate (1208346-DUP4)						Prepared: 08/16/12 13:42    Analyzed: 08/17/12 10:50						
QC Source Sample: Other (A12H262-21)												
Apex SOP												
% Solids	74.4	---	1.00	% by Weight	1	---	74.5	---	---	0.1	20%	
Duplicate (1208346-DUP5)						Prepared: 08/16/12 16:00    Analyzed: 08/17/12 10:50						
QC Source Sample: Other (A12H278-06)												
Apex SOP												
% Solids	81.1	---	1.00	% by Weight	1	---	81.8	---	---	0.9	20%	
Duplicate (1208346-DUP6)						Prepared: 08/16/12 18:53    Analyzed: 08/17/12 10:50						
QC Source Sample: Other (A12H315-02)												
Apex SOP												
% Solids	86.7	---	1.00	% by Weight	1	---	87.1	---	---	0.5	20%	

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Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:09

## SAMPLE PREPARATION INFORMATION

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

#### Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 1208321</b>							
A12H268-01	Soil	NWTPH-Gx (MS)	08/15/12 08:58	08/15/12 08:58	4.27g/5mL	10g/10mL	1.17
A12H268-02	Soil	NWTPH-Gx (MS)	08/15/12 09:20	08/15/12 09:20	5.34g/5mL	10g/10mL	0.94
A12H268-03	Soil	NWTPH-Gx (MS)	08/15/12 09:37	08/15/12 09:37	4.98g/5mL	10g/10mL	1.00
A12H268-04	Soil	NWTPH-Gx (MS)	08/15/12 10:56	08/15/12 10:56	4.97g/5mL	10g/10mL	1.01
A12H268-06	Soil	NWTPH-Gx (MS)	08/15/12 10:44	08/15/12 10:44	5.05g/5mL	10g/10mL	0.99
A12H268-07	Soil	NWTPH-Gx (MS)	08/15/12 11:07	08/15/12 11:07	5.11g/5mL	10g/10mL	0.98
A12H268-08	Soil	NWTPH-Gx (MS)	08/15/12 11:30	08/15/12 11:30	4.68g/5mL	10g/10mL	1.07
A12H268-09	Soil	NWTPH-Gx (MS)	08/15/12 11:57	08/15/12 11:57	5.39g/5mL	10g/10mL	0.93
A12H268-11	Soil	NWTPH-Gx (MS)	08/15/12 12:26	08/15/12 12:26	5.05g/5mL	10g/10mL	0.99
A12H268-13	Soil	NWTPH-Gx (MS)	08/15/12 13:31	08/15/12 13:31	5.21g/5mL	10g/10mL	0.96

#### Batch: 1208330

A12H268-12RE1	Soil	NWTPH-Gx (MS)	08/15/12 13:05	08/15/12 13:05	4.46g/5mL	10g/10mL	1.12
A12H268-14RE1	Soil	NWTPH-Gx (MS)	08/15/12 14:01	08/15/12 14:01	5.02g/5mL	10g/10mL	1.00

### BTEX Compounds by EPA 8260B

#### Prep: EPA 5035A

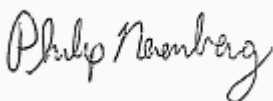
Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 1208321</b>							
A12H268-01	Soil	5035/8260B	08/15/12 08:58	08/15/12 08:58	4.27g/5mL	10g/10mL	1.17
A12H268-02	Soil	5035/8260B	08/15/12 09:20	08/15/12 09:20	5.34g/5mL	10g/10mL	0.94
A12H268-03	Soil	5035/8260B	08/15/12 09:37	08/15/12 09:37	4.98g/5mL	10g/10mL	1.00
A12H268-04	Soil	5035/8260B	08/15/12 10:56	08/15/12 10:56	4.97g/5mL	10g/10mL	1.01
A12H268-06	Soil	5035/8260B	08/15/12 10:44	08/15/12 10:44	5.05g/5mL	10g/10mL	0.99
A12H268-07	Soil	5035/8260B	08/15/12 11:07	08/15/12 11:07	5.11g/5mL	10g/10mL	0.98
A12H268-08	Soil	5035/8260B	08/15/12 11:30	08/15/12 11:30	4.68g/5mL	10g/10mL	1.07
A12H268-09	Soil	5035/8260B	08/15/12 11:57	08/15/12 11:57	5.39g/5mL	10g/10mL	0.93
A12H268-11	Soil	5035/8260B	08/15/12 12:26	08/15/12 12:26	5.05g/5mL	10g/10mL	0.99

#### Batch: 1208330

A12H268-12RE1	Soil	5035/8260B	08/15/12 13:05	08/15/12 13:05	4.46g/5mL	10g/10mL	1.12
A12H268-13RE1	Soil	5035/8260B	08/15/12 13:31	08/15/12 13:31	5.21g/5mL	10g/10mL	0.96
A12H268-14RE1	Soil	5035/8260B	08/15/12 14:01	08/15/12 14:01	5.02g/5mL	10g/10mL	1.00

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:09

## Notes and Definitions

### Qualifiers:

### Notes and Conventions:

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.
RPD	Relative Percent Difference
MDL	If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
WMS	Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
Batch QC	In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
Blank Policy	Apex assesses blank data for potential high bias down to a level equal to ½ the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses.  For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor.  Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.
---	QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
***	Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

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Philip Nerenberg, Lab Director

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08/30/12 23:09

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**Reported:**  
08/30/12 23:09

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# Apex Labs

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323 Phone  
503-718-0333 Fax

Thursday, August 30, 2012

Paul Ecker  
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

RE: Plaid Pantry #112 / 1179

Enclosed are the results of analyses for work order A12H337, which was received by the laboratory on 8/17/2012 at 2:10:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [pnerenberg@apex-labs.com](mailto:pnerenberg@apex-labs.com), or by phone at 503-718-2323.

---

Apex Laboratories



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---

Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

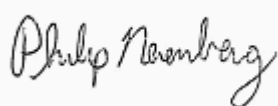
Reported:  
08/30/12 23:12

## ANALYTICAL REPORT FOR SAMPLES

### SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SVE-3/5	A12H337-01	Soil	08/16/12 07:16	08/17/12 14:10
SVE-3/12.5	A12H337-02	Soil	08/16/12 07:28	08/17/12 14:10
SVE-3/8	A12H337-03	Soil	08/16/12 07:25	08/17/12 14:10
SVE-3/14	A12H337-04	Soil	08/16/12 07:37	08/17/12 14:10
SVE-3/20	A12H337-05	Soil	08/16/12 07:50	08/17/12 14:10
B-16/6	A12H337-10	Soil	08/16/12 08:06	08/17/12 14:10
B-16/9	A12H337-11	Soil	08/16/12 08:28	08/17/12 14:10
B-16/13	A12H337-12	Soil	08/16/12 10:10	08/17/12 14:10
B-7/6	A12H337-16	Soil	08/16/12 11:44	08/17/12 14:10
B-7/9	A12H337-17	Soil	08/16/12 11:45	08/17/12 14:10
B-7/13	A12H337-18	Soil	08/16/12 11:50	08/17/12 14:10
B-7/14	A12H337-19	Soil	08/16/12 11:52	08/17/12 14:10
B-8/6	A12H337-21	Soil	08/16/12 12:15	08/17/12 14:10
B-8/9	A12H337-22	Soil	08/16/12 12:21	08/17/12 14:10
B-8/13	A12H337-23	Soil	08/16/12 12:28	08/17/12 14:10
SVE-5/5	A12H337-26	Soil	08/16/12 13:54	08/17/12 14:10
SVE-5/7.5	A12H337-27	Soil	08/16/12 13:56	08/17/12 14:10
SVE-4/6	A12H337-29	Soil	08/17/12 09:15	08/17/12 14:10
SVE-4/9	A12H337-30	Soil	08/17/12 09:21	08/17/12 14:10
SVE-4/11	A12H337-31	Soil	08/17/12 09:28	08/17/12 14:10
SVE-4/14	A12H337-32	Soil	08/17/12 09:33	08/17/12 14:10
SVE-2/8	A12H337-35	Soil	08/17/12 10:06	08/17/12 14:10
SVE-2/12	A12H337-37	Soil	08/17/12 10:10	08/17/12 14:10
SVE-2/16	A12H337-38	Soil	08/17/12 10:47	08/17/12 14:10
SVE-2/20	A12H337-39	Soil	08/17/12 10:50	08/17/12 14:10

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Philip Nerenberg, Lab Director

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:12

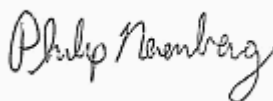
## ANALYTICAL SAMPLE RESULTS

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>SVE-3/12.5 (A12H337-02)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208400</b>			
<b>Gasoline Range Organics</b>	<b>216</b>	---	71.7	mg/kg dry	500	08/21/12 12:28	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 85 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			78 %	Limits: 50-150 %	"	"	"	
<b>SVE-3/8 (A12H337-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208400</b>			
<b>Gasoline Range Organics</b>	<b>3820</b>	---	120	mg/kg dry	1000	08/21/12 13:20	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 105 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			90 %	Limits: 50-150 %	"	"	"	
<b>SVE-3/14 (A12H337-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208400</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	6.25	mg/kg dry	50	08/21/12 11:37	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 89 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			86 %	Limits: 50-150 %	"	"	"	
<b>SVE-3/20 (A12H337-05)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208400</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	5.95	mg/kg dry	50	08/21/12 12:03	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 101 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			84 %	Limits: 50-150 %	"	"	"	
<b>B-16/6 (A12H337-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208400</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	5.81	mg/kg dry	50	08/21/12 14:37	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 80 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			85 %	Limits: 50-150 %	"	"	"	
<b>B-16/9 (A12H337-11)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208400</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	8.04	mg/kg dry	50	08/21/12 15:02	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 92 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			82 %	Limits: 50-150 %	"	"	"	
<b>B-16/13 (A12H337-12)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208400</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	5.92	mg/kg dry	50	08/21/12 15:28	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 77 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			89 %	Limits: 50-150 %	"	"	"	
<b>B-7/6 (A12H337-16)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208400</b>			
<b>Gasoline Range Organics</b>	<b>473</b>	---	85.5	mg/kg dry	500	08/21/12 15:54	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 101 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			85 %	Limits: 50-150 %	"	"	"	
<b>B-7/9 (A12H337-17)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208429</b>			
<b>Gasoline Range Organics</b>	<b>1730</b>	---	82.0	mg/kg dry	500	08/22/12 01:54	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 153 %	Limits: 50-150 %	1	"	"	S-02

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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

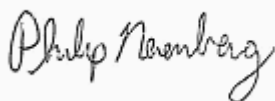
## ANALYTICAL SAMPLE RESULTS

## Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-7/9 (A12H337-17)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				
Surrogate: 1,4-Difluorobenzene (Sur)			Recovery: 88 %	Limits: 50-150 %	1	"	NWTPH-Gx (MS)	
<b>B-7/13 (A12H337-18RE1)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208449</b>				
<b>Gasoline Range Organics</b>	<b>303</b>	---	8.91	mg/kg dry	50	08/22/12 15:56	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 132 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			95 %	Limits: 50-150 %	"	"	"	
<b>B-7/14 (A12H337-19)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				
Gasoline Range Organics	ND	---	5.80	mg/kg dry	50	08/21/12 19:55	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 77 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			87 %	Limits: 50-150 %	"	"	"	
<b>B-8/6 (A12H337-21)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				
Gasoline Range Organics	ND	---	8.41	mg/kg dry	50	08/21/12 20:20	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 97 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			81 %	Limits: 50-150 %	"	"	"	
<b>B-8/9 (A12H337-22)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				
Gasoline Range Organics	ND	---	7.43	mg/kg dry	50	08/21/12 20:46	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 78 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			79 %	Limits: 50-150 %	"	"	"	
<b>B-8/13 (A12H337-23)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				
Gasoline Range Organics	ND	---	8.87	mg/kg dry	50	08/21/12 21:12	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 100 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			80 %	Limits: 50-150 %	"	"	"	
<b>SVE-5/5 (A12H337-26)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				
Gasoline Range Organics	ND	---	6.13	mg/kg dry	50	08/21/12 21:37	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 83 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			77 %	Limits: 50-150 %	"	"	"	
<b>SVE-5/7.5 (A12H337-27)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				
<b>Gasoline Range Organics</b>	<b>793</b>	---	32.4	mg/kg dry	200	08/22/12 02:45	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 108 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			94 %	Limits: 50-150 %	"	"	"	
<b>SVE-4/6 (A12H337-29)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				
Gasoline Range Organics	ND	---	8.06	mg/kg dry	50	08/21/12 22:03	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 92 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			86 %	Limits: 50-150 %	"	"	"	
<b>SVE-4/9 (A12H337-30)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				

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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

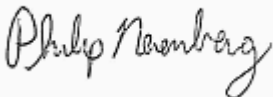
Reported:  
08/30/12 23:12

## ANALYTICAL SAMPLE RESULTS

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>SVE-4/9 (A12H337-30)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208429</b>			
<b>Gasoline Range Organics</b>	<b>96.5</b>	---	7.24	mg/kg dry	50	08/21/12 22:29	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 115 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			84 %	Limits: 50-150 %	"	"	"	
<b>SVE-4/11 (A12H337-31)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208429</b>			
<b>Gasoline Range Organics</b>	<b>53.8</b>	---	7.59	mg/kg dry	50	08/21/12 22:54	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 104 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			94 %	Limits: 50-150 %	"	"	"	
<b>SVE-4/14 (A12H337-32)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208429</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	5.99	mg/kg dry	50	08/21/12 23:45	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 93 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			89 %	Limits: 50-150 %	"	"	"	
<b>SVE-2/8 (A12H337-35)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208429</b>			
<b>Gasoline Range Organics</b>	<b>6800</b>	---	89.6	mg/kg dry	500	08/22/12 03:11	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 160 %	Limits: 50-150 %	1	"	"	S-02
1,4-Difluorobenzene (Sur)			116 %	Limits: 50-150 %	"	"	"	
<b>SVE-2/12 (A12H337-37)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208429</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	5.71	mg/kg dry	50	08/22/12 00:11	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 80 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			87 %	Limits: 50-150 %	"	"	"	
<b>SVE-2/16 (A12H337-38)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208429</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	7.01	mg/kg dry	50	08/22/12 00:37	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 93 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			83 %	Limits: 50-150 %	"	"	"	
<b>SVE-2/20 (A12H337-39)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208429</b>			
<b>Gasoline Range Organics</b>	<b>ND</b>	---	5.92	mg/kg dry	50	08/22/12 01:28	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 94 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			81 %	Limits: 50-150 %	"	"	"	

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Philip Nerenberg, Lab Director

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:12

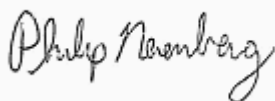
## ANALYTICAL SAMPLE RESULTS

### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>SVE-3/12.5 (A12H337-02)</b>		<b>Matrix: Soil</b>		<b>Batch: 1208400</b>				
Benzene	1530	---	179	ug/kg dry	500	08/21/12 12:28	5035/8260B	
Toluene	4780	---	717	"	"	"	"	
Ethylbenzene	3940	---	359	"	"	"	"	
Xylenes, total	21100	---	1080	"	"	"	"	
Naphthalene	ND	---	1430	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	717	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	359	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>		<i>94 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>		<i>92 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>		<i>91 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<b>SVE-3/8 (A12H337-03)</b>		<b>Matrix: Soil</b>		<b>Batch: 1208400</b>				
Benzene	6530	---	300	ug/kg dry	1000	08/21/12 13:20	5035/8260B	
Toluene	117000	---	1200	"	"	"	"	
Ethylbenzene	70200	---	600	"	"	"	"	
Xylenes, total	389000	---	1800	"	"	"	"	
Naphthalene	15600	---	2400	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1200	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	600	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	600	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>		<i>98 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>		<i>86 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>		<i>94 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<b>SVE-3/14 (A12H337-04)</b>		<b>Matrix: Soil</b>		<b>Batch: 1208400</b>				
Benzene	ND	---	15.6	ug/kg dry	50	08/21/12 11:37	5035/8260B	
Toluene	ND	---	62.5	"	"	"	"	
Ethylbenzene	ND	---	31.2	"	"	"	"	
Xylenes, total	ND	---	93.7	"	"	"	"	
Naphthalene	ND	---	125	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	62.5	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	31.2	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>		<i>104 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>		<i>97 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>		<i>101 %</i>		<i>Limits: 70-130 %</i>	"	"	"	

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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

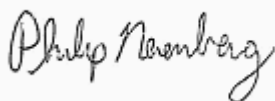
## ANALYTICAL SAMPLE RESULTS

## RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-16/6 (A12H337-10)</b>		<b>Matrix: Soil</b>		<b>Batch: 1208400</b>				
Benzene	ND	---	14.5	ug/kg dry	50	08/21/12 14:37	5035/8260B	
Toluene	ND	---	58.1	"	"	"	"	
Ethylbenzene	ND	---	29.0	"	"	"	"	
Xylenes, total	ND	---	87.1	"	"	"	"	
Naphthalene	ND	---	116	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	58.1	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	29.0	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 94 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>105 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>94 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-16/13 (A12H337-12)</b>		<b>Matrix: Soil</b>		<b>Batch: 1208400</b>				
Benzene	ND	---	14.8	ug/kg dry	50	08/21/12 15:28	5035/8260B	
Toluene	ND	---	59.2	"	"	"	"	
Ethylbenzene	ND	---	29.6	"	"	"	"	
Xylenes, total	ND	---	88.8	"	"	"	"	
Naphthalene	ND	---	118	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	59.2	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	29.6	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 97 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>107 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>95 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-7/6 (A12H337-16)</b>		<b>Matrix: Soil</b>		<b>Batch: 1208400</b>				
Benzene	ND	---	214	ug/kg dry	500	08/21/12 15:54	5035/8260B	
Toluene	ND	---	855	"	"	"	"	
<b>Ethylbenzene</b>	<b>2050</b>	---	427	"	"	"	"	
<b>Xylenes, total</b>	<b>11900</b>	---	1280	"	"	"	"	
Naphthalene	ND	---	1710	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	855	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	427	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 92 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>108 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>93 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>94 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-7/13 (A12H337-18RE1)</b>		<b>Matrix: Soil</b>		<b>Batch: 1208449</b>				

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EES Environmental Inc  
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Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

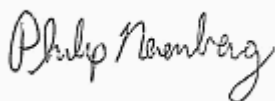
## ANALYTICAL SAMPLE RESULTS

## RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-7/13 (A12H337-18RE1)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208449</b>				
<b>Benzene</b>	<b>154</b>	---	22.3	ug/kg dry	50	08/22/12 15:56	5035/8260B	
Toluene	ND	---	89.1	"	"	"	"	
<b>Ethylbenzene</b>	<b>171</b>	---	44.5	"	"	"	"	
<b>Xylenes, total</b>	<b>252</b>	---	134	"	"	"	"	
<b>Naphthalene</b>	<b>299</b>	---	178	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	89.1	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	44.5	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 106 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>115 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-7/14 (A12H337-19)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				
Benzene	ND	---	14.5	ug/kg dry	50	08/21/12 19:55	5035/8260B	
Toluene	ND	---	58.0	"	"	"	"	
Ethylbenzene	ND	---	29.0	"	"	"	"	
Xylenes, total	ND	---	86.9	"	"	"	"	
Naphthalene	ND	---	116	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	58.0	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	29.0	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>97 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-8/6 (A12H337-21)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				
<b>Benzene</b>	<b>26.1</b>	---	21.0	ug/kg dry	50	08/21/12 20:20	5035/8260B	
Toluene	ND	---	84.1	"	"	"	"	
<b>Ethylbenzene</b>	<b>72.4</b>	---	42.1	"	"	"	"	
<b>Xylenes, total</b>	<b>299</b>	---	126	"	"	"	"	
Naphthalene	ND	---	168	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	84.1	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	42.1	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>91 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>96 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>B-8/13 (A12H337-23)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				

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Philip Nerenberg, Lab Director

EES Environmental Inc  
 240 N Broadway Ste 115  
 Portland, OR 97227

Project: **Plaid Pantry #112**  
 Project Number: 1179  
 Project Manager: Paul Ecker

Reported:  
 08/30/12 23:12

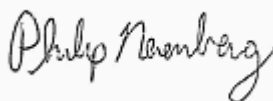
## ANALYTICAL SAMPLE RESULTS

### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-8/13 (A12H337-23)</b>		<b>Matrix: Soil</b>		<b>Batch: 1208429</b>				
Benzene	ND	---	22.2	ug/kg dry	50	08/21/12 21:12	5035/8260B	
Toluene	ND	---	88.7	"	"	"	"	
Ethylbenzene	ND	---	44.3	"	"	"	"	
Xylenes, total	ND	---	133	"	"	"	"	
Naphthalene	ND	---	177	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	88.7	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	44.3	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>		<i>99 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>		<i>91 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<b>SVE-5/5 (A12H337-26)</b>		<b>Matrix: Soil</b>		<b>Batch: 1208429</b>				
Benzene	ND	---	15.3	ug/kg dry	50	08/21/12 21:37	5035/8260B	
Toluene	ND	---	61.3	"	"	"	"	
Ethylbenzene	ND	---	30.7	"	"	"	"	
Xylenes, total	ND	---	92.0	"	"	"	"	
Naphthalene	ND	---	123	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	61.3	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	30.7	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 114 %</i>		<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>		<i>96 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>		<i>85 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>		<i>93 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<b>SVE-5/7.5 (A12H337-27)</b>		<b>Matrix: Soil</b>		<b>Batch: 1208429</b>				
<b>Benzene</b>	<b>149</b>	---	81.0	ug/kg dry	200	08/22/12 02:45	5035/8260B	
<b>Toluene</b>	<b>8980</b>	---	324	"	"	"	"	
<b>Ethylbenzene</b>	<b>7430</b>	---	162	"	"	"	"	
<b>Xylenes, total</b>	<b>56900</b>	---	486	"	"	"	"	
<b>Naphthalene</b>	<b>20700</b>	---	648	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	324	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	162	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	162	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>		<i>106 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>		<i>89 %</i>		<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>Limits: 70-130 %</i>	"	"	"	

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Project Number: 1179  
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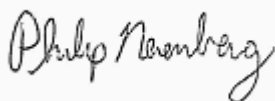
## ANALYTICAL SAMPLE RESULTS

## RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>SVE-4/6 (A12H337-29)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				
Benzene	ND	---	20.1	ug/kg dry	50	08/21/12 22:03	5035/8260B	
Toluene	ND	---	80.6	"	"	"	"	
Ethylbenzene	ND	---	40.3	"	"	"	"	
Xylenes, total	ND	---	121	"	"	"	"	
Naphthalene	ND	---	161	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	80.6	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	40.3	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 116 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>86 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>SVE-4/11 (A12H337-31)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				
<b>Benzene</b>	<b>34.1</b>	---	19.0	ug/kg dry	50	08/21/12 22:54	5035/8260B	
<b>Toluene</b>	<b>153</b>	---	75.9	"	"	"	"	
<b>Ethylbenzene</b>	<b>816</b>	---	37.9	"	"	"	"	
<b>Xylenes, total</b>	<b>1500</b>	---	114	"	"	"	"	
<b>Naphthalene</b>	<b>1360</b>	---	152	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	75.9	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	37.9	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 106 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>108 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>94 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>SVE-4/14 (A12H337-32)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				
Benzene	ND	---	15.0	ug/kg dry	50	08/21/12 23:45	5035/8260B	
Toluene	ND	---	59.9	"	"	"	"	
Ethylbenzene	ND	---	29.9	"	"	"	"	
Xylenes, total	ND	---	89.8	"	"	"	"	
Naphthalene	ND	---	120	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	59.9	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	29.9	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 108 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>107 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>94 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>SVE-2/8 (A12H337-35)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				

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Project Number: 1179  
Project Manager: Paul EckerReported:  
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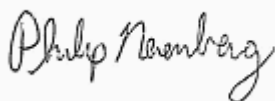
## ANALYTICAL SAMPLE RESULTS

## RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>SVE-2/8 (A12H337-35)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				
Benzene	13700	---	224	ug/kg dry	500	08/22/12 03:11	5035/8260B	
Toluene	47900	---	896	"	"	"	"	
Ethylbenzene	96100	---	448	"	"	"	"	
Xylenes, total	436000	---	1340	"	"	"	"	
Naphthalene	26500	---	1790	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	896	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	448	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	448	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 95 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>107 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>93 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>90 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>SVE-2/12 (A12H337-37)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				
Benzene	ND	---	14.3	ug/kg dry	50	08/22/12 00:11	5035/8260B	
Toluene	ND	---	57.1	"	"	"	"	
Ethylbenzene	ND	---	28.5	"	"	"	"	
Xylenes, total	ND	---	85.6	"	"	"	"	
Naphthalene	ND	---	114	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	57.1	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	28.5	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 108 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>SVE-2/16 (A12H337-38)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208429</b>				
Benzene	ND	---	17.5	ug/kg dry	50	08/22/12 00:37	5035/8260B	
Toluene	ND	---	70.1	"	"	"	"	
Ethylbenzene	ND	---	35.1	"	"	"	"	
Xylenes, total	ND	---	105	"	"	"	"	
Naphthalene	ND	---	140	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	70.1	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	35.1	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 107 %</i>	<i>Limits: 70-130 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>95 %</i>	<i>Limits: 70-130 %</i>	"	"	"	

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

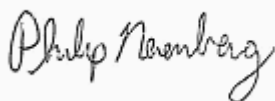
## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260B SIM

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>SVE-3/12.5 (A12H337-02)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208500</b>			
1,2-Dibromoethane (EDB)	ND	---	7.17	ug/kg dry	50	08/23/12 22:15	5035/8260B SIM	
Surrogate: Dibromofluoromethane (Surr)			Recovery: 113 %	Limits: 70-130 %	"	"	"	
1,4-Difluorobenzene (Surr)			110 %	Limits: 70-130 %	"	"	"	
Toluene-d8 (Surr)			101 %	Limits: 70-130 %	"	"	"	
4-Bromofluorobenzene (Surr)			98 %	Limits: 70-130 %	"	"	"	
<b>SVE-3/14 (A12H337-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208500</b>			
1,2-Dibromoethane (EDB)	ND	---	6.25	ug/kg dry	50	08/23/12 16:39	5035/8260B SIM	
Surrogate: Dibromofluoromethane (Surr)			Recovery: 106 %	Limits: 70-130 %	"	"	"	
1,4-Difluorobenzene (Surr)			105 %	Limits: 70-130 %	"	"	"	
Toluene-d8 (Surr)			99 %	Limits: 70-130 %	"	"	"	
4-Bromofluorobenzene (Surr)			100 %	Limits: 70-130 %	"	"	"	
<b>B-16/6 (A12H337-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208500</b>			
1,2-Dibromoethane (EDB)	ND	---	5.81	ug/kg dry	50	08/23/12 17:04	5035/8260B SIM	
Surrogate: Dibromofluoromethane (Surr)			Recovery: 106 %	Limits: 70-130 %	"	"	"	
1,4-Difluorobenzene (Surr)			105 %	Limits: 70-130 %	"	"	"	
Toluene-d8 (Surr)			100 %	Limits: 70-130 %	"	"	"	
4-Bromofluorobenzene (Surr)			100 %	Limits: 70-130 %	"	"	"	
<b>B-16/13 (A12H337-12)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208500</b>			
1,2-Dibromoethane (EDB)	ND	---	5.92	ug/kg dry	50	08/23/12 17:30	5035/8260B SIM	
Surrogate: Dibromofluoromethane (Surr)			Recovery: 107 %	Limits: 70-130 %	"	"	"	
1,4-Difluorobenzene (Surr)			106 %	Limits: 70-130 %	"	"	"	
Toluene-d8 (Surr)			99 %	Limits: 70-130 %	"	"	"	
4-Bromofluorobenzene (Surr)			100 %	Limits: 70-130 %	"	"	"	
<b>B-7/6 (A12H337-16)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208500</b>			
1,2-Dibromoethane (EDB)	ND	---	11.1	ug/kg dry	50	08/23/12 22:41	5035/8260B SIM	R-01
Surrogate: Dibromofluoromethane (Surr)			Recovery: 112 %	Limits: 70-130 %	"	"	"	
1,4-Difluorobenzene (Surr)			109 %	Limits: 70-130 %	"	"	"	
Toluene-d8 (Surr)			104 %	Limits: 70-130 %	"	"	"	
4-Bromofluorobenzene (Surr)			98 %	Limits: 70-130 %	"	"	"	
<b>B-7/13 (A12H337-18)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208500</b>			
1,2-Dibromoethane (EDB)	ND	---	8.91	ug/kg dry	50	08/23/12 23:07	5035/8260B SIM	
Surrogate: Dibromofluoromethane (Surr)			Recovery: 110 %	Limits: 70-130 %	"	"	"	
1,4-Difluorobenzene (Surr)			108 %	Limits: 70-130 %	"	"	"	
Toluene-d8 (Surr)			103 %	Limits: 70-130 %	"	"	"	
4-Bromofluorobenzene (Surr)			101 %	Limits: 70-130 %	"	"	"	

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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

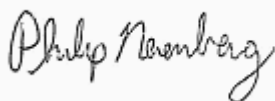
## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260B SIM

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>B-7/14 (A12H337-19)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208500</b>				
1,2-Dibromoethane (EDB)	ND	---	5.80	ug/kg dry	50	08/23/12 17:56	5035/8260B SIM	
Surrogate: Dibromofluoromethane (Surr)			Recovery: 107 %	Limits: 70-130 %	"	"	"	
1,4-Difluorobenzene (Surr)			106 %	Limits: 70-130 %	"	"	"	
Toluene-d8 (Surr)			100 %	Limits: 70-130 %	"	"	"	
4-Bromofluorobenzene (Surr)			101 %	Limits: 70-130 %	"	"	"	
<b>B-8/6 (A12H337-21)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208500</b>				
1,2-Dibromoethane (EDB)	ND	---	8.41	ug/kg dry	50	08/23/12 21:23	5035/8260B SIM	
Surrogate: Dibromofluoromethane (Surr)			Recovery: 112 %	Limits: 70-130 %	"	"	"	
1,4-Difluorobenzene (Surr)			110 %	Limits: 70-130 %	"	"	"	
Toluene-d8 (Surr)			100 %	Limits: 70-130 %	"	"	"	
4-Bromofluorobenzene (Surr)			99 %	Limits: 70-130 %	"	"	"	
<b>B-8/13 (A12H337-23)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208500</b>				
1,2-Dibromoethane (EDB)	ND	---	8.87	ug/kg dry	50	08/23/12 18:22	5035/8260B SIM	
Surrogate: Dibromofluoromethane (Surr)			Recovery: 108 %	Limits: 70-130 %	"	"	"	
1,4-Difluorobenzene (Surr)			107 %	Limits: 70-130 %	"	"	"	
Toluene-d8 (Surr)			99 %	Limits: 70-130 %	"	"	"	
4-Bromofluorobenzene (Surr)			100 %	Limits: 70-130 %	"	"	"	
<b>SVE-5/5 (A12H337-26)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208500</b>				
1,2-Dibromoethane (EDB)	ND	---	6.13	ug/kg dry	50	08/23/12 18:48	5035/8260B SIM	
Surrogate: Dibromofluoromethane (Surr)			Recovery: 109 %	Limits: 70-130 %	"	"	"	
1,4-Difluorobenzene (Surr)			107 %	Limits: 70-130 %	"	"	"	
Toluene-d8 (Surr)			100 %	Limits: 70-130 %	"	"	"	
4-Bromofluorobenzene (Surr)			101 %	Limits: 70-130 %	"	"	"	
<b>SVE-4/6 (A12H337-29)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208500</b>				
1,2-Dibromoethane (EDB)	ND	---	8.06	ug/kg dry	50	08/23/12 19:14	5035/8260B SIM	
Surrogate: Dibromofluoromethane (Surr)			Recovery: 109 %	Limits: 70-130 %	"	"	"	
1,4-Difluorobenzene (Surr)			108 %	Limits: 70-130 %	"	"	"	
Toluene-d8 (Surr)			100 %	Limits: 70-130 %	"	"	"	
4-Bromofluorobenzene (Surr)			100 %	Limits: 70-130 %	"	"	"	
<b>SVE-4/11 (A12H337-31)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208500</b>				
1,2-Dibromoethane (EDB)	ND	---	7.59	ug/kg dry	50	08/23/12 21:49	5035/8260B SIM	
Surrogate: Dibromofluoromethane (Surr)			Recovery: 113 %	Limits: 70-130 %	"	"	"	
1,4-Difluorobenzene (Surr)			111 %	Limits: 70-130 %	"	"	"	
Toluene-d8 (Surr)			99 %	Limits: 70-130 %	"	"	"	
4-Bromofluorobenzene (Surr)			99 %	Limits: 70-130 %	"	"	"	

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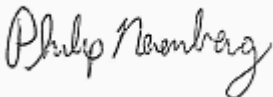
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

## ANALYTICAL SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260B SIM

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>SVE-4/14 (A12H337-32)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208500</b>			
1,2-Dibromoethane (EDB)	ND	---	5.99	ug/kg dry	50	08/23/12 19:40	5035/8260B SIM	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 109 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>108 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>SVE-2/12 (A12H337-37)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208500</b>			
1,2-Dibromoethane (EDB)	ND	---	5.71	ug/kg dry	50	08/23/12 20:06	5035/8260B SIM	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 110 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>109 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<b>SVE-2/16 (A12H337-38)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208500</b>			
1,2-Dibromoethane (EDB)	ND	---	7.01	ug/kg dry	50	08/23/12 20:32	5035/8260B SIM	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 110 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>109 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>	<i>Limits: 70-130 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 70-130 %</i>	"	"	"	

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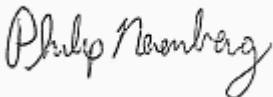
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

## ANALYTICAL SAMPLE RESULTS

## Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>SVE-3/5 (A12H337-01)</b>			<b>Matrix: Soil</b>					
Batch: 1208523								
<b>Lead</b>	<b>13.2</b>	---	1.45	mg/kg dry	10	08/27/12 14:58	EPA 6020	
<b>SVE-3/8 (A12H337-03)</b>			<b>Matrix: Soil</b>					
Batch: 1208523								
<b>Lead</b>	<b>10.3</b>	---	1.25	mg/kg dry	10	08/27/12 15:30	EPA 6020	
<b>B-16/6 (A12H337-10)</b>			<b>Matrix: Soil</b>					
Batch: 1208523								
<b>Lead</b>	<b>11.3</b>	---	1.35	mg/kg dry	10	08/27/12 15:39	EPA 6020	
<b>B-16/9 (A12H337-11)</b>			<b>Matrix: Soil</b>					
Batch: 1208523								
<b>Lead</b>	<b>12.2</b>	---	1.29	mg/kg dry	10	08/27/12 15:42	EPA 6020	
<b>SVE-5/5 (A12H337-26)</b>			<b>Matrix: Soil</b>					
Batch: 1208523								
<b>Lead</b>	<b>7.52</b>	---	1.25	mg/kg dry	10	08/27/12 15:45	EPA 6020	
<b>SVE-5/7.5 (A12H337-27)</b>			<b>Matrix: Soil</b>					
Batch: 1208523								
<b>Lead</b>	<b>10.6</b>	---	1.32	mg/kg dry	10	08/27/12 15:48	EPA 6020	
<b>SVE-2/8 (A12H337-35)</b>			<b>Matrix: Soil</b>					
Batch: 1208523								
<b>Lead</b>	<b>10.5</b>	---	1.37	mg/kg dry	10	08/27/12 15:51	EPA 6020	
<b>SVE-2/12 (A12H337-37)</b>			<b>Matrix: Soil</b>					
Batch: 1208523								
<b>Lead</b>	<b>2.81</b>	---	1.11	mg/kg dry	10	08/27/12 16:00	EPA 6020	

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

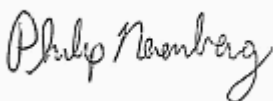
Reported:  
08/30/12 23:12

## ANALYTICAL SAMPLE RESULTS

Percent Dry Weight								
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>SVE-3/5 (A12H337-01)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208419</b>			
% Solids	73.6	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>SVE-3/12.5 (A12H337-02)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208419</b>			
% Solids	75.9	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>SVE-3/8 (A12H337-03)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208419</b>			
% Solids	84.3	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>SVE-3/14 (A12H337-04)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208419</b>			
% Solids	94.2	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>SVE-3/20 (A12H337-05)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208419</b>			
% Solids	93.6	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>B-16/6 (A12H337-10)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208419</b>			
% Solids	78.1	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>B-16/9 (A12H337-11)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208419</b>			
% Solids	77.0	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>B-16/13 (A12H337-12)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208419</b>			
% Solids	93.3	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>B-7/6 (A12H337-16)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208419</b>			
% Solids	76.0	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>B-7/9 (A12H337-17)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208419</b>			
% Solids	75.7	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>B-7/13 (A12H337-18)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208419</b>			
% Solids	76.8	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>B-7/14 (A12H337-19)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208419</b>			
% Solids	93.1	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>B-8/6 (A12H337-21)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208419</b>			
% Solids	73.6	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>B-8/9 (A12H337-22)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208419</b>			
% Solids	76.5	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>B-8/13 (A12H337-23)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208419</b>			
% Solids	86.7	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>SVE-5/5 (A12H337-26)</b>			<b>Matrix: Soil</b>		<b>Batch: 1208419</b>			

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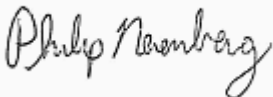
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

## ANALYTICAL SAMPLE RESULTS

## Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>SVE-5/5 (A12H337-26)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208419</b>				
% Solids	80.6	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>SVE-5/7.5 (A12H337-27)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208419</b>				
% Solids	79.9	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>SVE-4/6 (A12H337-29)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208419</b>				
% Solids	82.5	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>SVE-4/9 (A12H337-30)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208419</b>				
% Solids	77.0	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>SVE-4/11 (A12H337-31)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208419</b>				
% Solids	75.5	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>SVE-4/14 (A12H337-32)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208419</b>				
% Solids	93.6	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>SVE-2/8 (A12H337-35)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208419</b>				
% Solids	76.9	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>SVE-2/12 (A12H337-37)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208419</b>				
% Solids	93.1	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>SVE-2/16 (A12H337-38)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208419</b>				
% Solids	93.9	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	
<b>SVE-2/20 (A12H337-39)</b>			<b>Matrix: Soil</b>	<b>Batch: 1208419</b>				
% Solids	95.2	---	1.00	% by Weight	1	08/22/12 10:46	Apex SOP	

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Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

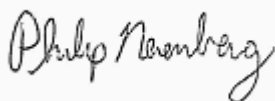
## QUALITY CONTROL (QC) SAMPLE RESULTS

## Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208400 - EPA 5035A						Soil						
Blank (1208400-BLK1)						Prepared: 08/21/12 09:00		Analyzed: 08/21/12 10:19				
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 83 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		82 %		50-150 %		"						
LCS (1208400-BS2)						Prepared: 08/21/12 09:00		Analyzed: 08/21/12 09:53				
NWTPH-Gx (MS)												
Gasoline Range Organics	23.7	---	5.00	mg/kg wet	50	25.0	---	95	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 90 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		94 %		50-150 %		"						
Duplicate (1208400-DUP1)						Prepared: 08/16/12 07:28		Analyzed: 08/21/12 12:54				
QC Source Sample: SVE-3/12.5 (A12H337-02)												
NWTPH-Gx (MS)												
Gasoline Range Organics	346	---	76.3	mg/kg dry	500	---	216	---	---	46	30%	Q-04
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 93 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		83 %		50-150 %		"						
Batch 1208429 - EPA 5035A						Soil						
Blank (1208429-BLK1)						Prepared: 08/21/12 12:00		Analyzed: 08/21/12 19:29				
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 95 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		86 %		50-150 %		"						
LCS (1208429-BS2)						Prepared: 08/21/12 12:00		Analyzed: 08/21/12 19:03				
NWTPH-Gx (MS)												
Gasoline Range Organics	21.8	---	5.00	mg/kg wet	50	25.0	---	87	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 87 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		83 %		50-150 %		"						
Duplicate (1208429-DUP1)						Prepared: 08/17/12 09:28		Analyzed: 08/21/12 23:20				
QC Source Sample: SVE-4/11 (A12H337-31)												
NWTPH-Gx (MS)												
Gasoline Range Organics	44.9	---	7.54	mg/kg dry	50	---	53.8	---	---	18	30%	

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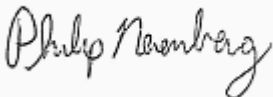
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208429 - EPA 5035A						Soil						
Duplicate (1208429-DUP1)					Prepared: 08/17/12 09:28		Analyzed: 08/21/12 23:20					
QC Source Sample: SVE-4/11 (A12H337-31)												
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 98 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		87 %		50-150 %		"						
Duplicate (1208429-DUP2)					Prepared: 08/21/12 11:30		Analyzed: 08/22/12 04:02					
QC Source Sample: Other (A12H360-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics		552	---	69.2	mg/kg dry	500	---	801	---	---	37	30%
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 100 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		85 %		50-150 %		"						
A-01a												

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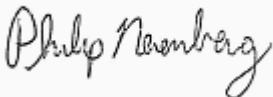
EES Environmental Inc  
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Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208449 - EPA 5035A						Soil						
Blank (1208449-BLK1)						Prepared: 08/22/12 09:00		Analyzed: 08/22/12 12:35				
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 81 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		88 %		50-150 %		"						
LCS (1208449-BS2)						Prepared: 08/22/12 09:00		Analyzed: 08/22/12 12:07				
NWTPH-Gx (MS)												
Gasoline Range Organics	25.0	---	5.00	mg/kg wet	50	25.0	---	100	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 103 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		92 %		50-150 %		"						
Duplicate (1208449-DUP1)						Prepared: 08/22/12 13:15		Analyzed: 08/22/12 13:33				
QC Source Sample: Other (A12H366-03RE1)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	5.85	mg/kg wet	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 84 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		87 %		50-150 %		"						

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Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

## QUALITY CONTROL (QC) SAMPLE RESULTS

## RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208400 - EPA 5035A						Soil						
Blank (1208400-BLK1)			Prepared: 08/21/12 09:00 Analyzed: 08/21/12 10:19									
5035/8260B												
Benzene	ND	---	8.33	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	33.3	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	16.7	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	50.0	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	66.7	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	33.3	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	16.7	"	"	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	16.7	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery: 100 %		Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		102 %		70-130 %		"						
Toluene-d8 (Surr)		95 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		94 %		70-130 %		"						

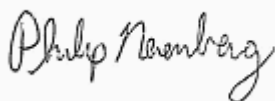
## LCS (1208400-BS1)

Prepared: 08/21/12 09:00 Analyzed: 08/21/12 09:28

<b>5035/8260B</b>												
Benzene	1200	---	12.5	ug/kg wet	50	1000	---	120	65-135%	---	---	
Toluene	1040	---	50.0	"	"	"	---	104	"	---	---	
Ethylbenzene	1060	---	25.0	"	"	"	---	106	"	---	---	
m,p-Xylene	2150	---	50.0	"	"	2000	---	108	"	---	---	
o-Xylene	1060	---	25.0	"	"	1000	---	106	"	---	---	
Xylenes, total	3210	---	75.0	"	"	3000	---	107	"	---	---	
Naphthalene	1050	---	100	"	"	1000	---	105	"	---	---	
Methyl tert-butyl ether (MTBE)	1070	---	50.0	"	"	"	---	107	"	---	---	
Isopropylbenzene	1070	---	50.0	"	"	"	---	107	"	---	---	
n-Propylbenzene	1130	---	25.0	"	"	"	---	113	"	---	---	
1,2,4-Trimethylbenzene	1110	---	50.0	"	"	"	---	111	"	---	---	
1,3,5-Trimethylbenzene	1140	---	50.0	"	"	"	---	114	"	---	---	
1,2-Dibromoethane (EDB)	1050	---	25.0	"	"	"	---	105	"	---	---	
1,2-Dichloroethane (EDC)	980	---	25.0	"	"	"	---	98	"	---	---	

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Project Number: 1179  
Project Manager: Paul EckerReported:  
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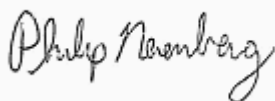
## QUALITY CONTROL (QC) SAMPLE RESULTS

## RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208400 - EPA 5035A						Soil						
LCS (1208400-BS1)						Prepared: 08/21/12 09:00    Analyzed: 08/21/12 09:28						
Surr: Dibromofluoromethane (Surr)		Recovery: 99 %		Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		105 %		70-130 %		"						
Toluene-d8 (Surr)		93 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		92 %		70-130 %		"						
Duplicate (1208400-DUP1)						Prepared: 08/16/12 07:28    Analyzed: 08/21/12 12:54						
QC Source Sample: SVE-3/12.5 (A12H337-02)												
5035/8260B												
Benzene	1470	---	191	ug/kg dry	500	---	1530	---	---	4	30%	
Toluene	4840	---	763	"	"	---	4780	---	---	1	30%	
Ethylbenzene	4780	---	382	"	"	---	3940	---	---	19	30%	
m,p-Xylene	20300	---	763	"	"	---	16900	---	---	19	30%	
o-Xylene	5180	---	382	"	"	---	4260	---	---	20	30%	
Xylenes, total	25500	---	1140	"	"	---	21100	---	---	19	30%	
Naphthalene	ND	---	1530	"	"	---	1230	---	---	***	30%	
Methyl tert-butyl ether (MTBE)	ND	---	763	"	"	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	763	"	"	---	437	---	---	***	30%	Q-04
n-Propylbenzene	2800	---	382	"	"	---	1940	---	---	36	30%	Q-04
1,2,4-Trimethylbenzene	16100	---	763	"	"	---	12400	---	---	26	30%	
1,3,5-Trimethylbenzene	5820	---	763	"	"	---	3860	---	---	40	30%	Q-04
1,2-Dibromoethane (EDB)	ND	---	382	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	382	"	"	---	ND	---	---	---	30%	
Surr: Dibromofluoromethane (Surr)		Recovery: 111 %		Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		98 %		70-130 %		"						
Toluene-d8 (Surr)		89 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		91 %		70-130 %		"						
Matrix Spike (1208400-MS1)						Prepared: 08/16/12 11:44    Analyzed: 08/21/12 16:19						
QC Source Sample: B-7/6 (A12H337-16)												
5035/8260B												
Benzene	17700	---	198	ug/kg dry	500	15800	180	111	65-135%	---	---	
Toluene	15100	---	792	"	"	"	ND	95	"	---	---	
Ethylbenzene	17300	---	396	"	"	"	2050	96	"	---	---	
m,p-Xylene	39800	---	792	"	"	31700	8490	99	"	---	---	
o-Xylene	18900	---	396	"	"	15800	3400	98	"	---	---	
Xylenes, total	58600	---	1190	"	"	47500	11900	98	"	---	---	

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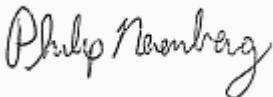
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

## QUALITY CONTROL (QC) SAMPLE RESULTS

## RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208400 - EPA 5035A						Soil						
Matrix Spike (1208400-MS1)				Prepared: 08/16/12 11:44		Analyzed: 08/21/12 16:19						
QC Source Sample: B-7/6 (A12H337-16)												
Naphthalene	19900	---	1580	ug/kg dry	"	15800	1090	119	"	---	---	
Methyl tert-butyl ether (MTBE)	15300	---	792	"	"	"	ND	97	"	---	---	
Isopropylbenzene	15800	---	792	"	"	"	ND	100	"	---	---	
n-Propylbenzene	18200	---	396	"	"	"	1510	105	"	---	---	
1,2,4-Trimethylbenzene	26200	---	792	"	"	"	10400	100	"	---	---	
1,3,5-Trimethylbenzene	19300	---	792	"	"	"	3640	99	"	---	---	
1,2-Dibromoethane (EDB)	15000	---	396	"	"	"	ND	95	"	---	---	
1,2-Dichloroethane (EDC)	12900	---	396	"	"	"	ND	81	"	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery: 94 %		Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		106 %		70-130 %		"						
Toluene-d8 (Surr)		90 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		90 %		70-130 %		"						

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:12

## QUALITY CONTROL (QC) SAMPLE RESULTS

### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208429 - EPA 5035A						Soil						
Blank (1208429-BLK1)						Prepared: 08/21/12 12:00 Analyzed: 08/21/12 19:29						
5035/8260B												
Benzene	ND	---	8.33	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	33.3	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	16.7	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	50.0	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	66.7	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	33.3	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	16.7	"	"	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	16.7	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr) Recovery: 98 % Limits: 70-130 % Dilution: 1x												
1,4-Difluorobenzene (Surr) 107 % 70-130 % "												
Toluene-d8 (Surr) 91 % 70-130 % "												
4-Bromofluorobenzene (Surr) 96 % 70-130 % "												

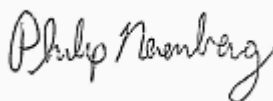
### LCS (1208429-BS1)

Prepared: 08/21/12 12:00 Analyzed: 08/21/12 18:38

<b>5035/8260B</b>												
Benzene	1120	---	12.5	ug/kg wet	50	1000	---	112	65-135%	---	---	
Toluene	1010	---	50.0	"	"	"	---	101	"	---	---	
Ethylbenzene	1070	---	25.0	"	"	"	---	107	"	---	---	
m,p-Xylene	2040	---	50.0	"	"	2000	---	102	"	---	---	
o-Xylene	1020	---	25.0	"	"	1000	---	102	"	---	---	
Xylenes, total	3070	---	75.0	"	"	3000	---	102	"	---	---	
Naphthalene	1210	---	100	"	"	1000	---	121	"	---	---	
Methyl tert-butyl ether (MTBE)	1210	---	50.0	"	"	"	---	121	"	---	---	
Isopropylbenzene	1080	---	50.0	"	"	"	---	108	"	---	---	
n-Propylbenzene	1150	---	25.0	"	"	"	---	115	"	---	---	
1,2,4-Trimethylbenzene	1130	---	50.0	"	"	"	---	113	"	---	---	
1,3,5-Trimethylbenzene	1080	---	50.0	"	"	"	---	108	"	---	---	
1,2-Dibromoethane (EDB)	1050	---	25.0	"	"	"	---	105	"	---	---	
1,2-Dichloroethane (EDC)	911	---	25.0	"	"	"	---	91	"	---	---	

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240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

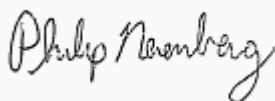
## QUALITY CONTROL (QC) SAMPLE RESULTS

## RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208429 - EPA 5035A						Soil						
LCS (1208429-BS1)						Prepared: 08/21/12 12:00 Analyzed: 08/21/12 18:38						
Surr: Dibromofluoromethane (Surr)		Recovery: 97 %		Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		107 %		70-130 %		"						
Toluene-d8 (Surr)		93 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		96 %		70-130 %		"						
Duplicate (1208429-DUP1)						Prepared: 08/17/12 09:28 Analyzed: 08/21/12 23:20						
QC Source Sample: SVE-4/11 (A12H337-31)												
5035/8260B												
Benzene	29.4	---	18.8	ug/kg dry	50	---	34.1	---	---	15	30%	Q-04
Toluene	145	---	75.4	"	"	---	153	---	---	5	30%	
Ethylbenzene	757	---	37.7	"	"	---	816	---	---	7	30%	
m,p-Xylene	1430	---	75.4	"	"	---	1470	---	---	3	30%	
o-Xylene	58.8	---	37.7	"	"	---	29.6	---	---	66	30%	
Xylenes, total	1490	---	113	"	"	---	1500	---	---	0.6	30%	
Naphthalene	1240	---	151	"	"	---	1360	---	---	9	30%	
Methyl tert-butyl ether (MTBE)	ND	---	75.4	"	"	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	75.4	"	"	---	75.9	---	---	***	30%	
n-Propylbenzene	462	---	37.7	"	"	---	558	---	---	19	30%	
1,2,4-Trimethylbenzene	4730	---	75.4	"	"	---	5470	---	---	14	30%	
1,3,5-Trimethylbenzene	1390	---	75.4	"	"	---	1630	---	---	16	30%	
1,2-Dibromoethane (EDB)	ND	---	37.7	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	37.7	"	"	---	ND	---	---	---	30%	
Surr: Dibromofluoromethane (Surr)		Recovery: 101 %		Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		103 %		70-130 %		"						
Toluene-d8 (Surr)		96 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		94 %		70-130 %		"						
Duplicate (1208429-DUP2)						Prepared: 08/21/12 11:30 Analyzed: 08/22/12 04:02						
QC Source Sample: Other (A12H360-01)												
5035/8260B												
Benzene	ND	---	173	ug/kg dry	500	---	ND	---	---	---	30%	A-01a
Toluene	ND	---	692	"	"	---	ND	---	---	---	30%	
Ethylbenzene	574	---	346	"	"	---	792	---	---	32	30%	
m,p-Xylene	1540	---	692	"	"	---	2600	---	---	51	30%	
o-Xylene	498	---	346	"	"	---	874	---	---	55	30%	
Xylenes, total	2040	---	1040	"	"	---	3480	---	---	52	30%	

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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

## QUALITY CONTROL (QC) SAMPLE RESULTS

## RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208429 - EPA 5035A						Soil						
Duplicate (1208429-DUP2)				Prepared: 08/21/12 11:30			Analyzed: 08/22/12 04:02					
QC Source Sample: Other (A12H360-01)												
Naphthalene	1910	---	1380	ug/kg dry	"	---	3030	---	---	45	30%	A-01a
Methyl tert-butyl ether (MTBE)	ND	---	692	"	"	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	692	"	"	---	676	---	---	***	30%	A-01a
n-Propylbenzene	969	---	346	"	"	---	1270	---	---	27	30%	
1,2,4-Trimethylbenzene	7050	---	692	"	"	---	10300	---	---	37	30%	A-01a
1,3,5-Trimethylbenzene	2460	---	692	"	"	---	3800	---	---	43	30%	A-01a
1,2-Dibromoethane (EDB)	ND	---	346	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	346	"	"	---	ND	---	---	---	30%	

Surr: Dibromofluoromethane (Surr) Recovery: 92 % Limits: 70-130 % Dilution: 1x  
 1,4-Difluorobenzene (Surr) 104 % 70-130 % "  
 Toluene-d8 (Surr) 95 % 70-130 % "  
 4-Bromofluorobenzene (Surr) 90 % 70-130 % "

**Matrix Spike (1208429-MS1)** Prepared: 08/17/12 10:47 Analyzed: 08/22/12 01:02

QC Source Sample: SVE-2/16 (A12H337-38)

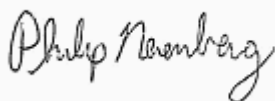
5035/8260B

Benzene	1330	---	17.0	ug/kg dry	50	1360	ND	97	65-135%	---	---
Toluene	1220	---	68.0	"	"	"	ND	89	"	---	---
Ethylbenzene	1310	---	34.0	"	"	"	ND	96	"	---	---
m,p-Xylene	2790	---	68.0	"	"	2730	ND	102	"	---	---
o-Xylene	1310	---	34.0	"	"	1360	ND	96	"	---	---
Xylenes, total	4100	---	102	"	"	4090	ND	100	"	---	---
Naphthalene	1400	---	136	"	"	1360	ND	103	"	---	---
Methyl tert-butyl ether (MTBE)	1390	---	68.0	"	"	"	ND	102	"	---	---
Isopropylbenzene	1350	---	68.0	"	"	"	ND	99	"	---	---
n-Propylbenzene	1320	---	34.0	"	"	"	ND	97	"	---	---
1,2,4-Trimethylbenzene	1340	---	68.0	"	"	"	ND	98	"	---	---
1,3,5-Trimethylbenzene	1370	---	68.0	"	"	"	ND	101	"	---	---
1,2-Dibromoethane (EDB)	1330	---	34.0	"	"	"	ND	98	"	---	---
1,2-Dichloroethane (EDC)	1450	---	34.0	"	"	"	ND	106	"	---	---

Surr: Dibromofluoromethane (Surr) Recovery: 112 % Limits: 70-130 % Dilution: 1x  
 1,4-Difluorobenzene (Surr) 98 % 70-130 % "  
 Toluene-d8 (Surr) 87 % 70-130 % "  
 4-Bromofluorobenzene (Surr) 89 % 70-130 % "

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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

## QUALITY CONTROL (QC) SAMPLE RESULTS

## RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208449 - EPA 5035A						Soil						
Blank (1208449-BLK1)						Prepared: 08/22/12 09:00 Analyzed: 08/22/12 12:35						
5035/8260B												
Benzene	ND	---	8.33	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	33.3	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	33.3	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	16.7	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	50.0	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	66.7	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	33.3	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	16.7	"	"	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	33.3	"	"	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	16.7	"	"	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	16.7	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery: 103 %		Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		101 %		70-130 %		"						
Toluene-d8 (Surr)		105 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		114 %		70-130 %		"						

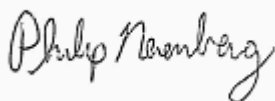
## LCS (1208449-BS1)

Prepared: 08/22/12 09:00 Analyzed: 08/22/12 11:39

<b>5035/8260B</b>												
Benzene	1060	---	12.5	ug/kg wet	50	1000	---	106	65-135%	---	---	
Toluene	970	---	50.0	"	"	"	---	97	"	---	---	
Ethylbenzene	1010	---	25.0	"	"	"	---	101	"	---	---	
m,p-Xylene	1990	---	50.0	"	"	2000	---	100	"	---	---	
o-Xylene	1010	---	25.0	"	"	1000	---	101	"	---	---	
Xylenes, total	3000	---	75.0	"	"	3000	---	100	"	---	---	
Naphthalene	1140	---	100	"	"	1000	---	114	"	---	---	
Methyl tert-butyl ether (MTBE)	1060	---	50.0	"	"	"	---	106	"	---	---	
Isopropylbenzene	1030	---	50.0	"	"	"	---	103	"	---	---	
n-Propylbenzene	1070	---	25.0	"	"	"	---	107	"	---	---	
1,2,4-Trimethylbenzene	1100	---	50.0	"	"	"	---	110	"	---	---	
1,3,5-Trimethylbenzene	1090	---	50.0	"	"	"	---	109	"	---	---	
1,2-Dibromoethane (EDB)	1030	---	25.0	"	"	"	---	103	"	---	---	
1,2-Dichloroethane (EDC)	1020	---	25.0	"	"	"	---	102	"	---	---	

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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

## QUALITY CONTROL (QC) SAMPLE RESULTS

## RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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## Batch 1208449 - EPA 5035A

## Soil

## LCS (1208449-BS1)

Prepared: 08/22/12 09:00 Analyzed: 08/22/12 11:39

Surr: Dibromofluoromethane (Surr)	Recovery: 109 %	Limits: 70-130 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	101 %	70-130 %	"
Toluene-d8 (Surr)	103 %	70-130 %	"
4-Bromofluorobenzene (Surr)	111 %	70-130 %	"

## Duplicate (1208449-DUP1)

Prepared: 08/22/12 13:15 Analyzed: 08/22/12 13:33

## QC Source Sample: Other (A12H366-03RE1)

## 5035/8260B

Benzene	ND	---	14.6	ug/kg wet	50	---	ND	---	---	---	30%
Toluene	ND	---	58.5	"	"	---	ND	---	---	---	30%
Ethylbenzene	ND	---	29.3	"	"	---	ND	---	---	---	30%
m,p-Xylene	ND	---	58.5	"	"	---	ND	---	---	---	30%
o-Xylene	ND	---	29.3	"	"	---	ND	---	---	---	30%
Xylenes, total	ND	---	87.8	"	"	---	ND	---	---	---	30%
Naphthalene	ND	---	117	"	"	---	ND	---	---	---	30%
Methyl tert-butyl ether (MTBE)	ND	---	58.5	"	"	---	ND	---	---	---	30%
Isopropylbenzene	ND	---	58.5	"	"	---	ND	---	---	---	30%
n-Propylbenzene	ND	---	29.3	"	"	---	ND	---	---	---	30%
1,2,4-Trimethylbenzene	ND	---	58.5	"	"	---	ND	---	---	---	30%
1,3,5-Trimethylbenzene	ND	---	58.5	"	"	---	ND	---	---	---	30%
1,2-Dibromoethane (EDB)	ND	---	29.3	"	"	---	ND	---	---	---	30%
1,2-Dichloroethane (EDC)	ND	---	29.3	"	"	---	ND	---	---	---	30%

Surr: Dibromofluoromethane (Surr)	Recovery: 105 %	Limits: 70-130 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	102 %	70-130 %	"
Toluene-d8 (Surr)	103 %	70-130 %	"
4-Bromofluorobenzene (Surr)	114 %	70-130 %	"

## Matrix Spike (1208449-MS1)

Prepared: 08/21/12 18:07 Analyzed: 08/22/12 15:27

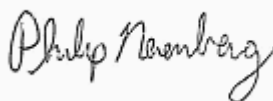
## QC Source Sample: Other (A12H353-05)

## 5035/8260B

Benzene	1220	---	14.2	ug/kg dry	50	1140	ND	107	65-135%	---	---
Toluene	1090	---	57.0	"	"	"	ND	96	"	---	---
Ethylbenzene	1160	---	28.5	"	"	"	ND	101	"	---	---
m,p-Xylene	2300	---	57.0	"	"	2280	ND	101	"	---	---
o-Xylene	1150	---	28.5	"	"	1140	ND	101	"	---	---
Xylenes, total	3460	---	85.5	"	"	3420	ND	101	"	---	---

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

## QUALITY CONTROL (QC) SAMPLE RESULTS

## RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208449 - EPA 5035A						Soil						
Matrix Spike (1208449-MS1)				Prepared: 08/21/12 18:07		Analyzed: 08/22/12 15:27						
QC Source Sample: Other (A12H353-05)												
Naphthalene	1410	---	114	ug/kg dry	"	1140	ND	124	"	---	---	
Methyl tert-butyl ether (MTBE)	1230	---	57.0	"	"	"	ND	108	"	---	---	
Isopropylbenzene	1210	---	57.0	"	"	"	ND	106	"	---	---	
n-Propylbenzene	1250	---	28.5	"	"	"	ND	110	"	---	---	
1,2,4-Trimethylbenzene	1250	---	57.0	"	"	"	ND	110	"	---	---	
1,3,5-Trimethylbenzene	1240	---	57.0	"	"	"	ND	109	"	---	---	
1,2-Dibromoethane (EDB)	1200	---	28.5	"	"	"	ND	105	"	---	---	
1,2-Dichloroethane (EDC)	1190	---	28.5	"	"	"	ND	104	"	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery: 109 %		Limits: 70-130 %		Dilution: 1x						
1,4-Difluorobenzene (Surr)		102 %		70-130 %		"						
Toluene-d8 (Surr)		101 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		113 %		70-130 %		"						

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Philip Nerenberg, Lab Director



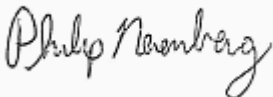
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Volatile Organic Compounds by EPA 8260B SIM

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208500 - EPA 5035A						Soil						
Blank (1208500-BLK1)						Prepared: 08/23/12 12:00		Analyzed: 08/23/12 15:21				
5035/8260B SIM												
1,2-Dibromoethane (EDB)	ND	---	3.33	ug/kg wet	50	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery: 105 %		Limits: 70-130 %		Dilution: 50x						
1,4-Difluorobenzene (Surr)		104 %		70-130 %		"						
Toluene-d8 (Surr)		99 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		100 %		70-130 %		"						
LCS (1208500-BS1)						Prepared: 08/23/12 12:00		Analyzed: 08/23/12 14:55				
5035/8260B SIM												
1,2-Dibromoethane (EDB)	28.4	---	5.00	ug/kg wet	50	25.0	---	114	70-130%	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery: 105 %		Limits: 70-130 %		Dilution: 50x						
1,4-Difluorobenzene (Surr)		103 %		70-130 %		"						
Toluene-d8 (Surr)		99 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		100 %		70-130 %		"						
Duplicate (1208500-DUP1)						Prepared: 08/14/12 10:15		Analyzed: 08/23/12 16:13				
QC Source Sample: Other (A12H246-04)												
5035/8260B SIM												
1,2-Dibromoethane (EDB)	ND	---	7.13	ug/kg dry	50	---	ND	---	---	---	30%	
Surr: Dibromofluoromethane (Surr)		Recovery: 106 %		Limits: 70-130 %		Dilution: 50x						
1,4-Difluorobenzene (Surr)		105 %		70-130 %		"						
Toluene-d8 (Surr)		99 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		101 %		70-130 %		"						
Matrix Spike (1208500-MS1)						Prepared: 08/17/12 10:47		Analyzed: 08/23/12 20:57				
QC Source Sample: SVE-2/16 (A12H337-38)												
5035/8260B SIM												
1,2-Dibromoethane (EDB)	24.9	---	6.80	ug/kg dry	50	34.1	ND	73	70-130%	---	---	
Surr: Dibromofluoromethane (Surr)		Recovery: 111 %		Limits: 70-130 %		Dilution: 50x						
1,4-Difluorobenzene (Surr)		110 %		70-130 %		"						
Toluene-d8 (Surr)		100 %		70-130 %		"						
4-Bromofluorobenzene (Surr)		100 %		70-130 %		"						

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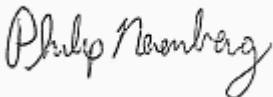
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208523 - EPA 3051A						Soil						
Blank (1208523-BLK1)						Prepared: 08/24/12 12:53    Analyzed: 08/27/12 14:46						
EPA 6020												
Lead	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
LCS (1208523-BS1)						Prepared: 08/24/12 12:53    Analyzed: 08/27/12 14:49						
EPA 6020												
Lead	48.5	---	1.00	mg/kg wet	10	50.0	---	97	80-120%	---	---	
Duplicate (1208523-DUP1)						Prepared: 08/24/12 12:53    Analyzed: 08/27/12 15:33						
QC Source Sample: SVE-3/8 (A12H337-03)												
EPA 6020												
Lead	9.26	---	1.20	mg/kg dry	10	---	10.3	---	---	11	40%	
Matrix Spike (1208523-MS1)						Prepared: 08/24/12 12:53    Analyzed: 08/27/12 15:36						
QC Source Sample: SVE-3/8 (A12H337-03)												
EPA 6020												
Lead	69.0	---	1.30	mg/kg dry	10	64.8	10.3	91	75-125%	---	---	
Matrix Spike (1208523-MS2)						Prepared: 08/24/12 12:53    Analyzed: 08/27/12 16:44						
QC Source Sample: Other (A12H414-01)												
EPA 6020												
Lead	578	---	5.64	mg/kg dry	50	56.4	725	-261	75-125%	---	---	Q-03
Post Spike (1208523-PS2)						Prepared: 08/27/12 16:52    Analyzed: 08/27/12 16:54						
QC Source Sample: Post Spike (A12H414-01)												
EPA 6020												
Lead	7460	---		ug/L	50	1670	5690	106	80-120%		---	

Apex Laboratories



Philip Nerenberg, Lab Director

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:12

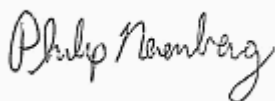
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208419 - Total Solids (Dry Weight)						Soil						
Duplicate (1208419-DUP1)						Prepared: 08/21/12 11:31		Analyzed: 08/22/12 10:46				
QC Source Sample: Other (A12H151-44)												
Apex SOP												
% Solids	77.7	---	1.00	% by Weight	1	---	79.1	---	---	2	20%	
Duplicate (1208419-DUP2)						Prepared: 08/21/12 11:31		Analyzed: 08/22/12 10:46				
QC Source Sample: Other (A12H344-05)												
Apex SOP												
% Solids	60.8	---	1.00	% by Weight	1	---	62.3	---	---	2	20%	
Duplicate (1208419-DUP3)						Prepared: 08/21/12 11:31		Analyzed: 08/22/12 10:46				
QC Source Sample: Other (A12H345-08)												
Apex SOP												
% Solids	89.3	---	1.00	% by Weight	1	---	89.5	---	---	0.2	20%	
Duplicate (1208419-DUP4)						Prepared: 08/21/12 11:33		Analyzed: 08/22/12 10:46				
QC Source Sample: Other (A12H361-02)												
Apex SOP												
% Solids	76.2	---	1.00	% by Weight	1	---	75.1	---	---	1	20%	
Duplicate (1208419-DUP5)						Prepared: 08/21/12 17:31		Analyzed: 08/22/12 10:46				
QC Source Sample: B-16/6 (A12H337-10)												
Apex SOP												
% Solids	76.7	---	1.00	% by Weight	1	---	78.1	---	---	2	20%	
Duplicate (1208419-DUP6)						Prepared: 08/21/12 17:31		Analyzed: 08/22/12 10:46				
QC Source Sample: B-8/9 (A12H337-22)												
Apex SOP												
% Solids	76.3	---	1.00	% by Weight	1	---	76.5	---	---	0.3	20%	
Duplicate (1208419-DUP7)						Prepared: 08/21/12 17:31		Analyzed: 08/22/12 10:46				
QC Source Sample: Other (A12H343-03)												
Apex SOP												
% Solids	78.4	---	1.00	% by Weight	1	---	78.3	---	---	0.1	20%	
Duplicate (1208419-DUP8)						Prepared: 08/21/12 17:31		Analyzed: 08/22/12 10:46				

Apex Laboratories

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Philip Nerenberg, Lab Director

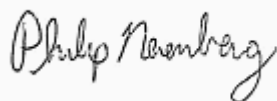
EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul EckerReported:  
08/30/12 23:12

## QUALITY CONTROL (QC) SAMPLE RESULTS

## Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1208419 - Total Solids (Dry Weight)							Soil					
Duplicate (1208419-DUP8)					Prepared: 08/21/12 17:31		Analyzed: 08/22/12 10:46					
QC Source Sample: Other (A12H378-04)												
Apex SOP												
% Solids	82.4	---	1.00	% by Weight	1	---	82.5	---	---	0.1	20%	

Apex Laboratories



Philip Nerenberg, Lab Director

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:12

## SAMPLE PREPARATION INFORMATION

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

#### Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 1208400</b>							
A12H337-02	Soil	NWTPH-Gx (MS)	08/16/12 07:28	08/16/12 07:28	5.9g/5mL	10g/10mL	0.85
A12H337-03	Soil	NWTPH-Gx (MS)	08/16/12 07:25	08/16/12 07:25	5.85g/5mL	10g/10mL	0.86
A12H337-04	Soil	NWTPH-Gx (MS)	08/16/12 07:37	08/16/12 07:37	4.47g/5mL	10g/10mL	1.12
A12H337-05	Soil	NWTPH-Gx (MS)	08/16/12 07:50	08/16/12 07:50	4.76g/5mL	10g/10mL	1.05
A12H337-10	Soil	NWTPH-Gx (MS)	08/16/12 08:06	08/16/12 08:06	7.27g/5mL	10g/10mL	0.69
A12H337-11	Soil	NWTPH-Gx (MS)	08/16/12 08:28	08/16/12 08:28	4.96g/5mL	10g/10mL	1.01
A12H337-12	Soil	NWTPH-Gx (MS)	08/16/12 10:10	08/16/12 10:10	4.82g/5mL	10g/10mL	1.04
A12H337-16	Soil	NWTPH-Gx (MS)	08/16/12 11:44	08/16/12 11:44	4.72g/5mL	10g/10mL	1.06
<b>Batch: 1208429</b>							
A12H337-17	Soil	NWTPH-Gx (MS)	08/16/12 11:45	08/16/12 11:45	5.01g/5mL	10g/10mL	1.00
A12H337-19	Soil	NWTPH-Gx (MS)	08/16/12 11:52	08/16/12 11:52	4.95g/5mL	10g/10mL	1.01
A12H337-21	Soil	NWTPH-Gx (MS)	08/16/12 12:15	08/16/12 12:15	5.13g/5mL	10g/10mL	0.98
A12H337-22	Soil	NWTPH-Gx (MS)	08/16/12 12:21	08/16/12 12:21	5.54g/5mL	10g/10mL	0.90
A12H337-23	Soil	NWTPH-Gx (MS)	08/16/12 12:28	08/16/12 12:28	3.56g/5mL	10g/10mL	1.40
A12H337-26	Soil	NWTPH-Gx (MS)	08/16/12 13:54	08/16/12 13:54	6.29g/5mL	10g/10mL	0.80
A12H337-27	Soil	NWTPH-Gx (MS)	08/16/12 13:56	08/16/12 13:56	4.57g/5mL	10g/10mL	1.09
A12H337-29	Soil	NWTPH-Gx (MS)	08/17/12 09:15	08/17/12 09:15	4.33g/5mL	10g/10mL	1.15
A12H337-30	Soil	NWTPH-Gx (MS)	08/17/12 09:21	08/17/12 09:21	5.65g/5mL	10g/10mL	0.89
A12H337-31	Soil	NWTPH-Gx (MS)	08/17/12 09:28	08/17/12 09:28	5.55g/5mL	10g/10mL	0.90
A12H337-32	Soil	NWTPH-Gx (MS)	08/17/12 09:33	08/17/12 09:33	4.73g/5mL	10g/10mL	1.06
A12H337-35	Soil	NWTPH-Gx (MS)	08/17/12 10:06	08/17/12 10:06	4.36g/5mL	10g/10mL	1.15
A12H337-37	Soil	NWTPH-Gx (MS)	08/17/12 10:10	08/17/12 10:10	5.03g/5mL	10g/10mL	0.99
A12H337-38	Soil	NWTPH-Gx (MS)	08/17/12 10:47	08/17/12 10:47	3.98g/5mL	10g/10mL	1.26
A12H337-39	Soil	NWTPH-Gx (MS)	08/17/12 10:50	08/17/12 10:50	4.63g/5mL	10g/10mL	1.08
<b>Batch: 1208449</b>							
A12H337-18RE1	Soil	NWTPH-Gx (MS)	08/16/12 11:50	08/16/12 11:50	4.4g/5mL	10g/10mL	1.14

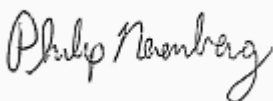
### RBCA Compounds (BTEX+) by EPA 8260B

#### Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 1208400</b>							
A12H337-02	Soil	5035/8260B	08/16/12 07:28	08/16/12 07:28	5.9g/5mL	10g/10mL	0.85
A12H337-03	Soil	5035/8260B	08/16/12 07:25	08/16/12 07:25	5.85g/5mL	10g/10mL	0.86
A12H337-04	Soil	5035/8260B	08/16/12 07:37	08/16/12 07:37	4.47g/5mL	10g/10mL	1.12
A12H337-10	Soil	5035/8260B	08/16/12 08:06	08/16/12 08:06	7.27g/5mL	10g/10mL	0.69
A12H337-12	Soil	5035/8260B	08/16/12 10:10	08/16/12 10:10	4.82g/5mL	10g/10mL	1.04

Apex Laboratories

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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:12

## SAMPLE PREPARATION INFORMATION

### RBCA Compounds (BTEX+) by EPA 8260B

#### Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A12H337-16	Soil	5035/8260B	08/16/12 11:44	08/16/12 11:44	4.72g/5mL	10g/10mL	1.06
<b>Batch: 1208429</b>							
A12H337-19	Soil	5035/8260B	08/16/12 11:52	08/16/12 11:52	4.95g/5mL	10g/10mL	1.01
A12H337-21	Soil	5035/8260B	08/16/12 12:15	08/16/12 12:15	5.13g/5mL	10g/10mL	0.98
A12H337-23	Soil	5035/8260B	08/16/12 12:28	08/16/12 12:28	3.56g/5mL	10g/10mL	1.40
A12H337-26	Soil	5035/8260B	08/16/12 13:54	08/16/12 13:54	6.29g/5mL	10g/10mL	0.80
A12H337-27	Soil	5035/8260B	08/16/12 13:56	08/16/12 13:56	4.57g/5mL	10g/10mL	1.09
A12H337-29	Soil	5035/8260B	08/17/12 09:15	08/17/12 09:15	4.33g/5mL	10g/10mL	1.15
A12H337-31	Soil	5035/8260B	08/17/12 09:28	08/17/12 09:28	5.55g/5mL	10g/10mL	0.90
A12H337-32	Soil	5035/8260B	08/17/12 09:33	08/17/12 09:33	4.73g/5mL	10g/10mL	1.06
A12H337-35	Soil	5035/8260B	08/17/12 10:06	08/17/12 10:06	4.36g/5mL	10g/10mL	1.15
A12H337-37	Soil	5035/8260B	08/17/12 10:10	08/17/12 10:10	5.03g/5mL	10g/10mL	0.99
A12H337-38	Soil	5035/8260B	08/17/12 10:47	08/17/12 10:47	3.98g/5mL	10g/10mL	1.26
<b>Batch: 1208449</b>							
A12H337-18RE1	Soil	5035/8260B	08/16/12 11:50	08/16/12 11:50	4.4g/5mL	10g/10mL	1.14

### Volatile Organic Compounds by EPA 8260B SIM

#### Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 1208500</b>							
A12H337-02	Soil	5035/8260B SIM	08/16/12 07:28	08/16/12 07:28	5.9g/5mL	10g/10mL	0.85
A12H337-04	Soil	5035/8260B SIM	08/16/12 07:37	08/16/12 07:37	4.47g/5mL	10g/10mL	1.12
A12H337-10	Soil	5035/8260B SIM	08/16/12 08:06	08/16/12 08:06	7.27g/5mL	10g/10mL	0.69
A12H337-12	Soil	5035/8260B SIM	08/16/12 10:10	08/16/12 10:10	4.82g/5mL	10g/10mL	1.04
A12H337-16	Soil	5035/8260B SIM	08/16/12 11:44	08/16/12 11:44	4.72g/5mL	10g/10mL	1.06
A12H337-18	Soil	5035/8260B SIM	08/16/12 11:50	08/16/12 11:50	4.4g/5mL	10g/10mL	1.14
A12H337-19	Soil	5035/8260B SIM	08/16/12 11:52	08/16/12 11:52	4.95g/5mL	10g/10mL	1.01
A12H337-21	Soil	5035/8260B SIM	08/16/12 12:15	08/16/12 12:15	5.13g/5mL	10g/10mL	0.98
A12H337-23	Soil	5035/8260B SIM	08/16/12 12:28	08/16/12 12:28	3.56g/5mL	10g/10mL	1.40
A12H337-26	Soil	5035/8260B SIM	08/16/12 13:54	08/16/12 13:54	6.29g/5mL	10g/10mL	0.80
A12H337-29	Soil	5035/8260B SIM	08/17/12 09:15	08/17/12 09:15	4.33g/5mL	10g/10mL	1.15
A12H337-31	Soil	5035/8260B SIM	08/17/12 09:28	08/17/12 09:28	5.55g/5mL	10g/10mL	0.90
A12H337-32	Soil	5035/8260B SIM	08/17/12 09:33	08/17/12 09:33	4.73g/5mL	10g/10mL	1.06
A12H337-37	Soil	5035/8260B SIM	08/17/12 10:10	08/17/12 10:10	5.03g/5mL	10g/10mL	0.99
A12H337-38	Soil	5035/8260B SIM	08/17/12 10:47	08/17/12 10:47	3.98g/5mL	10g/10mL	1.26

Apex Laboratories

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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:12

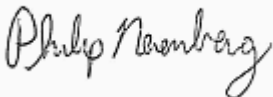
## SAMPLE PREPARATION INFORMATION

### Total Metals by EPA 6020 (ICPMS)

#### Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 1208523							
A12H337-01	Soil	EPA 6020	08/16/12 07:16	08/24/12 12:53	0.467g/50mL	0.5g/50mL	1.07
A12H337-03	Soil	EPA 6020	08/16/12 07:25	08/24/12 12:53	0.473g/50mL	0.5g/50mL	1.06
A12H337-10	Soil	EPA 6020	08/16/12 08:06	08/24/12 12:53	0.475g/50mL	0.5g/50mL	1.05
A12H337-11	Soil	EPA 6020	08/16/12 08:28	08/24/12 12:53	0.504g/50mL	0.5g/50mL	0.99
A12H337-26	Soil	EPA 6020	08/16/12 13:54	08/24/12 12:53	0.496g/50mL	0.5g/50mL	1.01
A12H337-27	Soil	EPA 6020	08/16/12 13:56	08/24/12 12:53	0.473g/50mL	0.5g/50mL	1.06
A12H337-35	Soil	EPA 6020	08/17/12 10:06	08/24/12 12:53	0.475g/50mL	0.5g/50mL	1.05
A12H337-37	Soil	EPA 6020	08/17/12 10:10	08/24/12 12:53	0.484g/50mL	0.5g/50mL	1.03

Apex Laboratories



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Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:12

## Notes and Definitions

### Qualifiers:

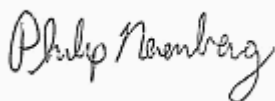
- A-01a RPD is out due to carryover from previous sample.
- Q-03 Percent recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
- Q-04 Percent recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.
- S-02 Surrogate recovery cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

### Notes and Conventions:

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.
- RPD Relative Percent Difference
- MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
- WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
- Batch In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS
- QC Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
  
- Blank Policy Apex assesses blank data for potential high bias down to a level equal to ½ the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses.  
  
For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor.  
  
Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.
- QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- \*\*\* Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Philip Nerenberg, Lab Director



<b>EES Environmental Inc</b>	Project: <b>Plaid Pantry #112</b>	
240 N Broadway Ste 115	Project Number: 1179	<b>Reported:</b>
Portland, OR 97227	Project Manager: Paul Ecker	08/30/12 23:12

**APEX LABS**

12324 S.W. Garden Place, Tigard, OR 97238 PH: 503-718-2321 Fax: 503-718-0333

**CHAIN OF CUSTODY**

8-20-12 Updated A12-H337

Lab# \_\_\_\_\_ CUC 1 of 3

**Project Name:** Plant Hardway 112

**Project #:** 1179

**Company:** EE's Environmental

**Address:** 340 W. Broadway, P.O. Box 97427

**Served by:** Ray Parker & Anthony Carabate

**Project Name:** Plant Hardway 112

**Project #:** 1179

**Lab #:** 587 784-1873

**Env#:** \_\_\_\_\_

**Site Location:** OR

**Other:** \_\_\_\_\_

**LAB ID #**

**DATE**

**TIME**

**MATRIX**

**# OF CONTAINERS**

**ANALYSIS REQUEST**

**TC.P Metals (g)**

**TCRA Metals (g)**

**600 TPO**

**600 PCBs**

**600 SEM PAHs**

**600 SVOC**

**600 BTEX**

**600 RHINO VOC**

**600 VOC**

**NAPTH-CA**

**NAPTH-DC**

**NAPTH-HCIB**

**SAMPLE ID**

**SVE-3/5**

**SVE-3/12.5**

**SVE-3/8**

**SVE-3/14**

**SVE-3/20**

**SVE-3/25**

**SVE-3/31**

**SVE-3/37**

**DATE**

**TIME**

**MATRIX**

**# OF CONTAINERS**

**ANALYSIS REQUEST**

**TC.P Metals (g)**

**TCRA Metals (g)**

**600 TPO**

**600 PCBs**

**600 SEM PAHs**

**600 SVOC**

**600 BTEX**

**600 RHINO VOC**

**600 VOC**

**NAPTH-CA**

**NAPTH-DC**

**NAPTH-HCIB**

**Normal Turn Around Time (TAT) = 3-10 Business Days**

**1 Day**

**2 Day**

**3 Day**

**4 Day**

**5 Day**

**Other:** \_\_\_\_\_

**TAT Requested (circle)**

**1 Day**

**2 Day**

**3 Day**

**4 Day**

**5 Day**

**Other:** \_\_\_\_\_

**SPECIAL INSTRUCTIONS:**

**BTEX, EDB, EDC, MTBE**

**NAPHTHALENE**

**EDB Low Level MRL 50.005**

**RELINQUISHED BY:**

**Signature:** Ray Parker

**Date:** 8/20/12

**RECEIVED BY:**

**Signature:** Ray Parker

**Date:** 8/20/12

**RELINQUISHED BY:**

**Signature:** Ray Parker

**Date:** 8/20/12

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:12

8-20-12 Updated A12H337  
Lab # 205

## CHAIN OF CUSTODY

APEX LABS

12232 S.W. Garden Place, Tigard, OR 97223 PH: 503-718-2323 FAX: 503-718-0333

Company: <b>EES ENVIRONMENTAL</b>		Project Mgr: <b>PAUL ECKER</b>		Project Name: <b>PLAID PANTRY #112</b>		Project # <b>1179</b>	
Address: <b>240 N. BROADWAY STE 115, PORTLAND, OR</b>		Phone: <b>503 784 1013</b>		Fax:		Email:	
Sampled by: <b>JAN GRIFFIN &amp; ANTHONY CHANG</b>							
Site Location: <b>OR</b>	Other: <b>(N/A)</b>						
SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	ANALYSIS REQUEST	
1 B-16/13		08/16/12	07:56	S	3	1100-Z	Total Lead
2 B-16/16		08/16/12	08:00	S	1	1100-COLS	
3 B-16/19		08/16/12	08:00	S	1	1100-COLS	
4 B-16/13		08/16/12	08:00	S	1	1100-COLS	
5 B-16/14		08/16/12	08:00	S	1	1100-COLS	
6 B-8/13		08/16/12	08:00	S	1	1100-COLS	
7 B-7/13		08/16/12	08:00	S	1	1100-COLS	
8 B-7/16		08/16/12	08:00	S	1	1100-COLS	
9 B-7/19		08/16/12	08:00	S	1	1100-COLS	
10 B-7/13		08/16/12	08:00	S	1	1100-COLS	
Normal Turn Around Time (TAT) = 7-10 Business Days						SPECIAL INSTRUCTIONS: <b>See note pg 1</b>	
TAT Requested (circle)		1 Day		2 Day		3 Day	
		4 DAY		5 DAY		Other:	
SAMPLES ARE HELD FOR 30 DAYS							
RELINQUISHED BY: <b>Jan Griffin</b>		RECEIVED BY: <b>Corey</b>		DATE: <b>08/17/12</b>		SIGNATURE: <b>[Signature]</b>	
PROJECT: <b>Plaid Pantry</b>		PROJECT: <b>Plaid Pantry</b>		DATE: <b>08/17/12</b>		SIGNATURE: <b>[Signature]</b>	
PROJECT: <b>Plaid Pantry</b>		PROJECT: <b>Plaid Pantry</b>		DATE: <b>08/17/12</b>		SIGNATURE: <b>[Signature]</b>	
PROJECT: <b>Plaid Pantry</b>		PROJECT: <b>Plaid Pantry</b>		DATE: <b>08/17/12</b>		SIGNATURE: <b>[Signature]</b>	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Philip Nerenberg*

Philip Nerenberg, Lab Director

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:12

8-30-12 Updated AIRH337  
Lab # C0C 305

## CHAIN OF CUSTODY

## APEX LABS

12232 S.W. Garden Place, Tigard, OR 97223 PH: 503-718-2323 Fax: 503-718-0333

Company: <b>EES ENVIRONMENTAL</b>		Project Mgr: <b>Paul Ecker</b>		Project Name: <b>Plaid Pantry #112</b>		Project # <b>1179</b>															
Address: <b>740 N. Broadway #115, Portland, OR</b>		Phone: <b>503 484 1097</b>		Fax:		Email:															
Sampled by: <b>Anthony Chavez &amp; Jay Burris</b>																					
Site Location: <b>OR</b>	Other: <b>(NA)</b>																				
SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	A OR CONTAINERS	NWTRH-CHD	NWTRH-D	NWTRH-G	E269 VOC	E269 RBDN VOCs	E269 BTEX	E270 SVOC	E270 SEM PAHs	E270 PCBs	600 TTD	HCBs Metals (d)	TCLP Metals (d)	AL, AR, AS, BA, BR, CA, CB, CH, CL, CO, CU, CY, FE, HI, HR, IR, KR, LB, LI, MN, MO, NI, NR, NY, PB, PC, PD, PE, PF, PG, PI, PK, PL, PM, PP, PT, PU, PY, R, S, SE, SI, SN, SO, SR, SS, ST, SV, TA, TB, TC, TD, TE, TI, TM, TN, TP, TR, TS, TT, TV, TW, TX, TY, VA, VB, VC, VD, VE, VF, VG, VH, VI, VK, VL, VM, VN, VO, VP, VR, VS, VT, VV, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WR, WS, WT, WW, WY, X, Y, Z	ANALYSIS REQUEST		
1 B-7/14		08/10/12	152	S	3																
2 B-7/18		08/10/12	159																		
3 B-8/16		08/16/12	1215																		
4 B-8/19		08/19/12	1221																		
5 B-8/13		08/13/12	1228																		
6 B-8/14		08/14/12	1235																		
7 B-8/18		08/18/12	1240																		
8 SVE-5/5		08/18/12	1351																		
9 SVE-5/7.5		08/18/12	1356																		
Normal Turn Around Time (TAT) = 7-10 Business Days		YES		NO																	
TAT Requested (circle)		1 Day	2 Day	3 Day																	
		4 DAY	5 DAY	Other:																	
RECEIVED BY:		RECEIVED BY:		RECEIVED BY:		RECEIVED BY:		RECEIVED BY:		RECEIVED BY:		RECEIVED BY:		RECEIVED BY:		RECEIVED BY:		RECEIVED BY:		RECEIVED BY:	
Signature: <b>Paul Ecker</b>		Signature: <b>Paul Ecker</b>		Signature: <b>Paul Ecker</b>		Signature: <b>Paul Ecker</b>		Signature: <b>Paul Ecker</b>		Signature: <b>Paul Ecker</b>		Signature: <b>Paul Ecker</b>		Signature: <b>Paul Ecker</b>		Signature: <b>Paul Ecker</b>		Signature: <b>Paul Ecker</b>		Signature: <b>Paul Ecker</b>	
Title: <b>Lab Manager</b>		Title: <b>Lab Manager</b>		Title: <b>Lab Manager</b>		Title: <b>Lab Manager</b>		Title: <b>Lab Manager</b>		Title: <b>Lab Manager</b>		Title: <b>Lab Manager</b>		Title: <b>Lab Manager</b>		Title: <b>Lab Manager</b>		Title: <b>Lab Manager</b>		Title: <b>Lab Manager</b>	
Current: <b>Paul Ecker</b>		Current: <b>Paul Ecker</b>		Current: <b>Paul Ecker</b>		Current: <b>Paul Ecker</b>		Current: <b>Paul Ecker</b>		Current: <b>Paul Ecker</b>		Current: <b>Paul Ecker</b>		Current: <b>Paul Ecker</b>		Current: <b>Paul Ecker</b>		Current: <b>Paul Ecker</b>		Current: <b>Paul Ecker</b>	

See note pg 1

*Philip Nerenberg*

EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:12

## APEX LABS

## CHAIN OF CUSTODY

8-20-12 Updated A12H337  
COC # 405

12232 S.W. Garden Place, Tigard, OR 97223 Fax: 503-718-2323 Fax: 503-718-0333

Company: **EES ENVIRONMENTAL** Project Mgr: **PAUL ECKER** Project Name: **PLAID PANTRY #112** Project # **1179**

Address: **240 N. BROADWAY STE 115, PORTLAND, OR** Phone: **503 784 1093** Email:

Sampled by: **ANTHONY CHAVEZ**

LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	ANALYSIS REQUEST
SVB-4/3	09/17/12	0903	S	3	AL, ST, AL, BA, BE, CA, CB, CR, CU, CY, FE, NI, NR, PC, PE, PP, PV, SE, SI, SN, SO, SS, SU, TA, TE, TI, TR, TZ, VC, VV, W, Z
SVB-4/6	09/15	0945			AL, ST, AL, BA, BE, CA, CB, CR, CU, CY, FE, NI, NR, PC, PE, PP, PV, SE, SI, SN, SO, SS, SU, TA, TE, TI, TR, TZ, VC, VV, W, Z
SVB-4/9	09/11	0901			AL, ST, AL, BA, BE, CA, CB, CR, CU, CY, FE, NI, NR, PC, PE, PP, PV, SE, SI, SN, SO, SS, SU, TA, TE, TI, TR, TZ, VC, VV, W, Z
SVB-4/11	09/11	0928			AL, ST, AL, BA, BE, CA, CB, CR, CU, CY, FE, NI, NR, PC, PE, PP, PV, SE, SI, SN, SO, SS, SU, TA, TE, TI, TR, TZ, VC, VV, W, Z
SVB-4/14	09/13	0933			AL, ST, AL, BA, BE, CA, CB, CR, CU, CY, FE, NI, NR, PC, PE, PP, PV, SE, SI, SN, SO, SS, SU, TA, TE, TI, TR, TZ, VC, VV, W, Z
SVB-4/18	09/19	0939			AL, ST, AL, BA, BE, CA, CB, CR, CU, CY, FE, NI, NR, PC, PE, PP, PV, SE, SI, SN, SO, SS, SU, TA, TE, TI, TR, TZ, VC, VV, W, Z
SVB-2/6	10/02	1002			AL, ST, AL, BA, BE, CA, CB, CR, CU, CY, FE, NI, NR, PC, PE, PP, PV, SE, SI, SN, SO, SS, SU, TA, TE, TI, TR, TZ, VC, VV, W, Z
SVB-2/8	10/06	1006			AL, ST, AL, BA, BE, CA, CB, CR, CU, CY, FE, NI, NR, PC, PE, PP, PV, SE, SI, SN, SO, SS, SU, TA, TE, TI, TR, TZ, VC, VV, W, Z
SVB-2/10	10/08	1008			AL, ST, AL, BA, BE, CA, CB, CR, CU, CY, FE, NI, NR, PC, PE, PP, PV, SE, SI, SN, SO, SS, SU, TA, TE, TI, TR, TZ, VC, VV, W, Z
SVB-2/12	10/10	1010			AL, ST, AL, BA, BE, CA, CB, CR, CU, CY, FE, NI, NR, PC, PE, PP, PV, SE, SI, SN, SO, SS, SU, TA, TE, TI, TR, TZ, VC, VV, W, Z

Site Location: **OR** Other: **IN**

Normal Turn Around Time (TAT) = T-10 Business Days

TAT Requested (circled): **1 DAY** 2 Day 3 Day 4 DAY 5 DAY Other: **See note pg 1**

RELINQUISHED BY: **Philip Nerenberg** Date: **08/17/12** RECEIVED BY: **Paul Ecker** Date: **08/17/12**

Signature: **Philip Nerenberg** Date: **08/17/12** Signature: **Paul Ecker** Date: **08/17/12**

Print Name: **Philip Nerenberg** Title: **Lab Manager** Print Name: **Paul Ecker** Title: **Project Manager**

Company: **Apex Labs** Company: **EES Environmental Inc**

Apex Laboratories

*Philip Nerenberg*

Philip Nerenberg, Lab Director

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EES Environmental Inc  
240 N Broadway Ste 115  
Portland, OR 97227

Project: **Plaid Pantry #112**  
Project Number: 1179  
Project Manager: Paul Ecker

Reported:  
08/30/12 23:12

8-20-12 Updated A121133-7  
Lab # 5

## CHAIN OF CUSTODY

APEX LABS

12232 S.W. Garden Place, Tigard, OR 97223 Fax: 503-718-2323 Fax: 503-718-0333

Company: <b>EES Environmental</b>		Project Name: <b>Plaid Pantry #112</b>		Project # <b>1179</b>	
Address: <b>240 N Broadway Ste 115, Portland, OR</b>		Lab # <b>5</b>		Facility: <b>789 1093</b>	
Sampled by: <b>Anthony Chavira</b>		Project Mgr: <b>Paul Ecker</b>		Email:	
Site Location: <b>OR</b>	Other: <b>NO</b>	ANALYSIS REQUEST			
SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS
<b>SV6-2/16</b>	<b>0817</b>	<b>8/17/12</b>	<b>10:11</b>	<b>S</b>	<b>3</b>
<b>SV6-2/20</b>	<b>1050</b>	<b>10/50</b>	<b>10:50</b>	<b>S</b>	<b>1</b>
<b>SV6-2/24</b>	<b>1056</b>	<b>10/56</b>	<b>10:56</b>	<b>S</b>	<b>1</b>
<b>SV6-2/28</b>	<b>1059</b>	<b>10/59</b>	<b>10:59</b>	<b>S</b>	<b>1</b>
<b>SV6-2/32</b>	<b>1103</b>	<b>11/03</b>	<b>11:03</b>	<b>S</b>	<b>1</b>
ANALYSIS REQUEST					
<input checked="" type="checkbox"/> 606 BTEX <input checked="" type="checkbox"/> 609 BTEX <input checked="" type="checkbox"/> 610 BTEX <input checked="" type="checkbox"/> 611 BTEX <input checked="" type="checkbox"/> 612 BTEX <input checked="" type="checkbox"/> 613 BTEX <input checked="" type="checkbox"/> 614 BTEX <input checked="" type="checkbox"/> 615 BTEX <input checked="" type="checkbox"/> 616 BTEX <input checked="" type="checkbox"/> 617 BTEX <input checked="" type="checkbox"/> 618 BTEX <input checked="" type="checkbox"/> 619 BTEX <input checked="" type="checkbox"/> 620 BTEX <input checked="" type="checkbox"/> 621 BTEX <input checked="" type="checkbox"/> 622 BTEX <input checked="" type="checkbox"/> 623 BTEX <input checked="" type="checkbox"/> 624 BTEX <input checked="" type="checkbox"/> 625 BTEX <input checked="" type="checkbox"/> 626 BTEX <input checked="" type="checkbox"/> 627 BTEX <input checked="" type="checkbox"/> 628 BTEX <input checked="" type="checkbox"/> 629 BTEX <input 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see note pg 1

Paul

*Philip Nerenberg*

9/5/2012

Mr. Leonard Farr  
EES Environmental Consulting, Inc.  
240 N Broadway  
Suite 115  
Portland OR 97227

Project Name: Plaid Pantry 112  
Project #: 1179  
Workorder #: 1208458

Dear Mr. Leonard Farr

The following report includes the data for the above referenced project for sample(s) received on 8/21/2012 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner  
Project Manager

**WORK ORDER #: 1208458**

## Work Order Summary

<b>CLIENT:</b>	Mr. Leonard Farr EES Environmental Consulting, Inc. 240 N Broadway Suite 115 Portland, OR 97227	<b>BILL TO:</b>	Mr. Leonard Farr EES Environmental Consulting, Inc. 240 N Broadway Suite 115 Portland, OR 97227
<b>PHONE:</b>	530-847-2740	<b>P.O. #</b>	1179
<b>FAX:</b>		<b>PROJECT #</b>	1179 Plaid Pantry 112
<b>DATE RECEIVED:</b>	08/21/2012	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	09/05/2012		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	S-4	Modified TO-15	4.0 "Hg	5 psi
02A	S-10	Modified TO-15	2.5 "Hg	5 psi
03A	S-11	Modified TO-15	6.5 "Hg	5 psi
04A	S-6	Modified TO-15	8.0 "Hg	5 psi
05A	S-1	Modified TO-15	6.0 "Hg	5 psi
06A	S-2	Modified TO-15	5.0 "Hg	5 psi
07A	S-3	Modified TO-15	3.5 "Hg	5 psi
08A	S-9	Modified TO-15	5.5 "Hg	5 psi
09A	S-13	Modified TO-15	5.0 "Hg	5 psi
10A	S-7	Modified TO-15	7.0 "Hg	5 psi
11A	S-8	Modified TO-15	4.5 "Hg	5 psi
12A	S-5	Modified TO-15	4.5 "Hg	5 psi
13A	SVE-4	Modified TO-15	5.5 "Hg	5 psi
14A	Lab Blank	Modified TO-15	NA	NA
14B	Lab Blank	Modified TO-15	NA	NA
14C	Lab Blank	Modified TO-15	NA	NA
15A	CCV	Modified TO-15	NA	NA
15B	CCV	Modified TO-15	NA	NA
15C	CCV	Modified TO-15	NA	NA
16A	LCS	Modified TO-15	NA	NA
16AA	LCSD	Modified TO-15	NA	NA
16B	LCS	Modified TO-15	NA	NA
16BB	LCSD	Modified TO-15	NA	NA

Continued on next page

# WORK ORDER #: 1208458

## Work Order Summary

<b>CLIENT:</b>	Mr. Leonard Farr EES Environmental Consulting, Inc. 240 N Broadway Suite 115 Portland, OR 97227	<b>BILL TO:</b>	Mr. Leonard Farr EES Environmental Consulting, Inc. 240 N Broadway Suite 115 Portland, OR 97227
<b>PHONE:</b>	530-847-2740	<b>P.O. #</b>	1179
<b>FAX:</b>		<b>PROJECT #</b>	1179 Plaid Pantry 112
<b>DATE RECEIVED:</b>	08/21/2012	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	09/05/2012		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
16C	LCS	Modified TO-15	NA	NA
16CC	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:



Technical Director

DATE: 09/05/12

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.

Eurofins Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563

(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020





**LABORATORY NARRATIVE**  
**Modified TO-15**  
**EES Environmental Consulting, Inc.**  
**Workorder# 1208458**

Thirteen 6 Liter Summa Canister (100% Certified) samples were received on August 21, 2012. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
ICAL %RSD acceptance criteria	+/- 30% RSD with 2 compounds allowed out to < 40% RSD	30% RSD with 4 compounds allowed out to < 40% RSD
Daily Calibration	+/- 30% Difference	<= 30% Difference with four allowed out up to <=40%; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

Dilution was performed on samples S-8 and S-5 due to the presence of high level target species.

Dilution was performed on sample SVE-4 due to the presence of high level non-target species.

The recovery of surrogate 1,2-Dichloroethane-d4 in samples S-10 and S-7 was outside laboratory control limits due to matrix interference. The surrogate recovery is flagged.

The recovery of internal standard Bromochloromethane in sample S-10 was outside control limits due to the presence of high level of matrix interference. Sample S-10 was re-analyzed to confirm the interference. Internal standard Bromochloromethane is only associated with target compound Methyl tert-butyl ether.

### **Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV and/or LCS.

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

## Summary of Detected Compounds

### MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: S-4**

**Lab ID#: 1208458-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.16	3.3	0.50	10
Toluene	0.16	35	0.58	130
Ethyl Benzene	0.16	11	0.67	49
m,p-Xylene	0.16	43	0.67	180
o-Xylene	0.16	15	0.67	66
Naphthalene	0.78	1.2	4.1	6.2

**Client Sample ID: S-10**

**Lab ID#: 1208458-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.15	0.53	0.47	1.7
Toluene	0.15	1.8	0.55	7.0
Ethyl Benzene	0.15	0.42	0.63	1.8
m,p-Xylene	0.15	1.6	0.63	7.1
o-Xylene	0.15	0.61	0.63	2.6
Naphthalene	0.73	1.2	3.8	6.4

**Client Sample ID: S-11**

**Lab ID#: 1208458-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.17	0.42	0.55	1.3
Toluene	0.17	2.6	0.64	9.7
Ethyl Benzene	0.17	0.50	0.74	2.2
m,p-Xylene	0.17	1.5	0.74	6.6
o-Xylene	0.17	0.49	0.74	2.1

**Client Sample ID: S-6**

**Lab ID#: 1208458-04A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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## Summary of Detected Compounds

### MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: S-6**

**Lab ID#: 1208458-04A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.18	0.90	0.58	2.9
Toluene	0.18	3.0	0.69	11
Ethyl Benzene	0.18	0.47	0.79	2.0
m,p-Xylene	0.18	1.5	0.79	6.6
o-Xylene	0.18	0.59	0.79	2.6

**Client Sample ID: S-1**

**Lab ID#: 1208458-05A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.17	1.9	0.54	6.1
Toluene	0.17	13	0.63	50
Ethyl Benzene	0.17	2.2	0.73	9.6
m,p-Xylene	0.17	8.6	0.73	37
o-Xylene	0.17	2.7	0.73	12
Naphthalene	0.84	0.84	4.4	4.4

**Client Sample ID: S-2**

**Lab ID#: 1208458-06A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.16	2.7	0.51	8.7
Toluene	0.16	19	0.61	72
Ethyl Benzene	0.16	7.2	0.70	31
m,p-Xylene	0.16	27	0.70	120
o-Xylene	0.16	9.9	0.70	43
Naphthalene	0.80	0.84	4.2	4.4

**Client Sample ID: S-3**

**Lab ID#: 1208458-07A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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## Summary of Detected Compounds

### MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: S-3**

**Lab ID#: 1208458-07A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.15	1.2	0.48	3.8
Toluene	0.15	4.8	0.57	18
Ethyl Benzene	0.15	0.60	0.66	2.6
m,p-Xylene	0.15	1.9	0.66	8.2
o-Xylene	0.15	0.77	0.66	3.3
Naphthalene	0.76	0.84	4.0	4.4

**Client Sample ID: S-9**

**Lab ID#: 1208458-08A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.16	0.67	0.52	2.1
Toluene	0.16	2.1	0.62	8.1
Ethyl Benzene	0.16	0.40	0.71	1.7
m,p-Xylene	0.16	1.4	0.71	6.0
o-Xylene	0.16	0.58	0.71	2.5

**Client Sample ID: S-13**

**Lab ID#: 1208458-09A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.16	0.34	0.51	1.1
Toluene	0.16	2.8	0.61	11
Ethyl Benzene	0.16	0.16	0.70	0.71
m,p-Xylene	0.16	0.72	0.70	3.1
o-Xylene	0.16	0.28	0.70	1.2

**Client Sample ID: S-7**

**Lab ID#: 1208458-10A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.18	2.4	0.56	7.7

## Summary of Detected Compounds

### MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: S-7**

**Lab ID#: 1208458-10A**

Toluene	0.18	3.7	0.66	14
Ethyl Benzene	0.18	0.71	0.76	3.1
m,p-Xylene	0.18	2.1	0.76	9.0
o-Xylene	0.18	1.1	0.76	5.0
Naphthalene	0.88	3.6	4.6	19

**Client Sample ID: S-8**

**Lab ID#: 1208458-11A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	130	2500	420	7900
Toluene	130	57000	500	220000
Ethyl Benzene	130	20000	570	86000
m,p-Xylene	130	78000	570	340000
o-Xylene	130	36000	570	160000
Naphthalene	530	1500	2800	7700

**Client Sample ID: S-5**

**Lab ID#: 1208458-12A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	260	26000	840	82000
Toluene	260	230000	990	860000
Ethyl Benzene	260	48000	1100	210000
m,p-Xylene	260	210000	1100	900000
o-Xylene	260	79000	1100	340000

**Client Sample ID: SVE-4**

**Lab ID#: 1208458-13A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	16	180	52	560
Toluene	16	3200	62	12000
Ethyl Benzene	16	1100	71	4800

**Summary of Detected Compounds  
EPA METHOD TO-15 GC/MS**

**Client Sample ID: SVE-4**

**Lab ID#: 1208458-13A**

m,p-Xylene	16	5100	71	22000
o-Xylene	16	2100	71	9300
Naphthalene	66	120	340	620



Air Toxics

Client Sample ID: S-4

Lab ID#: 1208458-01A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>v082718</b>	<b>Date of Collection:</b> 8/14/12 9:53:00 AM
<b>Dil. Factor:</b>	<b>1.55</b>	<b>Date of Analysis:</b> 8/27/12 08:36 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.16	Not Detected	0.56	Not Detected
Benzene	0.16	3.3	0.50	10
1,2-Dichloroethane	0.16	Not Detected	0.63	Not Detected
Toluene	0.16	35	0.58	130
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Ethyl Benzene	0.16	11	0.67	49
m,p-Xylene	0.16	43	0.67	180
o-Xylene	0.16	15	0.67	66
Naphthalene	0.78	1.2	4.1	6.2

**Container Type: 6 Liter Summa Canister (100% Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	92	70-130





Air Toxics

Client Sample ID: S-10

Lab ID#: 1208458-02A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082717	Date of Collection:	8/14/12 1:05:00 PM
Dil. Factor:	1.46	Date of Analysis:	8/27/12 07:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.15	Not Detected	0.53	Not Detected
Benzene	0.15	0.53	0.47	1.7
1,2-Dichloroethane	0.15	Not Detected	0.59	Not Detected
Toluene	0.15	1.8	0.55	7.0
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.1	Not Detected
Ethyl Benzene	0.15	0.42	0.63	1.8
m,p-Xylene	0.15	1.6	0.63	7.1
o-Xylene	0.15	0.61	0.63	2.6
Naphthalene	0.73	1.2	3.8	6.4

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	172 Q	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: S-11

Lab ID#: 1208458-03A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	v082719	Date of Collection:	8/14/12 1:03:00 PM
Dil. Factor:	1.71	Date of Analysis:	8/27/12 09:30 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.17	Not Detected	0.62	Not Detected
Benzene	0.17	0.42	0.55	1.3
1,2-Dichloroethane	0.17	Not Detected	0.69	Not Detected
Toluene	0.17	2.6	0.64	9.7
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Ethyl Benzene	0.17	0.50	0.74	2.2
m,p-Xylene	0.17	1.5	0.74	6.6
o-Xylene	0.17	0.49	0.74	2.1
Naphthalene	0.86	Not Detected	4.5	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: S-6

Lab ID#: 1208458-04A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082720	Date of Collection:	8/14/12 2:45:00 PM
Dil. Factor:	1.83	Date of Analysis:	8/27/12 10:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.18	Not Detected	0.66	Not Detected
Benzene	0.18	0.90	0.58	2.9
1,2-Dichloroethane	0.18	Not Detected	0.74	Not Detected
Toluene	0.18	3.0	0.69	11
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.4	Not Detected
Ethyl Benzene	0.18	0.47	0.79	2.0
m,p-Xylene	0.18	1.5	0.79	6.6
o-Xylene	0.18	0.59	0.79	2.6
Naphthalene	0.92	Not Detected	4.8	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: S-1

Lab ID#: 1208458-05A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082721	Date of Collection:	8/14/12 4:01:00 PM
Dil. Factor:	1.68	Date of Analysis:	8/27/12 10:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.17	Not Detected	0.60	Not Detected
Benzene	0.17	1.9	0.54	6.1
1,2-Dichloroethane	0.17	Not Detected	0.68	Not Detected
Toluene	0.17	13	0.63	50
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Ethyl Benzene	0.17	2.2	0.73	9.6
m,p-Xylene	0.17	8.6	0.73	37
o-Xylene	0.17	2.7	0.73	12
Naphthalene	0.84	0.84	4.4	4.4

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: S-2

Lab ID#: 1208458-06A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	v082813	Date of Collection:	8/15/12 9:09:00 AM
Dil. Factor:	1.61	Date of Analysis:	8/28/12 06:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.16	Not Detected	0.58	Not Detected
Benzene	0.16	2.7	0.51	8.7
1,2-Dichloroethane	0.16	Not Detected	0.65	Not Detected
Toluene	0.16	19	0.61	72
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Ethyl Benzene	0.16	7.2	0.70	31
m,p-Xylene	0.16	27	0.70	120
o-Xylene	0.16	9.9	0.70	43
Naphthalene	0.80	0.84	4.2	4.4

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: S-3

Lab ID#: 1208458-07A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>v082814</b>	<b>Date of Collection:</b> 8/15/12 10:14:00 AM
<b>Dil. Factor:</b>	<b>1.52</b>	<b>Date of Analysis:</b> 8/28/12 07:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.15	Not Detected	0.55	Not Detected
Benzene	0.15	1.2	0.48	3.8
1,2-Dichloroethane	0.15	Not Detected	0.62	Not Detected
Toluene	0.15	4.8	0.57	18
1,2-Dibromoethane (EDB)	0.15	Not Detected	1.2	Not Detected
Ethyl Benzene	0.15	0.60	0.66	2.6
m,p-Xylene	0.15	1.9	0.66	8.2
o-Xylene	0.15	0.77	0.66	3.3
Naphthalene	0.76	0.84	4.0	4.4

**Container Type: 6 Liter Summa Canister (100% Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: S-9

Lab ID#: 1208458-08A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082815	Date of Collection:	8/15/12 11:25:00 AM
Dil. Factor:	1.64	Date of Analysis:	8/28/12 08:42 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected
Benzene	0.16	0.67	0.52	2.1
1,2-Dichloroethane	0.16	Not Detected	0.66	Not Detected
Toluene	0.16	2.1	0.62	8.1
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.3	Not Detected
Ethyl Benzene	0.16	0.40	0.71	1.7
m,p-Xylene	0.16	1.4	0.71	6.0
o-Xylene	0.16	0.58	0.71	2.5
Naphthalene	0.82	Not Detected	4.3	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: S-13

Lab ID#: 1208458-09A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082816	Date of Collection:	8/15/12 1:22:00 PM
Dil. Factor:	1.61	Date of Analysis:	8/28/12 09:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.16	Not Detected	0.58	Not Detected
Benzene	0.16	0.34	0.51	1.1
1,2-Dichloroethane	0.16	Not Detected	0.65	Not Detected
Toluene	0.16	2.8	0.61	11
1,2-Dibromoethane (EDB)	0.16	Not Detected	1.2	Not Detected
Ethyl Benzene	0.16	0.16	0.70	0.71
m,p-Xylene	0.16	0.72	0.70	3.1
o-Xylene	0.16	0.28	0.70	1.2
Naphthalene	0.80	Not Detected	4.2	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	91	70-130





Air Toxics

Client Sample ID: S-7

Lab ID#: 1208458-10A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082817	Date of Collection:	8/16/12 12:51:00 PM
Dil. Factor:	1.75	Date of Analysis:	8/28/12 09:58 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.18	Not Detected	0.63	Not Detected
Benzene	0.18	2.4	0.56	7.7
1,2-Dichloroethane	0.18	Not Detected	0.71	Not Detected
Toluene	0.18	3.7	0.66	14
1,2-Dibromoethane (EDB)	0.18	Not Detected	1.3	Not Detected
Ethyl Benzene	0.18	0.71	0.76	3.1
m,p-Xylene	0.18	2.1	0.76	9.0
o-Xylene	0.18	1.1	0.76	5.0
Naphthalene	0.88	3.6	4.6	19

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	253 Q	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: S-8

Lab ID#: 1208458-11A

## EPA METHOD TO-15 GC/MS

File Name:	14082915	Date of Collection:	8/17/12 8:16:00 AM
Dil. Factor:	26.3	Date of Analysis:	8/29/12 02:34 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	130	Not Detected	470	Not Detected
Benzene	130	2500	420	7900
1,2-Dichloroethane	130	Not Detected	530	Not Detected
Toluene	130	57000	500	220000
1,2-Dibromoethane (EDB)	130	Not Detected	1000	Not Detected
Ethyl Benzene	130	20000	570	86000
m,p-Xylene	130	78000	570	340000
o-Xylene	130	36000	570	160000
Naphthalene	530	1500	2800	7700

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	96	70-130

Client Sample ID: S-5

Lab ID#: 1208458-12A

**EPA METHOD TO-15 GC/MS**

File Name:	14082917	Date of Collection: 8/17/12 10:20:00 AM
Dil. Factor:	52.6	Date of Analysis: 8/29/12 03:35 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	260	Not Detected	950	Not Detected
Benzene	260	26000	840	82000
1,2-Dichloroethane	260	Not Detected	1100	Not Detected
Toluene	260	230000	990	860000
1,2-Dibromoethane (EDB)	260	Not Detected	2000	Not Detected
Ethyl Benzene	260	48000	1100	210000
m,p-Xylene	260	210000	1100	900000
o-Xylene	260	79000	1100	340000
Naphthalene	1000	Not Detected	5500	Not Detected

**Container Type: 6 Liter Summa Canister (100% Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: SVE-4

Lab ID#: 1208458-13A

EPA METHOD TO-15 GC/MS

File Name:	14082918	Date of Collection:	8/17/12 12:44:00 PM
Dil. Factor:	3.28	Date of Analysis:	8/29/12 04:10 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	16	Not Detected	59	Not Detected
Benzene	16	180	52	560
1,2-Dichloroethane	16	Not Detected	66	Not Detected
Toluene	16	3200	62	12000
1,2-Dibromoethane (EDB)	16	Not Detected	130	Not Detected
Ethyl Benzene	16	1100	71	4800
m,p-Xylene	16	5100	71	22000
o-Xylene	16	2100	71	9300
Naphthalene	66	120	340	620

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1208458-14A

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082709	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/27/12 01:08 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Naphthalene	0.50	Not Detected	2.6	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1208458-14B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v082806	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/28/12 12:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Naphthalene	0.50	Not Detected	2.6	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: Lab Blank

Lab ID#: 1208458-14C

EPA METHOD TO-15 GC/MS

File Name:	14082908	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/29/12 11:49 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected
Benzene	5.0	Not Detected	16	Not Detected
1,2-Dichloroethane	5.0	Not Detected	20	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
1,2-Dibromoethane (EDB)	5.0	Not Detected	38	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Naphthalene	20	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1208458-15A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name: v082703  
Dil. Factor: 1.00

Date of Collection: NA  
Date of Analysis: 8/27/12 08:03 AM

Compound	%Recovery
Methyl tert-butyl ether	101
Benzene	90
1,2-Dichloroethane	93
Toluene	92
1,2-Dibromoethane (EDB)	108
Ethyl Benzene	96
m,p-Xylene	95
o-Xylene	95
Naphthalene	136

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	98	70-130



Client Sample ID: CCV

Lab ID#: 1208458-15B

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>v082802</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 8/28/12 09:36 AM

Compound	%Recovery
Methyl tert-butyl ether	98
Benzene	90
1,2-Dichloroethane	92
Toluene	90
1,2-Dibromoethane (EDB)	108
Ethyl Benzene	91
m,p-Xylene	91
o-Xylene	88
Naphthalene	130

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: CCV

Lab ID#: 1208458-15C

**EPA METHOD TO-15 GC/MS**

File Name:	14082903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/29/12 09:29 AM

Compound	%Recovery
Methyl tert-butyl ether	98
Benzene	104
1,2-Dichloroethane	106
Toluene	100
1,2-Dibromoethane (EDB)	95
Ethyl Benzene	92
m,p-Xylene	93
o-Xylene	94
Naphthalene	131

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1208458-16A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>v082704</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 8/27/12 08:46 AM

<b>Compound</b>	<b>%Recovery</b>
Methyl tert-butyl ether	96
Benzene	87
1,2-Dichloroethane	88
Toluene	87
1,2-Dibromoethane (EDB)	103
Ethyl Benzene	91
m,p-Xylene	91
o-Xylene	90
Naphthalene	114

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1208458-16AA

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>v082705</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 8/27/12 09:29 AM

Compound	%Recovery
Methyl tert-butyl ether	99
Benzene	89
1,2-Dichloroethane	88
Toluene	89
1,2-Dibromoethane (EDB)	105
Ethyl Benzene	94
m,p-Xylene	92
o-Xylene	88
Naphthalene	116

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1208458-16B

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>v082803</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 8/28/12 10:18 AM

Compound	%Recovery
Methyl tert-butyl ether	94
Benzene	84
1,2-Dichloroethane	85
Toluene	83
1,2-Dibromoethane (EDB)	107
Ethyl Benzene	86
m,p-Xylene	86
o-Xylene	84
Naphthalene	121

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1208458-16BB

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>v082804</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 8/28/12 10:59 AM

Compound	%Recovery
Methyl tert-butyl ether	89
Benzene	82
1,2-Dichloroethane	82
Toluene	79
1,2-Dibromoethane (EDB)	104
Ethyl Benzene	83
m,p-Xylene	84
o-Xylene	82
Naphthalene	125

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	90	70-130

Client Sample ID: LCS

Lab ID#: 1208458-16C

**EPA METHOD TO-15 GC/MS**

File Name:	14082904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/29/12 10:15 AM

Compound	%Recovery
Methyl tert-butyl ether	87
Benzene	93
1,2-Dichloroethane	95
Toluene	88
1,2-Dibromoethane (EDB)	86
Ethyl Benzene	80
m,p-Xylene	82
o-Xylene	81
Naphthalene	110

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: LCSD

Lab ID#: 1208458-16CC

**EPA METHOD TO-15 GC/MS**

File Name:	14082905	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/29/12 10:41 AM

Compound	%Recovery
Methyl tert-butyl ether	92
Benzene	96
1,2-Dichloroethane	98
Toluene	92
1,2-Dibromoethane (EDB)	89
Ethyl Benzene	85
m,p-Xylene	88
o-Xylene	86
Naphthalene	98

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130



9/6/2012

Mr. Leonard Farr  
EES Environmental Consulting, Inc.  
240 N Broadway  
Suite 115  
Portland OR 97227

Project Name: Plaid Pantry 112  
Project #: 1179  
Workorder #: 1208463

Dear Mr. Leonard Farr

The following report includes the data for the above referenced project for sample(s) received on 8/22/2012 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner  
Project Manager

# WORK ORDER #: 1208463

## Work Order Summary

<b>CLIENT:</b>	Mr. Leonard Farr EES Environmental Consulting, Inc. 240 N Broadway Suite 115 Portland, OR 97227	<b>BILL TO:</b>	Mr. Leonard Farr EES Environmental Consulting, Inc. 240 N Broadway Suite 115 Portland, OR 97227
<b>PHONE:</b>	530-847-2740	<b>P.O. #</b>	1179
<b>FAX:</b>		<b>PROJECT #</b>	1179 Plaid Pantry 112
<b>DATE RECEIVED:</b>	08/22/2012	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	09/06/2012		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	S-12	Modified TO-15	4.8 "Hg	5 psi
02A	Lab Blank	Modified TO-15	NA	NA
03A	CCV	Modified TO-15	NA	NA
04A	LCS	Modified TO-15	NA	NA
04AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:



Technical Director

DATE: 09/06/12

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.

Eurofins Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563

(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



**LABORATORY NARRATIVE**  
**Modified TO-15**  
**EES Environmental Consulting, Inc.**  
**Workorder# 1208463**

One 6 Liter Summa Canister (100% Certified) sample was received on August 22, 2012. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
ICAL %RSD acceptance criteria	+/- 30% RSD with 2 compounds allowed out to < 40% RSD	30% RSD with 4 compounds allowed out to < 40% RSD
Daily Calibration	+/- 30% Difference	<= 30% Difference with four allowed out up to <=40%; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

Dilution was performed on sample S-12 due to the presence of high level non-target species.

Sample S-12 was transferred from Low Level analysis to full scan TO-15 due to high levels of non-target compounds.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the reporting limit.
- UJ- Non-detected compound associated with low bias in the CCV and/or LCS.
- N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue

## Summary of Detected Compounds

### EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: S-12**

**Lab ID#: 1208463-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	16	21	58	75
Benzene	16	1200	51	3900
Toluene	16	5900	60	22000
Ethyl Benzene	16	330	69	1400
m,p-Xylene	16	5800	69	25000
o-Xylene	16	4000	69	17000



Air Toxics

Client Sample ID: S-12

Lab ID#: 1208463-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p082807	Date of Collection:	8/20/12 10:24:00 AM
Dil. Factor:	32.0	Date of Analysis:	8/28/12 11:37 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	16	21	58	75
Benzene	16	1200	51	3900
Toluene	16	5900	60	22000
Ethyl Benzene	16	330	69	1400
m,p-Xylene	16	5800	69	25000
o-Xylene	16	4000	69	17000
1,2-Dibromoethane (EDB)	16	Not Detected	120	Not Detected
1,2-Dichloroethane	16	Not Detected	65	Not Detected
Naphthalene	64	Not Detected	340	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	93	70-130
1,2-Dichloroethane-d4	121	70-130
4-Bromofluorobenzene	106	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1208463-02A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p082806	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/28/12 10:46 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Naphthalene	2.0	Not Detected	10	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	87	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: CCV

Lab ID#: 1208463-03A

**EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	p082802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/28/12 08:48 AM

Compound	%Recovery
Methyl tert-butyl ether	106
Benzene	92
Toluene	100
Ethyl Benzene	115
m,p-Xylene	119
o-Xylene	117
1,2-Dibromoethane (EDB)	108
1,2-Dichloroethane	96
Naphthalene	90

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	115	70-130



Client Sample ID: LCS

Lab ID#: 1208463-04A

**EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	p082803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/28/12 09:22 AM

Compound	%Recovery
Methyl tert-butyl ether	100
Benzene	96
Toluene	97
Ethyl Benzene	112
m,p-Xylene	118
o-Xylene	114
1,2-Dibromoethane (EDB)	106
1,2-Dichloroethane	94
Naphthalene	92

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	91	70-130
4-Bromofluorobenzene	111	70-130

Client Sample ID: LCSD

Lab ID#: 1208463-04AA

**EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	p082804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/28/12 09:41 AM

Compound	%Recovery
Methyl tert-butyl ether	98
Benzene	94
Toluene	98
Ethyl Benzene	108
m,p-Xylene	113
o-Xylene	108
1,2-Dibromoethane (EDB)	103
1,2-Dichloroethane	90
Naphthalene	90

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	109	70-130

10/24/2012

Mr. Leonard Farr  
EES Environmental Consulting, Inc.  
240 N Broadway  
Suite 115  
Portland OR 97227

Project Name: Plaid Pantry 112  
Project #: 1179  
Workorder #: 1210190A

Dear Mr. Leonard Farr

The following report includes the data for the above referenced project for sample(s) received on 10/9/2012 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner  
Project Manager

# WORK ORDER #: 1210190A

## Work Order Summary

<b>CLIENT:</b>	Mr. Leonard Farr EES Environmental Consulting, Inc. 240 N Broadway Suite 115 Portland, OR 97227	<b>BILL TO:</b>	Mr. Leonard Farr EES Environmental Consulting, Inc. 240 N Broadway Suite 115 Portland, OR 97227
<b>PHONE:</b>	530-847-2740	<b>P.O. #</b>	1179
<b>FAX:</b>		<b>PROJECT #</b>	1179 Plaid Pantry 112
<b>DATE RECEIVED:</b>	10/09/2012	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	10/24/2012		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	SVE-1 START	Modified TO-15	6.0 "Hg	15 psi
02A	SVE-1 STOP	Modified TO-15	5.5 "Hg	15 psi
03A	SVE-2 START	Modified TO-15	4.5 "Hg	15 psi
04A	SVE-2 STOP	Modified TO-15	3.6 "Hg	15 psi
05A	Lab Blank	Modified TO-15	NA	NA
05B	Lab Blank	Modified TO-15	NA	NA
06A	CCV	Modified TO-15	NA	NA
06B	CCV	Modified TO-15	NA	NA
07A	LCS	Modified TO-15	NA	NA
07AA	LCSD	Modified TO-15	NA	NA
07B	LCS	Modified TO-15	NA	NA
07BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:



Technical Director

DATE: 10/24/12

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.

Eurofins Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563

(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**EES Environmental Consulting, Inc.**  
**Workorder# 1210190A**

Four 1 Liter Summa Canister samples were received on October 09, 2012. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

Dilution was performed on samples SVE-1 START, SVE-1 STOP, SVE-2 START and SVE-2 STOP due to the presence of high level target species.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV and/or LCS.

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

## Summary of Detected Compounds

### EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: SVE-1 START**

**Lab ID#: 1210190A-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	18000	70000	43000	170000
Hexane	1800	170000	6300	600000
Tetrahydrofuran	1800	3600	5300	11000
Cyclohexane	1800	68000	6200	240000
2,2,4-Trimethylpentane	1800	110000	8400	500000
Benzene	1800	76000	5800	240000
Heptane	1800	170000	7400	690000
Toluene	1800	560000	6800	2100000
Ethyl Benzene	1800	46000	7800	200000
m,p-Xylene	1800	260000	7800	1100000
o-Xylene	1800	88000	7800	380000
Propylbenzene	1800	4000	8800	20000
4-Ethyltoluene	1800	23000	8800	110000
1,3,5-Trimethylbenzene	1800	8200	8800	40000
1,2,4-Trimethylbenzene	1800	11000	8800	54000

**Client Sample ID: SVE-1 STOP**

**Lab ID#: 1210190A-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	25000	69000	59000	160000
Hexane	2500	220000	8700	780000
Cyclohexane	2500	80000	8500	270000
2,2,4-Trimethylpentane	2500	120000	12000	560000
Benzene	2500	100000	7900	330000
Heptane	2500	220000	10000	910000
Toluene	2500	900000	9300	3400000
Ethyl Benzene	2500	110000	11000	490000
m,p-Xylene	2500	660000	11000	2800000
o-Xylene	2500	240000	11000	1000000
Cumene	2500	4700	12000	23000
Propylbenzene	2500	16000	12000	78000
4-Ethyltoluene	2500	100000	12000	500000

## Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: SVE-1 STOP**

**Lab ID#: 1210190A-02A**

1,3,5-Trimethylbenzene	2500	41000	12000	200000
1,2,4-Trimethylbenzene	2500	76000	12000	370000

**Client Sample ID: SVE-2 START**

**Lab ID#: 1210190A-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	48	53	90	100
Acetone	120	3000	280	7100
Carbon Disulfide	48	200	150	610
Hexane	12	23	42	83
Chloroform	12	17	58	82
2,2,4-Trimethylpentane	12	18	56	85
Benzene	12	16	38	50
Heptane	12	34	49	140
Toluene	12	300	45	1100
Tetrachloroethene	12	17	81	120
Chlorobenzene	12	13	55	58
Ethyl Benzene	12	54	52	230
m,p-Xylene	12	290	52	1200
o-Xylene	12	100	52	460
4-Ethyltoluene	12	62	58	300
1,3,5-Trimethylbenzene	12	28	58	140
1,2,4-Trimethylbenzene	12	50	58	240

**Client Sample ID: SVE-2 STOP**

**Lab ID#: 1210190A-04A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	2.3	4.1	11	20
Hexane	2.3	13	8.1	47
Chloroform	2.3	12	11	61
Cyclohexane	2.3	11	7.9	37
Carbon Tetrachloride	2.3	2.8	14	18

## Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: SVE-2 STOP**

**Lab ID#: 1210190A-04A**

2,2,4-Trimethylpentane	2.3	28	11	130
Benzene	2.3	11	7.3	36
Heptane	2.3	44	9.4	180
Toluene	2.3	340	8.7	1300
Tetrachloroethene	2.3	19	16	130
Ethyl Benzene	2.3	95	10	410
m,p-Xylene	2.3	680	10	3000
o-Xylene	2.3	290	10	1200
Cumene	2.3	6.4	11	32
Propylbenzene	2.3	27	11	130
4-Ethyltoluene	2.3	210	11	1000
1,3,5-Trimethylbenzene	2.3	89	11	440
1,2,4-Trimethylbenzene	2.3	200	11	970





Air Toxics

Client Sample ID: SVE-1 START

Lab ID#: 1210190A-01A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j101811	Date of Collection:	10/4/12 9:50:00 AM
Dil. Factor:	3600	Date of Analysis:	10/18/12 02:05 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1800	Not Detected	8900	Not Detected
Freon 114	1800	Not Detected	12000	Not Detected
Chloromethane	18000	Not Detected	37000	Not Detected
Vinyl Chloride	1800	Not Detected	4600	Not Detected
1,3-Butadiene	1800	Not Detected	4000	Not Detected
Bromomethane	18000	Not Detected	70000	Not Detected
Chloroethane	7200	Not Detected	19000	Not Detected
Freon 11	1800	Not Detected	10000	Not Detected
Ethanol	7200	Not Detected	14000	Not Detected
Freon 113	1800	Not Detected	14000	Not Detected
1,1-Dichloroethene	1800	Not Detected	7100	Not Detected
Acetone	18000	70000	43000	170000
2-Propanol	7200	Not Detected	18000	Not Detected
Carbon Disulfide	7200	Not Detected	22000	Not Detected
3-Chloropropene	7200	Not Detected	22000	Not Detected
Methylene Chloride	18000	Not Detected	62000	Not Detected
Methyl tert-butyl ether	1800	Not Detected	6500	Not Detected
trans-1,2-Dichloroethene	1800	Not Detected	7100	Not Detected
Hexane	1800	170000	6300	600000
1,1-Dichloroethane	1800	Not Detected	7300	Not Detected
2-Butanone (Methyl Ethyl Ketone)	7200	Not Detected	21000	Not Detected
cis-1,2-Dichloroethene	1800	Not Detected	7100	Not Detected
Tetrahydrofuran	1800	3600	5300	11000
Chloroform	1800	Not Detected	8800	Not Detected
1,1,1-Trichloroethane	1800	Not Detected	9800	Not Detected
Cyclohexane	1800	68000	6200	240000
Carbon Tetrachloride	1800	Not Detected	11000	Not Detected
2,2,4-Trimethylpentane	1800	110000	8400	500000
Benzene	1800	76000	5800	240000
1,2-Dichloroethane	1800	Not Detected	7300	Not Detected
Heptane	1800	170000	7400	690000
Trichloroethene	1800	Not Detected	9700	Not Detected
1,2-Dichloropropane	1800	Not Detected	8300	Not Detected
1,4-Dioxane	7200	Not Detected	26000	Not Detected
Bromodichloromethane	1800	Not Detected	12000	Not Detected
cis-1,3-Dichloropropene	1800	Not Detected	8200	Not Detected
4-Methyl-2-pentanone	1800	Not Detected	7400	Not Detected
Toluene	1800	560000	6800	2100000
trans-1,3-Dichloropropene	1800	Not Detected	8200	Not Detected
1,1,2-Trichloroethane	1800	Not Detected	9800	Not Detected
Tetrachloroethene	1800	Not Detected	12000	Not Detected
2-Hexanone	7200	Not Detected	29000	Not Detected

Client Sample ID: SVE-1 START

Lab ID#: 1210190A-01A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j101811	Date of Collection:	10/4/12 9:50:00 AM
Dil. Factor:	3600	Date of Analysis:	10/18/12 02:05 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1800	Not Detected	15000	Not Detected
1,2-Dibromoethane (EDB)	1800	Not Detected	14000	Not Detected
Chlorobenzene	1800	Not Detected	8300	Not Detected
Ethyl Benzene	1800	46000	7800	200000
m,p-Xylene	1800	260000	7800	1100000
o-Xylene	1800	88000	7800	380000
Styrene	1800	Not Detected	7700	Not Detected
Bromoform	1800	Not Detected	19000	Not Detected
Cumene	1800	Not Detected	8800	Not Detected
1,1,2,2-Tetrachloroethane	1800	Not Detected	12000	Not Detected
Propylbenzene	1800	4000	8800	20000
4-Ethyltoluene	1800	23000	8800	110000
1,3,5-Trimethylbenzene	1800	8200	8800	40000
1,2,4-Trimethylbenzene	1800	11000	8800	54000
1,3-Dichlorobenzene	1800	Not Detected	11000	Not Detected
1,4-Dichlorobenzene	1800	Not Detected	11000	Not Detected
alpha-Chlorotoluene	1800	Not Detected	9300	Not Detected
1,2-Dichlorobenzene	1800	Not Detected	11000	Not Detected
1,2,4-Trichlorobenzene	7200	Not Detected	53000	Not Detected
Hexachlorobutadiene	7200	Not Detected	77000	Not Detected

## Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	125	70-130
4-Bromofluorobenzene	89	70-130



Air Toxics

Client Sample ID: SVE-1 STOP

Lab ID#: 1210190A-02A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j101816	Date of Collection:	10/4/12 3:15:00 PM
Dil. Factor:	4940	Date of Analysis:	10/18/12 05:42 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	2500	Not Detected	12000	Not Detected
Freon 114	2500	Not Detected	17000	Not Detected
Chloromethane	25000	Not Detected	51000	Not Detected
Vinyl Chloride	2500	Not Detected	6300	Not Detected
1,3-Butadiene	2500	Not Detected	5500	Not Detected
Bromomethane	25000	Not Detected	96000	Not Detected
Chloroethane	9900	Not Detected	26000	Not Detected
Freon 11	2500	Not Detected	14000	Not Detected
Ethanol	9900	Not Detected	19000	Not Detected
Freon 113	2500	Not Detected	19000	Not Detected
1,1-Dichloroethene	2500	Not Detected	9800	Not Detected
Acetone	25000	69000	59000	160000
2-Propanol	9900	Not Detected	24000	Not Detected
Carbon Disulfide	9900	Not Detected	31000	Not Detected
3-Chloropropene	9900	Not Detected	31000	Not Detected
Methylene Chloride	25000	Not Detected	86000	Not Detected
Methyl tert-butyl ether	2500	Not Detected	8900	Not Detected
trans-1,2-Dichloroethene	2500	Not Detected	9800	Not Detected
Hexane	2500	220000	8700	780000
1,1-Dichloroethane	2500	Not Detected	10000	Not Detected
2-Butanone (Methyl Ethyl Ketone)	9900	Not Detected	29000	Not Detected
cis-1,2-Dichloroethene	2500	Not Detected	9800	Not Detected
Tetrahydrofuran	2500	Not Detected	7300	Not Detected
Chloroform	2500	Not Detected	12000	Not Detected
1,1,1-Trichloroethane	2500	Not Detected	13000	Not Detected
Cyclohexane	2500	80000	8500	270000
Carbon Tetrachloride	2500	Not Detected	16000	Not Detected
2,2,4-Trimethylpentane	2500	120000	12000	560000
Benzene	2500	100000	7900	330000
1,2-Dichloroethane	2500	Not Detected	10000	Not Detected
Heptane	2500	220000	10000	910000
Trichloroethene	2500	Not Detected	13000	Not Detected
1,2-Dichloropropane	2500	Not Detected	11000	Not Detected
1,4-Dioxane	9900	Not Detected	36000	Not Detected
Bromodichloromethane	2500	Not Detected	16000	Not Detected
cis-1,3-Dichloropropene	2500	Not Detected	11000	Not Detected
4-Methyl-2-pentanone	2500	Not Detected	10000	Not Detected
Toluene	2500	900000	9300	3400000
trans-1,3-Dichloropropene	2500	Not Detected	11000	Not Detected
1,1,2-Trichloroethane	2500	Not Detected	13000	Not Detected
Tetrachloroethene	2500	Not Detected	17000	Not Detected
2-Hexanone	9900	Not Detected	40000	Not Detected



Air Toxics

Client Sample ID: SVE-1 STOP

Lab ID#: 1210190A-02A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j101816	Date of Collection:	10/4/12 3:15:00 PM
Dil. Factor:	4940	Date of Analysis:	10/18/12 05:42 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	2500	Not Detected	21000	Not Detected
1,2-Dibromoethane (EDB)	2500	Not Detected	19000	Not Detected
Chlorobenzene	2500	Not Detected	11000	Not Detected
Ethyl Benzene	2500	110000	11000	490000
m,p-Xylene	2500	660000	11000	2800000
o-Xylene	2500	240000	11000	1000000
Styrene	2500	Not Detected	10000	Not Detected
Bromoform	2500	Not Detected	26000	Not Detected
Cumene	2500	4700	12000	23000
1,1,2,2-Tetrachloroethane	2500	Not Detected	17000	Not Detected
Propylbenzene	2500	16000	12000	78000
4-Ethyltoluene	2500	100000	12000	500000
1,3,5-Trimethylbenzene	2500	41000	12000	200000
1,2,4-Trimethylbenzene	2500	76000	12000	370000
1,3-Dichlorobenzene	2500	Not Detected	15000	Not Detected
1,4-Dichlorobenzene	2500	Not Detected	15000	Not Detected
alpha-Chlorotoluene	2500	Not Detected	13000	Not Detected
1,2-Dichlorobenzene	2500	Not Detected	15000	Not Detected
1,2,4-Trichlorobenzene	9900	Not Detected	73000	Not Detected
Hexachlorobutadiene	9900	Not Detected	100000	Not Detected

## Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	124	70-130
4-Bromofluorobenzene	88	70-130

Client Sample ID: SVE-2 START

Lab ID#: 1210190A-03A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j101815	Date of Collection:	10/5/12 8:40:00 AM
Dil. Factor:	23.8	Date of Analysis:	10/18/12 04:34 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	12	Not Detected	59	Not Detected
Freon 114	12	Not Detected	83	Not Detected
Chloromethane	120	Not Detected	240	Not Detected
Vinyl Chloride	12	Not Detected	30	Not Detected
1,3-Butadiene	12	Not Detected	26	Not Detected
Bromomethane	120	Not Detected	460	Not Detected
Chloroethane	48	Not Detected	120	Not Detected
Freon 11	12	Not Detected	67	Not Detected
Ethanol	48	53	90	100
Freon 113	12	Not Detected	91	Not Detected
1,1-Dichloroethene	12	Not Detected	47	Not Detected
Acetone	120	3000	280	7100
2-Propanol	48	Not Detected	120	Not Detected
Carbon Disulfide	48	200	150	610
3-Chloropropene	48	Not Detected	150	Not Detected
Methylene Chloride	120	Not Detected	410	Not Detected
Methyl tert-butyl ether	12	Not Detected	43	Not Detected
trans-1,2-Dichloroethene	12	Not Detected	47	Not Detected
Hexane	12	23	42	83
1,1-Dichloroethane	12	Not Detected	48	Not Detected
2-Butanone (Methyl Ethyl Ketone)	48	Not Detected	140	Not Detected
cis-1,2-Dichloroethene	12	Not Detected	47	Not Detected
Tetrahydrofuran	12	Not Detected	35	Not Detected
Chloroform	12	17	58	82
1,1,1-Trichloroethane	12	Not Detected	65	Not Detected
Cyclohexane	12	Not Detected	41	Not Detected
Carbon Tetrachloride	12	Not Detected	75	Not Detected
2,2,4-Trimethylpentane	12	18	56	85
Benzene	12	16	38	50
1,2-Dichloroethane	12	Not Detected	48	Not Detected
Heptane	12	34	49	140
Trichloroethene	12	Not Detected	64	Not Detected
1,2-Dichloropropane	12	Not Detected	55	Not Detected
1,4-Dioxane	48	Not Detected	170	Not Detected
Bromodichloromethane	12	Not Detected	80	Not Detected
cis-1,3-Dichloropropene	12	Not Detected	54	Not Detected
4-Methyl-2-pentanone	12	Not Detected	49	Not Detected
Toluene	12	300	45	1100
trans-1,3-Dichloropropene	12	Not Detected	54	Not Detected
1,1,2-Trichloroethane	12	Not Detected	65	Not Detected
Tetrachloroethene	12	17	81	120
2-Hexanone	48	Not Detected	190	Not Detected

Client Sample ID: SVE-2 START

Lab ID#: 1210190A-03A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j101815	Date of Collection:	10/5/12 8:40:00 AM
Dil. Factor:	23.8	Date of Analysis:	10/18/12 04:34 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	12	Not Detected	100	Not Detected
1,2-Dibromoethane (EDB)	12	Not Detected	91	Not Detected
Chlorobenzene	12	13	55	58
Ethyl Benzene	12	54	52	230
m,p-Xylene	12	290	52	1200
o-Xylene	12	100	52	460
Styrene	12	Not Detected	51	Not Detected
Bromoform	12	Not Detected	120	Not Detected
Cumene	12	Not Detected	58	Not Detected
1,1,2,2-Tetrachloroethane	12	Not Detected	82	Not Detected
Propylbenzene	12	Not Detected	58	Not Detected
4-Ethyltoluene	12	62	58	300
1,3,5-Trimethylbenzene	12	28	58	140
1,2,4-Trimethylbenzene	12	50	58	240
1,3-Dichlorobenzene	12	Not Detected	72	Not Detected
1,4-Dichlorobenzene	12	Not Detected	72	Not Detected
alpha-Chlorotoluene	12	Not Detected	62	Not Detected
1,2-Dichlorobenzene	12	Not Detected	72	Not Detected
1,2,4-Trichlorobenzene	48	Not Detected	350	Not Detected
Hexachlorobutadiene	48	Not Detected	510	Not Detected

## Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	119	70-130
4-Bromofluorobenzene	91	70-130

Client Sample ID: SVE-2 STOP

Lab ID#: 1210190A-04A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j101727	Date of Collection:	10/5/12 12:29:00 PM
Dil. Factor:	4.60	Date of Analysis:	10/17/12 10:22 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	2.3	4.1	11	20
Freon 114	2.3	Not Detected	16	Not Detected
Chloromethane	23	Not Detected	47	Not Detected
Vinyl Chloride	2.3	Not Detected	5.9	Not Detected
1,3-Butadiene	2.3	Not Detected	5.1	Not Detected
Bromomethane	23	Not Detected	89	Not Detected
Chloroethane	9.2	Not Detected	24	Not Detected
Freon 11	2.3	Not Detected	13	Not Detected
Ethanol	9.2	Not Detected	17	Not Detected
Freon 113	2.3	Not Detected	18	Not Detected
1,1-Dichloroethene	2.3	Not Detected	9.1	Not Detected
Acetone	23	Not Detected	55	Not Detected
2-Propanol	9.2	Not Detected	23	Not Detected
Carbon Disulfide	9.2	Not Detected	29	Not Detected
3-Chloropropene	9.2	Not Detected	29	Not Detected
Methylene Chloride	23	Not Detected	80	Not Detected
Methyl tert-butyl ether	2.3	Not Detected	8.3	Not Detected
trans-1,2-Dichloroethene	2.3	Not Detected	9.1	Not Detected
Hexane	2.3	13	8.1	47
1,1-Dichloroethane	2.3	Not Detected	9.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	9.2	Not Detected	27	Not Detected
cis-1,2-Dichloroethene	2.3	Not Detected	9.1	Not Detected
Tetrahydrofuran	2.3	Not Detected	6.8	Not Detected
Chloroform	2.3	12	11	61
1,1,1-Trichloroethane	2.3	Not Detected	12	Not Detected
Cyclohexane	2.3	11	7.9	37
Carbon Tetrachloride	2.3	2.8	14	18
2,2,4-Trimethylpentane	2.3	28	11	130
Benzene	2.3	11	7.3	36
1,2-Dichloroethane	2.3	Not Detected	9.3	Not Detected
Heptane	2.3	44	9.4	180
Trichloroethene	2.3	Not Detected	12	Not Detected
1,2-Dichloropropane	2.3	Not Detected	11	Not Detected
1,4-Dioxane	9.2	Not Detected	33	Not Detected
Bromodichloromethane	2.3	Not Detected	15	Not Detected
cis-1,3-Dichloropropene	2.3	Not Detected	10	Not Detected
4-Methyl-2-pentanone	2.3	Not Detected	9.4	Not Detected
Toluene	2.3	340	8.7	1300
trans-1,3-Dichloropropene	2.3	Not Detected	10	Not Detected
1,1,2-Trichloroethane	2.3	Not Detected	12	Not Detected
Tetrachloroethene	2.3	19	16	130
2-Hexanone	9.2	Not Detected	38	Not Detected

Client Sample ID: SVE-2 STOP

Lab ID#: 1210190A-04A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j101727	Date of Collection:	10/5/12 12:29:00 PM
Dil. Factor:	4.60	Date of Analysis:	10/17/12 10:22 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	2.3	Not Detected	20	Not Detected
1,2-Dibromoethane (EDB)	2.3	Not Detected	18	Not Detected
Chlorobenzene	2.3	Not Detected	10	Not Detected
Ethyl Benzene	2.3	95	10	410
m,p-Xylene	2.3	680	10	3000
o-Xylene	2.3	290	10	1200
Styrene	2.3	Not Detected	9.8	Not Detected
Bromoform	2.3	Not Detected	24	Not Detected
Cumene	2.3	6.4	11	32
1,1,2,2-Tetrachloroethane	2.3	Not Detected	16	Not Detected
Propylbenzene	2.3	27	11	130
4-Ethyltoluene	2.3	210	11	1000
1,3,5-Trimethylbenzene	2.3	89	11	440
1,2,4-Trimethylbenzene	2.3	200	11	970
1,3-Dichlorobenzene	2.3	Not Detected	14	Not Detected
1,4-Dichlorobenzene	2.3	Not Detected	14	Not Detected
alpha-Chlorotoluene	2.3	Not Detected	12	Not Detected
1,2-Dichlorobenzene	2.3	Not Detected	14	Not Detected
1,2,4-Trichlorobenzene	9.2	Not Detected	68	Not Detected
Hexachlorobutadiene	9.2	Not Detected	98	Not Detected

## Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	122	70-130
4-Bromofluorobenzene	87	70-130





Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1210190A-05A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name: j101707

Date of Collection: NA

Dil. Factor: 1.00

Date of Analysis: 10/17/12 11:09 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1210190A-05A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j101707	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/17/12 11:09 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	84	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1210190A-05B

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j101809	Date of Collection:	NA	
Dil. Factor:	1.00	Date of Analysis:	10/18/12 12:31 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 1210190A-05B

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j101809	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/18/12 12:31 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	115	70-130
4-Bromofluorobenzene	84	70-130

Client Sample ID: CCV

Lab ID#: 1210190A-06A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j101702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/17/12 08:35 AM

Compound	%Recovery
Freon 12	116
Freon 114	99
Chloromethane	110
Vinyl Chloride	90
1,3-Butadiene	84
Bromomethane	94
Chloroethane	92
Freon 11	115
Ethanol	88
Freon 113	95
1,1-Dichloroethene	87
Acetone	90
2-Propanol	94
Carbon Disulfide	92
3-Chloropropene	90
Methylene Chloride	102
Methyl tert-butyl ether	98
trans-1,2-Dichloroethene	95
Hexane	87
1,1-Dichloroethane	104
2-Butanone (Methyl Ethyl Ketone)	100
cis-1,2-Dichloroethene	96
Tetrahydrofuran	98
Chloroform	114
1,1,1-Trichloroethane	112
Cyclohexane	98
Carbon Tetrachloride	123
2,2,4-Trimethylpentane	92
Benzene	107
1,2-Dichloroethane	131 Q
Heptane	110
Trichloroethene	113
1,2-Dichloropropane	107
1,4-Dioxane	105
Bromodichloromethane	124
cis-1,3-Dichloropropene	116
4-Methyl-2-pentanone	92
Toluene	110
trans-1,3-Dichloropropene	117
1,1,2-Trichloroethane	118
Tetrachloroethene	107
2-Hexanone	96

Client Sample ID: CCV

Lab ID#: 1210190A-06A

**EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	j101702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/17/12 08:35 AM

Compound	%Recovery
Dibromochloromethane	121
1,2-Dibromoethane (EDB)	115
Chlorobenzene	99
Ethyl Benzene	110
m,p-Xylene	107
o-Xylene	106
Styrene	96
Bromoform	112
Cumene	112
1,1,1,2-Tetrachloroethane	124
Propylbenzene	119
4-Ethyltoluene	110
1,3,5-Trimethylbenzene	107
1,2,4-Trimethylbenzene	102
1,3-Dichlorobenzene	107
1,4-Dichlorobenzene	107
alpha-Chlorotoluene	108
1,2-Dichlorobenzene	106
1,2,4-Trichlorobenzene	98
Hexachlorobutadiene	103

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	107	70-130
1,2-Dichloroethane-d4	119	70-130
4-Bromofluorobenzene	86	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1210190A-06B

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j101803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/18/12 09:17 AM

Compound	%Recovery
Freon 12	128
Freon 114	105
Chloromethane	120
Vinyl Chloride	95
1,3-Butadiene	88
Bromomethane	99
Chloroethane	96
Freon 11	126
Ethanol	95
Freon 113	101
1,1-Dichloroethene	92
Acetone	96
2-Propanol	100
Carbon Disulfide	95
3-Chloropropene	90
Methylene Chloride	108
Methyl tert-butyl ether	103
trans-1,2-Dichloroethene	95
Hexane	91
1,1-Dichloroethane	109
2-Butanone (Methyl Ethyl Ketone)	103
cis-1,2-Dichloroethene	95
Tetrahydrofuran	101
Chloroform	119
1,1,1-Trichloroethane	119
Cyclohexane	100
Carbon Tetrachloride	130
2,2,4-Trimethylpentane	93
Benzene	110
1,2-Dichloroethane	138 Q
Heptane	109
Trichloroethene	119
1,2-Dichloropropane	109
1,4-Dioxane	103
Bromodichloromethane	128
cis-1,3-Dichloropropene	119
4-Methyl-2-pentanone	92
Toluene	109
trans-1,3-Dichloropropene	119
1,1,2-Trichloroethane	117
Tetrachloroethene	106
2-Hexanone	97

Client Sample ID: CCV

Lab ID#: 1210190A-06B

**EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	j101803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/18/12 09:17 AM

Compound	%Recovery
Dibromochloromethane	122
1,2-Dibromoethane (EDB)	117
Chlorobenzene	96
Ethyl Benzene	109
m,p-Xylene	106
o-Xylene	106
Styrene	96
Bromoform	114
Cumene	112
1,1,2,2-Tetrachloroethane	122
Propylbenzene	121
4-Ethyltoluene	110
1,3,5-Trimethylbenzene	108
1,2,4-Trimethylbenzene	103
1,3-Dichlorobenzene	108
1,4-Dichlorobenzene	108
alpha-Chlorotoluene	109
1,2-Dichlorobenzene	109
1,2,4-Trichlorobenzene	105
Hexachlorobutadiene	107

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	123	70-130
4-Bromofluorobenzene	86	70-130





Air Toxics

Client Sample ID: LCS

Lab ID#: 1210190A-07A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j101703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/17/12 09:06 AM

Compound	%Recovery
Freon 12	127
Freon 114	106
Chloromethane	122
Vinyl Chloride	100
1,3-Butadiene	92
Bromomethane	98
Chloroethane	99
Freon 11	124
Ethanol	90
Freon 113	100
1,1-Dichloroethene	99
Acetone	103
2-Propanol	100
Carbon Disulfide	121
3-Chloropropene	114
Methylene Chloride	107
Methyl tert-butyl ether	105
trans-1,2-Dichloroethene	110
Hexane	91
1,1-Dichloroethane	107
2-Butanone (Methyl Ethyl Ketone)	102
cis-1,2-Dichloroethene	98
Tetrahydrofuran	98
Chloroform	118
1,1,1-Trichloroethane	118
Cyclohexane	102
Carbon Tetrachloride	130
2,2,4-Trimethylpentane	93
Benzene	109
1,2-Dichloroethane	135 Q
Heptane	106
Trichloroethene	119
1,2-Dichloropropane	108
1,4-Dioxane	102
Bromodichloromethane	127
cis-1,3-Dichloropropene	119
4-Methyl-2-pentanone	95
Toluene	110
trans-1,3-Dichloropropene	123
1,1,2-Trichloroethane	117
Tetrachloroethene	106
2-Hexanone	100



Air Toxics

Client Sample ID: LCS

Lab ID#: 1210190A-07A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name: j101703  
Dil. Factor: 1.00

Date of Collection: NA  
Date of Analysis: 10/17/12 09:06 AM

Compound	%Recovery
Dibromochloromethane	122
1,2-Dibromoethane (EDB)	118
Chlorobenzene	102
Ethyl Benzene	109
m,p-Xylene	109
o-Xylene	109
Styrene	98
Bromoform	113
Cumene	113
1,1,2,2-Tetrachloroethane	121
Propylbenzene	118
4-Ethyltoluene	104
1,3,5-Trimethylbenzene	100
1,2,4-Trimethylbenzene	92
1,3-Dichlorobenzene	99
1,4-Dichlorobenzene	97
alpha-Chlorotoluene	100
1,2-Dichlorobenzene	98
1,2,4-Trichlorobenzene	86
Hexachlorobutadiene	92

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	122	70-130
4-Bromofluorobenzene	89	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1210190A-07AA

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name: j101704

Date of Collection: NA

Dil. Factor: 1.00

Date of Analysis: 10/17/12 09:24 AM

Compound	%Recovery
Freon 12	116
Freon 114	96
Chloromethane	114
Vinyl Chloride	90
1,3-Butadiene	82
Bromomethane	92
Chloroethane	89
Freon 11	114
Ethanol	83
Freon 113	94
1,1-Dichloroethene	95
Acetone	98
2-Propanol	93
Carbon Disulfide	112
3-Chloropropene	102
Methylene Chloride	101
Methyl tert-butyl ether	98
trans-1,2-Dichloroethene	104
Hexane	87
1,1-Dichloroethane	102
2-Butanone (Methyl Ethyl Ketone)	99
cis-1,2-Dichloroethene	94
Tetrahydrofuran	93
Chloroform	112
1,1,1-Trichloroethane	110
Cyclohexane	96
Carbon Tetrachloride	123
2,2,4-Trimethylpentane	88
Benzene	108
1,2-Dichloroethane	128
Heptane	108
Trichloroethene	116
1,2-Dichloropropane	107
1,4-Dioxane	102
Bromodichloromethane	123
cis-1,3-Dichloropropene	114
4-Methyl-2-pentanone	90
Toluene	107
trans-1,3-Dichloropropene	116
1,1,2-Trichloroethane	116
Tetrachloroethene	104
2-Hexanone	96

Client Sample ID: LCSD

Lab ID#: 1210190A-07AA

**EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	j101704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/17/12 09:24 AM

Compound	%Recovery
Dibromochloromethane	118
1,2-Dibromoethane (EDB)	118
Chlorobenzene	99
Ethyl Benzene	110
m,p-Xylene	107
o-Xylene	106
Styrene	96
Bromoform	106
Cumene	111
1,1,1,2-Tetrachloroethane	124
Propylbenzene	121
4-Ethyltoluene	106
1,3,5-Trimethylbenzene	105
1,2,4-Trimethylbenzene	98
1,3-Dichlorobenzene	106
1,4-Dichlorobenzene	104
alpha-Chlorotoluene	103
1,2-Dichlorobenzene	105
1,2,4-Trichlorobenzene	97
Hexachlorobutadiene	98

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	112	70-130
4-Bromofluorobenzene	86	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1210190A-07B

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j101805	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/18/12 10:05 AM

Compound	%Recovery
Freon 12	126
Freon 114	103
Chloromethane	125
Vinyl Chloride	96
1,3-Butadiene	89
Bromomethane	97
Chloroethane	97
Freon 11	124
Ethanol	89
Freon 113	99
1,1-Dichloroethene	96
Acetone	95
2-Propanol	99
Carbon Disulfide	118
3-Chloropropene	106
Methylene Chloride	107
Methyl tert-butyl ether	103
trans-1,2-Dichloroethene	108
Hexane	91
1,1-Dichloroethane	108
2-Butanone (Methyl Ethyl Ketone)	98
cis-1,2-Dichloroethene	96
Tetrahydrofuran	96
Chloroform	118
1,1,1-Trichloroethane	120
Cyclohexane	98
Carbon Tetrachloride	127
2,2,4-Trimethylpentane	90
Benzene	110
1,2-Dichloroethane	136 Q
Heptane	106
Trichloroethene	116
1,2-Dichloropropane	106
1,4-Dioxane	99
Bromodichloromethane	126
cis-1,3-Dichloropropene	116
4-Methyl-2-pentanone	89
Toluene	106
trans-1,3-Dichloropropene	120
1,1,2-Trichloroethane	118
Tetrachloroethene	109
2-Hexanone	95

Client Sample ID: LCS

Lab ID#: 1210190A-07B

**EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	j101805	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/18/12 10:05 AM

Compound	%Recovery
Dibromochloromethane	123
1,2-Dibromoethane (EDB)	118
Chlorobenzene	101
Ethyl Benzene	109
m,p-Xylene	108
o-Xylene	108
Styrene	95
Bromoform	113
Cumene	114
1,1,2,2-Tetrachloroethane	126
Propylbenzene	123
4-Ethyltoluene	109
1,3,5-Trimethylbenzene	108
1,2,4-Trimethylbenzene	102
1,3-Dichlorobenzene	111
1,4-Dichlorobenzene	109
alpha-Chlorotoluene	106
1,2-Dichlorobenzene	110
1,2,4-Trichlorobenzene	102
Hexachlorobutadiene	103

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	125	70-130
4-Bromofluorobenzene	91	70-130



Air Toxics

Client Sample ID: LCS D

Lab ID#: 1210190A-07BB

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j101806	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/18/12 10:39 AM

Compound	%Recovery
Freon 12	127
Freon 114	104
Chloromethane	126
Vinyl Chloride	96
1,3-Butadiene	87
Bromomethane	101
Chloroethane	100
Freon 11	123
Ethanol	90
Freon 113	101
1,1-Dichloroethene	98
Acetone	98
2-Propanol	101
Carbon Disulfide	116
3-Chloropropene	109
Methylene Chloride	108
Methyl tert-butyl ether	104
trans-1,2-Dichloroethene	104
Hexane	91
1,1-Dichloroethane	106
2-Butanone (Methyl Ethyl Ketone)	102
cis-1,2-Dichloroethene	96
Tetrahydrofuran	98
Chloroform	118
1,1,1-Trichloroethane	118
Cyclohexane	100
Carbon Tetrachloride	127
2,2,4-Trimethylpentane	91
Benzene	108
1,2-Dichloroethane	137 Q
Heptane	107
Trichloroethene	118
1,2-Dichloropropane	107
1,4-Dioxane	102
Bromodichloromethane	127
cis-1,3-Dichloropropene	115
4-Methyl-2-pentanone	91
Toluene	106
trans-1,3-Dichloropropene	118
1,1,2-Trichloroethane	116
Tetrachloroethene	106
2-Hexanone	94

Client Sample ID: LCSD

Lab ID#: 1210190A-07BB

**EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	j101806	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/18/12 10:39 AM

Compound	%Recovery
Dibromochloromethane	120
1,2-Dibromoethane (EDB)	116
Chlorobenzene	99
Ethyl Benzene	108
m,p-Xylene	107
o-Xylene	108
Styrene	96
Bromoform	109
Cumene	113
1,1,2,2-Tetrachloroethane	123
Propylbenzene	122
4-Ethyltoluene	106
1,3,5-Trimethylbenzene	108
1,2,4-Trimethylbenzene	100
1,3-Dichlorobenzene	108
1,4-Dichlorobenzene	109
alpha-Chlorotoluene	105
1,2-Dichlorobenzene	108
1,2,4-Trichlorobenzene	102
Hexachlorobutadiene	103

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130
1,2-Dichloroethane-d4	128	70-130
4-Bromofluorobenzene	89	70-130



# Appendix D

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## Standard Operating Procedures - Soil Gas (Vapor) Monitoring and Sampling

# Standard Operating Procedures

## Soil Gas (Vapor) Monitoring and Sampling

### SOP-SG1

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This standard operating procedure (SOP) describes procedures for performing soil gas (vapor) monitoring and sampling using direct-push drilling technology. Because each site is unique, these procedures should be viewed as guidelines and will likely require modification based on site and subsurface conditions present.

Personnel performing the soil gas monitoring and sampling will follow site safety procedures as specified in the site-specific Health and Safety Plan.

### EQUIPMENT

Soil gas monitoring and sampling will be performed using direct push sampling equipment. The direct push probe will be advanced using either a truck- or track-mounted Geoprobe rig, or for limited access areas, using portable methods such as rotary hammer drill (rotohammer).

Coring/probe installation equipment which may be used includes the following: a rotohammer or truck-mounted Geoprobe rig, ½-inch to 2-inch diameter concrete coring drill bit, cloth (for dust suppression during drilling), Geoprobe drill rods, ¼-inch diameter tubing (nylon, stainless steel, or Teflon®), fine-grained (20-40) silica sand, granular bentonite grout or alternative, and possibly cement in cases where the formation has a very low permeability.

Leak check equipment using helium or other pre-approved non-reactive tracer gas may include: helium tank, piping, three-way valve, leak check enclosure (shroud), helium detector, paper towels or rags, and nitrile gloves.

Monitoring/sampling equipment which may be used includes the following: Summa canister (may be a one-liter or six-liter Summa canister with valve), certified flow controller, steel filter, three-way valve, extra miscellaneous valves, photo ionization detector (PID), low flow vacuum pump, vacuum gauge, barometer/thermometer/wind speed indicator.

### CORING/PROBE INSTALLATION PROCEDURES

Prior to drilling or coring, an attempt will be made to locate utility lines and if inside a building, to determine whether or not the building has an existing vapor barrier or a tensioned slab.

When samples are collected beneath buildings, a minimum of one sample will be collected from beneath each building. In addition, one duplicate sample will be collected. If possible, the samples will be located in the central portion of the slab, away from the floor slab/perimeter foundation junction, where dilution is more likely to occur.

In each sample location, a small diameter (½-inch to one-inch) hole will be drilled in the foundation using a rotohammer, truck-mounted Geoprobe rig, or concrete corer. When drilling the hole, no water should be used and care should be taken not to puncture the surface of soil underneath. If dust prevention is necessary, cover the location with a cloth or towel and drill through a pre-cut small hole in the cloth.

The probes are typically advanced to a depth of five feet below ground surface (bgs), however, other site-specific depths or multiple depths for vertical soil gas profiling may be targeted by the work plan. At target depth, the probe rod will be withdrawn approximately three to six inches to disengage the expendable probe tip and minimize the terminal void space volume. New, dedicated disposable nylon, stainless steel, or Teflon® tubing would then be fitted with a barbed steel end nut, pushed into the base of the probe rod, and threaded

onto a downhole terminal fitting sealed with an o-ring to prevent vapor short-circuiting to the surface through the rod annulus.

The area immediately around the probe rods shall be grouted using hydrated bentonite grout (if temporary installation) or cement (if permanent installation). Wait 30 minutes prior to sampling for bentonite or cement to congeal. VOC-free modeling clay may also be used to seal around the probe rods to prevent vapor short-circuiting to the surface.

Procedures for leak checking, soil gas purging, and sampling are described in the section below.

Following the completion of sampling, the soil boreholes will be filled with hydrated granular or powdered bentonite grout. If a building slab or pavement is present, the hole(s) will be patched with cement and finished flush with the surface.

## SYSTEM SETUP

Inspect the laboratory-provided Summa canister for damage prior to use. Do not use a canister that has visible damage.

Using a wrench, remove the brass cap above the valve on the top of the Summa canister. Measure and record the initial vacuum of Summa canister. If using an external vacuum gauge, cap the gauge and attach it to the canister using a wrench. Open the canister valve only after verifying the gauge is properly capped.

Verify that the vacuum pressure of the canister is equal to that indicated on the laboratory supplied tag. If the vacuum does not match, the canister has likely leaked and should not be used. Record the vacuum pressure on the sample collection form.

The canister will then be fitted with the laboratory-provided steel filter. The sampling train (steel-filter, flow-controller (if used), and Summa canister) will be attached to a T connector with an in-line vacuum gauge and vacuum tight flow valves (Swagelok) at each end. All valves should be closed on the T-connector at this time. The valve connected to the sampling train is referred to as the sampling valve. The vacuum pump (truck-mounted or otherwise) is then attached to the second end of the T with the valve closed (referred to as the purge valve).

Lastly, the sample tubing is threaded through the leak-check shroud and connected to the soil gas sampling point and the third closed valve on the T-connector. The leak check shroud should then be sealed against the surface (see "Leak Check – Probe Point Surface Seal" below).

## LEAK CHECKING

### APPARATUS

The method described below shall be used to check for leaks in the lines and fittings of the above-ground sampling apparatus:

After the sampling system is set up, make sure all valves are closed.

Open the purge valve (the valve connecting the purge pump to the apparatus, all other valves remain closed), turn on the purge pump, and apply approximately ten inches of vacuum into the T-connector and valves. Close the purge valve and check to verify that there is no loss of vacuum within the sampling apparatus (T-connector and valves) over a one minute period of time. If there is a loss of vacuum, this indicates a leak in the purge/sample system train that must be remedied.

If necessary, recheck the system to verify that there is no leakage as described above.

Document the date and time the leak check(s) were performed. Close all valves.

### PROBE POINT SURFACE SEAL

In addition checking for leaks in the apparatus, the probe point surface seal also needs to be checked for leakage. The preferred method uses helium gas as a tracer and permits checking for and correcting potential leaks in the field prior to sampling. Other tracer gases may be used but approval of their use should be verified prior to the start of the work. The helium tracer gas method is listed in ITRC's "Technical and Regulatory Guidance, Vapor Intrusion Pathway: A Practical Guideline" dated January 2007 (ITRC 2007), and as described below. The ITRC guidance from which the text below is derived is consistent with California Environmental Protection Agency and Oregon Department of Environmental Quality guidance (CalEPA 2005 and 2010; DEQ 2010).

## HELIUM LEAK CHECK METHOD

- ☐ Insert sample tubing through the leak check enclosure (also referred to as a shroud) and complete sample tubing connections to the other apparatus (previously described above).
- ☐ Place the enclosure flush with the ground surface, placing hydrated bentonite around the shroud to seal the shroud around the sample point.
- ☐ Attach helium tubing from the helium tank regulator to the enclosure (the "helium in" tubing).
- ☐ Attach the exhaust tubing ("helium out") to the enclosure and locate the discharge end of the tubing as far as possible from the helium detector.
- ☐ Attach the helium detector on the exhaust line from the sample pump.
- ☐ Make sure the sample valve (from the sampling probe point) is closed.
- ☐ Open the helium tank valve and set the flow to approximately 200 milliliters/minute (ml/min); let it flow for about one minute to fill the leak check enclosure.
- ☐ Do an initial check to make sure the helium detector is not detecting any helium.
- ☐ Begin purging of soil gas as described in the section on purging below. During purging, continue monitoring helium detector, record readings. If helium is detected at over 5%, this indicates leakage; check/tighten all seals and fittings and repeat procedure. The helium exhaust line should also be monitored so that additional helium can be added to the shroud during sampling if needed.
- ☐ Close valves from the probe sampling point and purge pump lines, and turn pump off.
- ☐ If the helium detector reading is less than 5%, the system is considered leak free and sampling can be performed (see sampling section below).
- ☐ If the helium detector reading continues to be above 5%, leakage is indicated and the probe hole abandoned.
- ☐ Record helium monitoring measurements in field notes.

## SOIL GAS PURGING PROCEDURES

Purging and sampling will be accomplished at a low flow rate (100 to 200 ml/min) to minimize the potential for inducing leakage. Flow rates should not exceed 200 ml/min. Purge vapors will be monitored using a PID for the presence of volatile organic compounds.

Slowly open the vacuum pump purge valve and purge three tubing volumes of vapor from the line, then close the purge valve. Based on a volume of approximately 0.044 liters per foot of ¼-inch ID tubing, and assuming five feet of tubing above ground, this would yield a total purge volume of 1.32 liters for a five-foot probe depth (ten total feet of tubing), and a total purge volume of 1.98 liters for a ten-foot probe depth (15 total feet of tubing).

During purging, check for leaks as described in the section on leak checks above. Record PID measurements of purge vapors on the field form. Oxygen and carbon dioxide concentrations may be monitored in the soil gas stream if desired by the work plan. At the conclusion of purging, immediately close the purge valve and then shut off the purge pump.

## SOIL GAS SAMPLING PROCEDURES

Atmospheric conditions (barometric pressure, temperature, wind speed and direction) will be recorded prior to and after sampling. A portable weather station equipped with a data logger is preferred to log site-specific conditions over the duration of sampling. However, if a weather station cannot be set-up on site, record atmospheric data from the closest weather station.

After leak testing and soil gas purging, soil gas sampling may be performed.

After purging, the purge valve will be closed prior to opening the sampling valve. The sample valve will then be opened followed by slowly opening the Summa canister valve. The canister's valve should be closed when the vacuum gauge shows a vacuum of 5 inches of mercury (in Hg) (pressure of -5 in Hg). The sample valve should then be closed.

Ensure the canister valve is tightly closed. The sample train should be immediately disassembled by removing the steel particulate filter, flow controller, and the Summa canister. Immediately cap the Summa canister fitting. The final vacuum reading from the canister should be recorded on the chain of custody, sample collection form, and canister identification tag. If the final canister vacuum is less than 0.1 in Hg (more than 0.1 in Hg of pressure, or is a positive pressure), then the sample should be disregarded and a new sample collected.

Soil vapor samples will be shipped to a certified laboratory for analysis.

## FIELD RECORDS

The field technician maintains a log sheet summarizing:

- ☐ Sample Location.
- ☐ Sample Identification.
- ☐ Date and time of sample collection.
- ☐ Sampling depth.
- ☐ Tubing type, length, and volume.
- ☐ Purge Data (i.e. pump used, volume, PID screening information, purge start and stop time, purge vacuum reading).
- ☐ Weather conditions.
- ☐ Sampling methods and devices.
- ☐ Volume of sampling device.
- ☐ Sampling start and end date/time.
- ☐ Vacuum of canisters before and after samples collected.
- ☐ Apparent moisture content (dry, moist, or saturated, etc.) of the sampling zone.
- ☐ Chain of custody protocols and records used to track samples from sampling point to analysis.
- ☐ Other notes as applicable to site specific observations, sampling issues and mitigation of problems encountered.

## REFERENCES

Cal EPA. 2005 (February 7 rev.). Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air. Department of Toxic Substances Control, Interim Final. California Environmental Protection Agency.

Cal EPA. 2010 (March). Advisory – Active Soil Gas Investigation (Draft). California Environmental Protection Agency.

DEQ. 2010 (March 25). Guidance for Assessing and Remediating Vapor Intrusion in Buildings. Oregon Department of Environmental Quality.

ITRC, 2007 (January). Technical and Regulatory Guidance, Vapor Intrusion Pathway: A Practical Guideline, Interstate Technology & Regulatory Council