

Phase II Environmental Site Assessment

2301 & 2325 Lincoln Avenue
Tacoma, Washington 98421

Prepared for:
Port of Tacoma
c/o Anchor QEA
1119 Pacific Avenue, Suite 1600
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February 22, 2018
PBS Project No. 41237.005



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1 INTRODUCTION

PBS Engineering and Environmental Inc. (PBS) provided consulting services to the Port of Tacoma, care of Anchor QEA (Client), pertaining to a limited subsurface soil and groundwater investigation at the property addressed as 2301 & 2325 Lincoln Avenue in Tacoma, Washington (site).

This investigation was performed to assess subsurface conditions related to the findings of the Phase I Environmental Site Assessment completed by PBS in December 2017. Recognized environmental conditions (RECs) identified by the Phase I ESA assessment included:

- The former underground storage tank removed from the subject property was reported to have had a release of petroleum as gasoline range to soil and groundwater. While the reported cleanup at that time was sufficient to obtain a No Further Action determination from WDOE in 2002, the historic documented release meets the definition of an ASTM historical REC.
- The US Oil pipeline known to transect along the northern boundary of the subject property represents a potential concern for release of petroleum to the subject property.
- The US Oil bulk petroleum facility located directly southeast of the subject property has potential for release of petroleum to the environment. If present, the potential exists for groundwater migration to the subject property.
- The documented release associated with a UST removal at the northeast-adjacent property (Pierce County parcel #6965000450) represents a potential cross-contamination risk to groundwater at the subject property, although that property was granted NFA status following a cleanup and monitoring effort.

2 SITE DESCRIPTION

The subject property is comprised of two adjacent parcels that encompass a combined area of approximately 3.1 acres. The parcels are located on the west side of Lincoln Avenue, which is oriented in a roughly Northeast-Southwest direction. The southwestern parcel is occupied by three warehouse buildings and a small office building, and is paved. The northeastern parcel is occupied by an equipment storage lot and a shed building, and has a gravel surface.

The subject parcels are currently occupied by Sunbelt Rentals, which maintains and rents out construction equipment. Fueling, lubrication, and cleaning of that equipment takes place on site. An above-ground storage tank (AST) containing diesel fuel with a capacity of approximately 500-gallons is situated inside a concrete secondary containment structure within the western-most building on site. The wash area is located adjacent to the southeastern end of that building, and its associated drains are connected to an oil/water separator unit that drains to the city sanitary sewer system.

A pipeline easement has existed within the northeasterly 25-feet of the site since 1962. According to its owner (US Oil & Refining Co.), there are four underground pipelines running through that area, connecting the refining facility to the southeast across Lincoln Avenue to their shipping facility to the north along Port of Tacoma Road. The four pipelines were installed in 2007 and consist of one 24-inch diameter line, one 10-inch line, and two 8-inch lines. They reportedly transport crude oil, fuel oil, cutter oil, vacuum gas oil, ultra-low sulfur diesel fuel, and jet fuel. There is one inactive 10-inch pipeline in the easement, and US Oil plans to install four additional pipelines (three 12-inch lines and one 3-inch line) this year. US Oil has had previous pipelines in use through the area since the 1950s. They did not report any spills when information was requested from them, indicating that any such spills "would have been remediated in accordance with MTCA", and that "any information regarding such incidents would be of public record as required by law." US Oil also reported that their maintenance program for the pipelines were in accordance with American Petroleum

Institute Standard 570, which covers inspection, rating, repair, and alteration procedures for petroleum piping systems. Correspondence with US Oil is included in Appendix B.

3 SUBSURFACE INVESTIGATION

The subsurface investigation was conducted following PBS' standard Health and Safety Policies and Procedures, and a site-specific Health and Safety Plan (HASP) was reviewed with all contractors prior to work. On January 11, 2018, PBS met with Holocene Drilling personnel on site, who provided drilling services. Following a safety briefing, borings were advanced using direct-push methods to depths of up to 10-feet below ground surface (bgs) at seven locations. Continuous soil sampling was completed by driving a 5- ft long 2-inch diameter steel solid-barrel sampler lined with a PVC sleeve. Refer to Figure 2: Site Plan for boring locations on site.

At each boring location, soils were continuously screened with a PID and by visual and olfactory methods, and no indications of contamination were observed by those methods at any time. Soil samples were collected from observed fill soils above the groundwater interface (approximately 5.5- to 6-feet bgs at all locations) and from native soil at 9- to 10-feet bgs. Soil samples were collected from material not in contact with the PVC sampling sleeve and placed directly into 4-ounce jars and methanol-preserved 40-milliliter vials. Soil were logged continuously, noting grain size, density, color, odor, and moisture. During the advancement of boreholes, soil was screened for volatiles using a calibrated hand-held MiniRAE 3000 photoionization detector (PID), equipped with a 10.6 eV UV lamp. The PID is capable of detecting volatile organic compounds (VOCs). PID readings were collected from select soil intervals by partially filling a plastic bag and taking headspace readings within the bag. Volatile compounds were not detected with the PID during this investigation. Boring logs describing the subsurface lithology, sample depths, and PID readings are presented in Appendix I.

Groundwater was encountered in all borings at a depth of approximately 6-feet bgs. A temporary well, consisting of a 1-inch diameter PVC casing with five feet of 0.010-slot perforated screen set to straddle the observed water table, was set in each open borehole to allow for sample collection. Groundwater samples were collected from within the temporary well via low-flow sampling protocols using a peristaltic pump and clean, disposable tubing.

The samples were collected in laboratory-supplied containers, placed in a cooler with ice and transported to Fremont Analytical (laboratory located in Seattle, Washington) with chain-of-custody documentation. A total of fourteen soil samples and seven groundwater samples were submitted with chain-of-custody documentation. As there were no field indications of contamination, four soil samples from the borings thought to be most likely to be impacted by RECs identified in the Phase I ESA for this site were analyzed for the following constituents:

- (4) NWTPH as Diesel/Heavy Oil Range Organics by NWTPH-Dx
- (4) NWTPH as Gasoline by NWTPH-Gx Organics by NWTPH-Gx
- (4) Priority Pollutant metals (Ag, As, Be, Cd, Cr, Cu, Hg, Ni, Pb, Sb, Se, Tl, Zn, by EPA 6020)
- (4) Polychlorinated Biphenyls (PCBs) by EPA 8082 Mod
- (4) Volatile Organic Compounds (VOCs) by EPA 624/8240/8260
- (4) Semi-Volatile Organic Compounds (SVOCs) by EPA 8270D/625

All groundwater samples were analyzed for the following constituents:

- (7) NWTPH as Diesel/Heavy Oil Range Organics by NWTPH-Dx
- (7) NWTPH as Gasoline by NWTPH-Gx Organics by NWTPH-Gx

- (7) Priority Pollutant metals (dissolved, laboratory filtered) (Ag, As, Be, Cd, Cr, Cu, Hg, Ni, Pb, Sb, Se, Tl, Zn, by EPA 6020)
- (7) Volatile Organic Compounds (VOCs) by EPA 624/8240/8260
- (7) Semi-Volatile Organic Compounds (SVOCs) by EPA 8270D/625

Sampling equipment was either replaced with fresh equipment or decontaminated between borings. PBS personnel wore new disposable nitrile gloves when collecting each sample. Upon completion of sampling, temporary borings were backfilled with bentonite to six inches below grade and finished at the ground surface with cold patch asphalt to match the surrounding area.

4 FINDINGS

4.1 Field Observations

The subsurface soils profile encountered on site is presented in the summary table below and boring logs are included in Appendix A:

Table 1: Subsurface Profile

Classification	Description	Approximate Depth Range (feet bgs)
Gravel or Asphalt	Up to 6-inches of surface cover material	0.0 to 0.5
Fill Soil	Loose well-sorted brown to grey medium sand (SP), moist	0.5 to 5.5
Native Soil	Loose grey silty sand (SM) or soft grey silty clay (CH), wet	5.5 to 10.0

During the advancement of boreholes, no obvious visual or olfactory indications of contamination were observed. Soils were notably wet at the approximate depth of 6.0 to 6.5 feet-bgs. The measured depth to the static groundwater surface in each of the open boreholes were approximately 6.1 feet-bgs. Measurements were obtained by lowering an electronic water level meter into the open borehole.

Local topography is relatively flat, and groundwater flow may be influenced by tidal action from Commencement Bay. Under these conditions, interpretation of groundwater flow direction based on topography is not always reliable. It is anticipated that groundwater flow would broadly trend toward the north, toward nearby waterways and Commencement Bay.

4.2 Soil Analytical Results

Soil analytical data were screened against cleanup levels defined in MTCA, Chapter 173-340 of the Washington Administrative Code (WAC). Screening levels included the MTCA Method A Soil Cleanup Levels (Table 740-1), and MTCA Method C Soil Cleanup Levels for industrial land use. Soil analytical results are presented in Table 3.

Analytical results from the soil samples analyzed were below laboratory method reporting limits (MRLs) for NWTPH-Gx, NWTPH-Dx, PCBs, and VOCs (including BTEX). No exceedances of applicable screening levels were noted with the exception of arsenic in one sample. Arsenic in that sample (B4-1) was detected at a concentration of 24.5-mg/kg, which slightly exceeds MTCA Method A cleanup level (20 mg/kg) based on protection of groundwater. As described in Section 4.3, no arsenic contamination was noted in site groundwater. The soil arsenic concentration at station B4-1 was less than the MTCA Method C cleanup level

(88 mg/kg) protective of industrial workers. The detected concentration was also within the concentration range typical of shallow soil samples within the ASARCO smelter plume area.

A copy of the laboratory reports and chain-of-custody forms is presented in Appendix B.

4.3 Groundwater Analytical Results

Groundwater analytical results were screened against MTCA Method A Groundwater Cleanup Levels (Table 720-1) and MTCA Method B Groundwater Cleanup Levels. Groundwater analytical results are presented in Table 4.

Analytical results from the groundwater samples collected from all wells were below laboratory method reporting limits for NWTPH-Gx, BTEX, and SVOCs.

Total petroleum hydrocarbons as diesel- and/or heavy oil-range were detected at concentrations of 267-µg/L, 110-µg/L and 115-µg/L in samples B2, B4, and B7, respectively. These concentrations were all below the Method A cleanup level (500 µg /L).

None of the heavy metals concentrations exceeded applicable MTCA Method A or Method B groundwater cleanup levels.

Chloromethane was also detected at relatively low levels in samples B1, B3, B4, B6, and B7. However, there is no assigned regulatory standard for chloromethane. Chloromethane was used historically as a refrigerant, and in the manufacture of certain other chemicals. No specific uses at the property were identified.

There were several volatile organic compounds detected in the B2 groundwater sample at concentrations exceeding MTCA Method A or Method B cleanup levels, including the following:

- vinyl chloride: 2.24 µg/L; exceeds MTCA Method A cleanup level (0.2 µg/L),
- trans-1,2-Dichloroethene: 49.6 µg/L; exceeds MTCA Method B cleanup level (16 µg/L),
- cis-1,2-Dichloroethene: 773 µg/L; exceeds MTCA Method B cleanup level (160 µg/L)
- Trichloroethylene (TCE) (9.38 µg/L; exceeds MTCA Method A cleanup level (5 µg/L)

A copy of the laboratory reports and chain-of-custody forms is presented in Appendix B.

4.4 Vapor Intrusion Preliminary Screening Evaluation

Based on the volatile organic compounds (VOCs) detected in groundwater in sample B2, and the ability of vapors to migrate from groundwater up through the soil, the soil vapor intrusion pathway on the subject property is considered a potential exposure pathway.¹ The preliminary Vapor Intrusion (VI) Screening criteria is presented in Ecology's *Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action* (Ecology 2009), with updated 2015 Groundwater and Soil Gas Screening Levels.

¹ Preliminary VI Screening: The purpose of the preliminary VI screening is to quickly determine whether or not any potential exists for the vapor intrusion pathway to be complete. Two basic questions are asked, 1) Are volatile, toxic chemicals present or reasonable suspected to be present [Yes], and, 2) are occupied buildings in the vicinity [Yes]. Ecology's CLARC database contains soil gas and groundwater screening levels that were derived to be protective of indoor air quality under most situations, as presented below.

**Vapor Intrusion Screening for Groundwater
2301 & 2325 Lincoln Avenue Site²**

Analyte	Maximum Concentration Measured in Groundwater at the Site (µg/L)	Indoor Air Cleanup Screening Levels			
		2015 Groundwater Screening Level Method B Noncancer (µg/L)	2015 Groundwater Screening Level Method B Cancer (µg/L)	2015 Groundwater Screening Level Method C Noncancer (µg/L)	2015 Groundwater Screening Level Method C Cancer (µg/L)
Trichloroethene	9.38	3.8	1.6	8.4	26
Vinyl chloride	2.24	57	0.3	124	3.5

Note:

Shaded = Screening Level is Exceeded

5 LIMITED HAZARDOUS BUILDING MATERIALS SURVEY

The Client requested that PBS undertake selective sampling of suspected asbestos-containing materials (ACMs) and suspect lead-containing paint surfaces on the subject property.

5.1 Suspected Asbestos-Containing Materials

A PBS Asbestos Hazard Emergency Response Act (AHERA) accredited inspector performed a limited inspection of the buildings on site to determine the presence, location, and approximate quantity of asbestos containing materials (ACM). Seven bulk samples of building materials suspected of potentially containing asbestos were collected (see Figure 3) and submitted under chain of custody to NVL Industrial Hygiene Services of Seattle, Washington, for polarized light microscopy (PLM) analysis. The following materials were found to contain asbestos:

- Asbestos-containing flooring mastic with approximately 55% chrysotile was present underneath the lower-most layers of vinyl tile flooring in within the large 2301 building (sample A-4). Approximately 3% chrysotile mastic was found adhered to another (more recent) layer in the same sample. The quantity of suspect ACM flooring in this area is approximately 1,400-square feet or less.

At the time of this survey, all asbestos-containing building materials were observed to be in good condition with the exception of flooring tile layers within one room, where they had been partially torn up (see Site Photos in Appendix A).

Please refer to the asbestos bulk sample laboratory report in Appendix C for more sample details. Asbestos sampling and testing for this survey was limited in scope. The report information and testing results are not to be construed as an exhaustive investigation of asbestos-containing materials throughout the subject buildings.

² Screening levels are based on Ecology-calculated values using default assumptions. Ecology's vapor intrusion guidance notes that default assumptions may not be sufficiently conservative when groundwater is within 15 feet of the ground surface or within a few feet of the lowest floor of the building (Ecology 2016, Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action, Publication no. 09-09-047)

5.2 Potential Lead-Containing Paint

PBS collected four samples (Figure 3) of paint coatings to be analyzed for lead content. The samples were assigned a unique identification number and transmitted to NVL Laboratories, Inc. (AIHA IH #101861) in Seattle, Washington under chain-of-custody protocols for lead analysis using Flame Atomic Absorption Spectrometry (FAAS). The laboratory report is included in Appendix C.

Lead was detected at as a significant component in the following paint coatings:

- L-1 - Exterior red paint on metal columns of the northern-most shed building on site - 37% Lead

Lead was detected as a minor component in the other three paint coating samples:

- L-2 - Interior white paint on wood columns in the large 2301 building – 0.029% Lead
- L-3 - Interior white paint on west building wall – 0.012% Lead
- L-4 - Exterior white paint west building sheet metal siding – 0.088% Lead

Similar paint coatings to those identified above should be assumed to contain lead until sampled. All paint coatings that were not sampled as part as this investigation should be assumed to contain lead until sampled.

Paint or other building materials containing any detectable concentrations of lead require construction activities (renovation, demolition, etc.) to be performed in accordance with the State of Washington Department of Labor and Industries regulation for Lead in Construction (WAC 296-155-176).

6 INVESTIGATION OF STORM SEWER AND CATCH BASIN CONNECTIVITY

The purpose of the storm line video inspection of on-site catch basins was to determine the layout and interconnection of the sewer lines, and where storm water runoff from the site leaves the property. According to the property owner, drains near the equipment wash station are connected to the oil-water separator system, which drains to municipal sanitary sewer under a municipal wastewater discharge permit. There are no as-built storm line drawings available for the subject property, and no record of prior clean-out or inspection events. Ventilation Power Cleaning, Inc. was on site on January 24, 2018 to jet-clean the storm drains with a vacuum truck and to closed caption TV (CCTV) the storm drains.

The inspection found that the drains on the southwestern half and northeastern half of the site drain separately to a common manhole located along Lincoln Avenue. The storm sewer located under Lincoln Avenue is part of the city of Tacoma drain system. The on-site storm lines consist of 8-inch diameter PVC pipe between each catch basin. The pipes and structures appeared to be in generally good condition, with the exception of some roots intruding into a pipe to the northwest of a T-intersection along Lincoln Avenue, near the current small office building (see Figure 2 for details).

The CCTV videos were uploaded to the Port's FTP site on January 31, 2018.

7 CONCLUSIONS

A summary of the pertinent findings of this Phase II Environmental Site Assessment are presented below:

- Based on the site observations and analytical results of soil samples collected from seven 10-foot soil borings, there was no evidence of soil contamination exceeding applicable screening levels. Arsenic in one sample (B4-1) was detected at a concentration of 24.5-mg/kg, which slightly exceeds MTCA Method A cleanup level (20 mg/kg) based on protection of groundwater. As described in Section 4.3,

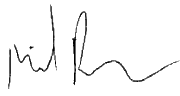
no arsenic contamination was noted in site groundwater. The soil arsenic concentration at station B4-1 was less than the MTCA Method C cleanup level (88 mg/kg) protective of industrial workers. The detected concentration was also within the concentration range typical of shallow soil samples within the ASARCO smelter plume area.

- This Phase II site assessment identified the presence of groundwater contamination at the site in excess of MTCA groundwater cleanup levels and screening levels protective of indoor air quality. Groundwater at boring location B2 contains concentrations of four chlorinated hydrocarbons (trichloroethylene, vinyl chloride, cis-1,2-dichloroethene and trans-1,2-dichloroethene) at concentrations exceeding MTCA Method A or Method B cleanup levels for protection of human health and the environment. The specific source of the contamination has not been defined. TCE was commonly used historically as a degreaser or paint tripper. The other three compounds exceeding cleanup levels are common degradation products of TCE.
- As described in Section 4.4, the groundwater data from location B2 were screened against preliminary screening levels for vapor intrusion concerns as contained in Ecology guidance. This screening demonstrated exceedances of Method B and C values for TCE, and of Method B for vinyl chloride. Because the groundwater elevations at the site are shallower than those assumed in the guidance document, actual vapor intrusion risks may be greater than estimated. Further sampling (e.g., soil vapor or indoor air) is warranted in the vicinity of boring B2. An existing office building is located in this area. Depending on the results of follow-up testing, that structure (or new structures if constructed in this area) could require an appropriate vapor barrier mitigation system.
- Diesel- and/or heavy oil-range petroleum hydrocarbons were detected in groundwater at locations B2, B4, and B7, but at concentrations below MTCA Method A cleanup levels.
- Asbestos is present in floor tile mastics found within the southeast office areas of the large 2301 building. Appropriate in-place management of asbestos containing material and/or abatement of the asbestos containing material should be completed in general accordance with Chapter 296-62 WAC. Damaged tiles noted in one location should be removed or encapsulated.
- Paint containing lead was identified in several of the paint surfaces on the interior and exterior of the subject property buildings. Most surfaces contained very low lead levels (< 0.5 percent). A different paint containing high lead levels (37%) was present on the steel columns supporting the open shed near the northern corner of the site. Lead containing materials should be managed in accordance with the State of Washington Department of Labor and Industries regulation for Lead in Construction (WAC 296-155-176).

8 LIMITATIONS

PBS has prepared this report for use by the Port of Tacoma and Anchor QEA and is not intended for use by others without the written consent of PBS. This study was limited to the tests, locations and depths as indicated to determine the absence or presence of certain contaminants. The site as a whole may have other contamination that was not characterized by this study. The findings and conclusions of this report are not scientific certainties, but rather probabilities based on professional judgment concerning the significance of the data gathered during the course of this investigation. PBS is not able to represent that the site or adjoining land contain no hazardous waste, oil or other latent conditions beyond that detected or observed by PBS.

Sincerely,
PBS Engineering and Environmental Inc.

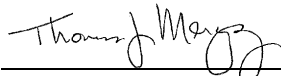


Mike Bagley, LG
Project Geologist

February 22, 2018
Date



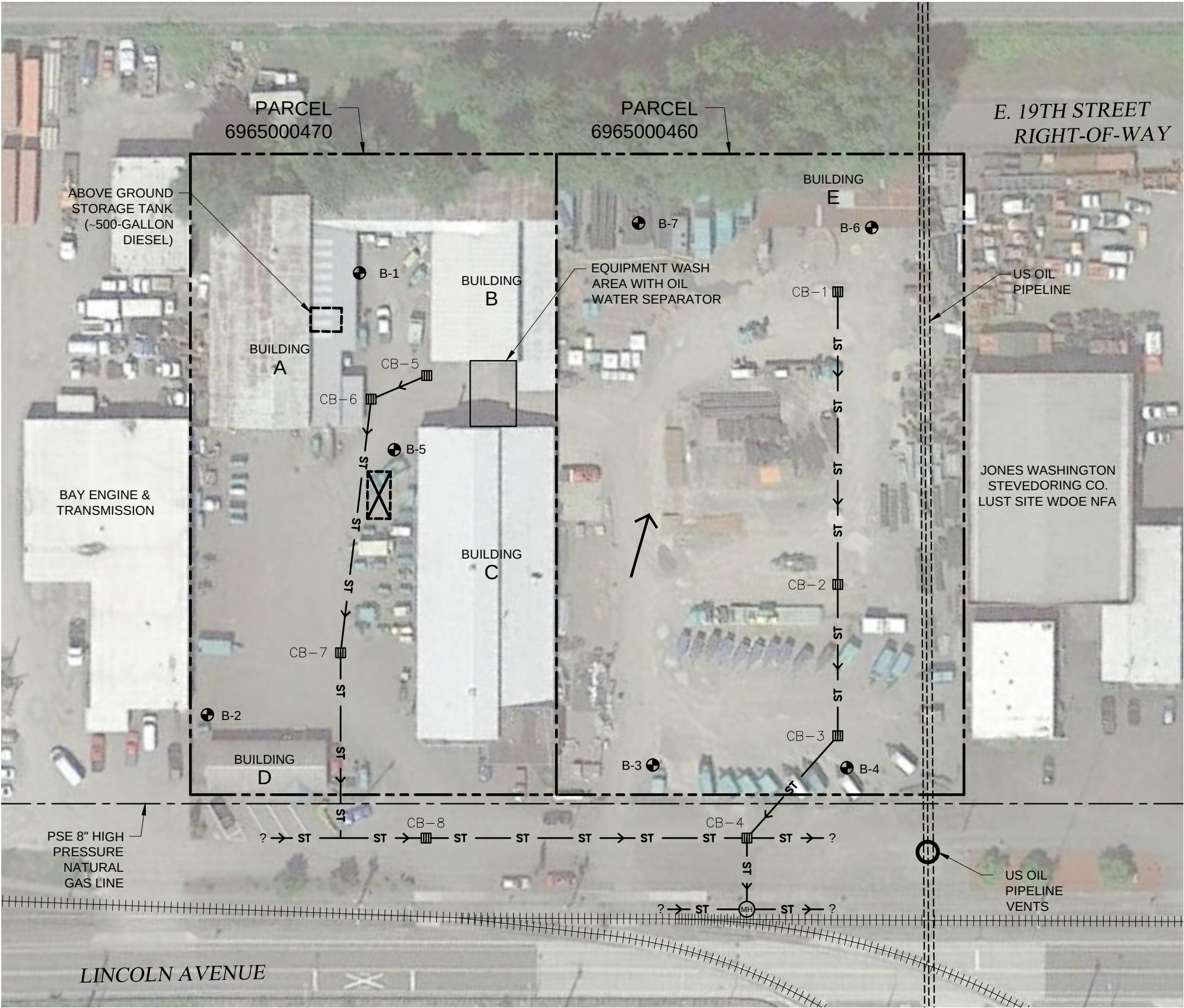
MIKE BAGLEY



Thomas Mergy, LHG
Environmental Services Manager

February 22, 2018
Date

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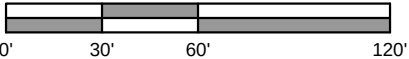
SOURCE: © 2017 GOOGLE EARTH PRO

LEGEND

- B-1 BORING NUMBER AND LOCATION
- APPROXIMATE LOCATION OF HISTORIC UST
- PARCEL BOUNDARY
- APPROXIMATE LOCATION OF PIPELINE EASEMENT
- ST STORMWATER LINE
- PSE 8" HIGH PRESSURE NATURAL GAS LINE
- CB-2 CATCH BASIN
- MH MANHOLE
- INFERRED GROUNDWATER FLOW DIRECTION



Scale 1" = 60'



PREPARED FOR: ANCHOR QEA AND PORT OF TACOMA

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SITE PLAN
2301 AND 2325 LINCOLN AVENUE
TACOMA, WASHINGTON

PROJECT

41237.005

DATE

FEB 2018

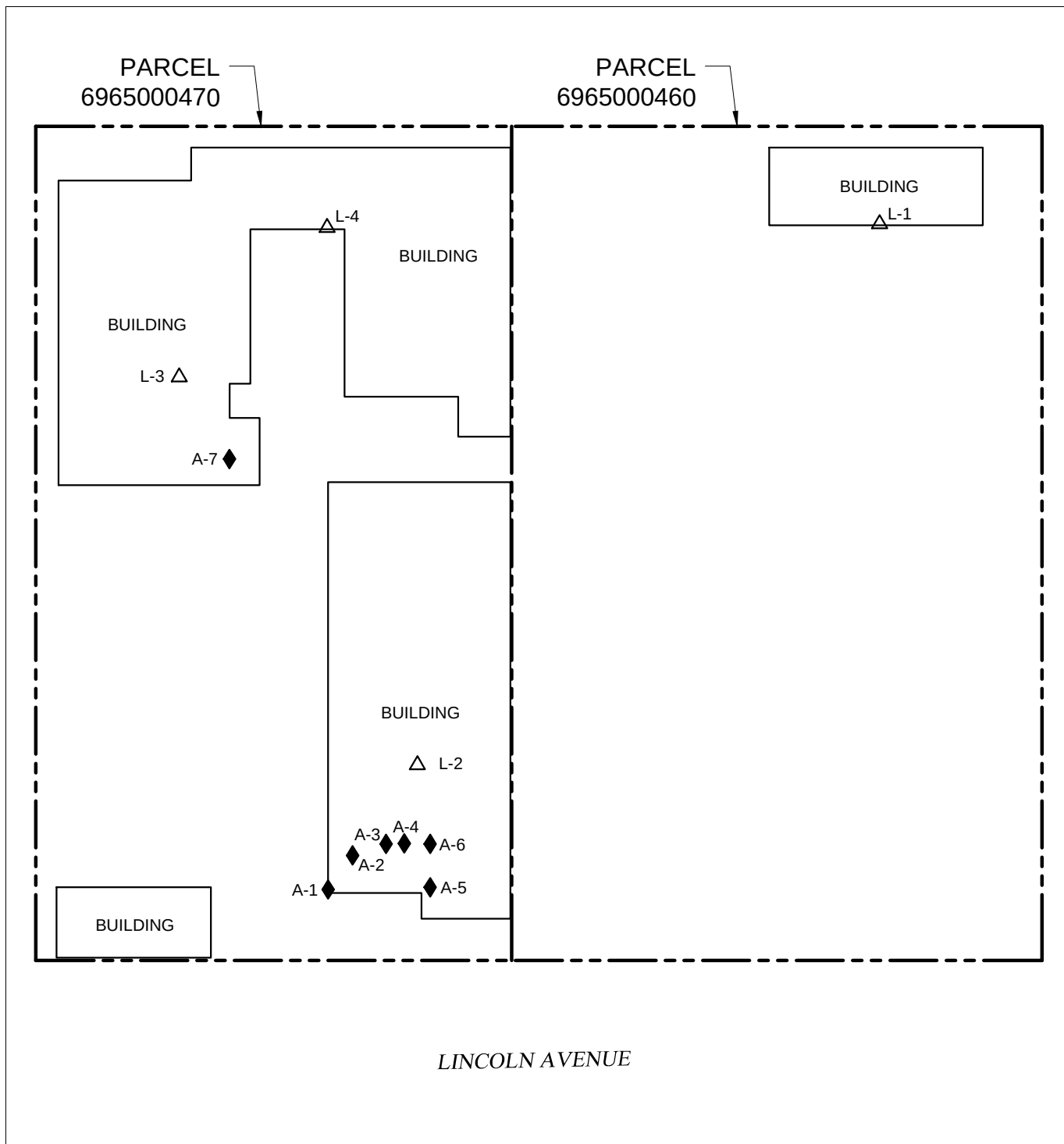
SHEET ID

2

A map of Washington State with the study area highlighted in the Puget Sound region. Labels include OLYMPIA, SEATTLE, TACOMA, and VANCOUVER. A bracket indicates the 'SITE' location between Seattle and Tacoma.



1

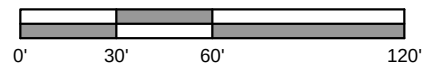


LEGEND

- ◆ A-1 ASBESTOS SAMPLE NUMBER AND LOCATION
- △ L-1 LEAD SAMPLE NUMBER AND LOCATION



Scale 1" = 60'



PREPARED FOR: ANCHOR QEA AND PORT OF TACOMA



LIMITED HAZARDOUS MATERIAL SAMPLING PLAN

2301 AND 2325 LINCOLN AVENUE
TACOMA, WASHINGTON

FEB 2018
41237.005

FIGURE

3

Table 2 - Soil Sample Analytical Results

Phase II Subsurface Soils Report
2301 & 2325 Lincoln Avenue
Tacoma, Washington

PBS Project No. 41357.005

Sample ID	Date	Depth (feet bgs)	Total Petroleum Hydrocarbons			Volatile Organic Compounds (VOCs)						Semivolatile Organic Compounds (SVOCs)		Other	Metals				
			Diesel (mg/kg)	Heavy Oil (mg/kg)	Gasoline (mg/kg)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)	Tetrachloroethylene (TCE) (mg/kg)	Vinyl Chloride (mg/kg)	Benzo(a) pyrene (mg/kg)	Other (mg/kg)	PCBs (mg/kg)	Mercury (mg/kg)	Arsenic (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)
B2-2	1/11/2018	9.5	<26.2	<65.6	<8.12	<0.0327	<0.0408	<0.0327	<0.1225	<0.0327	<0.0408	<0.0657	<0.263	<0.117	<0.317	4.15	<0.193	17.8	1.92
B4-1	1/11/2018	5.5	<33.7	<84.4	<10.1	<0.0405	<0.0506	<0.0405	<0.1516	<0.0405	<0.0506	<0.0495	<0.519	<0.0993	<0.437	24.5	<0.274	20.1	44.2
B5-2	1/11/2018	9.5	<27.8	<69.4	<9.36	<0.0374	<0.0468	<0.0374	<0.0936	<0.0374	<0.0468	<0.0731	<0.292	<0.127	<0.353	4.11	<0.207	19.60	3.31
B6-2	1/11/2018	9.5	<39	<97.5	<12.4	<0.0496	<0.0620	<0.0496	<1.860	<0.0496	<0.0620	<0.0496	<0.521	<0.0985	<0.502	9.14	<0.291	23.00	3.96
MTCA Method A Standards			2,000	2,000	100	0.03	6	7	9	0	7	0.10		1.0	2	20	2	2,000	250

NOTES:

-- = not analyzed

mg/Kg = milligrams per Kilogram, equivalent to parts per million (ppm)

<XX= Indicates analyte was not detected above the method reporting limit

Bold indicates analyte detected above MTCA Method A standard

Table 3 - Groundwater Sample Analytical Results

Phase II Subsurface Soils Report
2301 & 2325 Lincoln Avenue
Tacoma, Washington

PBS Project No. 41357.005

Sample ID	Date	Depth (feet bgs)	Total Petroleum Hydrocarbons			Volatile Organic Compounds (VOCs)							Semivolatile Organic Compounds (SVOCs)		Metals			
			Diesel (µg/L)	Heavy Oil (µg/L)	Gasoline (µg/L)	Benzene (µg/L)	Ethylbenzene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)	Vinyl Chloride (µg/L)	Trichloroethene (µg/L)	Chloromethane (µg/L)	Benzo(a) pyrene (µg/L)	Other (µg/L)	Mercury (µg/L)	Arsenic (µg/L)	Chromium (µg/L)	Lead (µg/L)
B1	1/11/2018	5.5	<49.5	<99.0	<50	<1	<1	<1	<3	<0.2	<0.5	4.31	<0.5	<2	<0.1	<1	<0.5	<0.5
B2	1/11/2018	5.5	155	112.0	<50.0	<1	<1	<1	<2	2.24	9.38	<2.00	<0.5	<2	<0.1	4.22	0.958	<0.5
B3	1/11/2018	5.5	<49.6	<99.3	<50	<1	<1	<1	<3	<0.2	<0.5	5.5	<0.5	<2	<0.1	<1	<0.5	<0.5
B4	1/11/2018	5.5	<50	110.0	<50	<1	<1	<1	<3	<0.2	<0.5	5.8	<0.5	<2	<0.1	<1	<0.5	<0.5
B5	1/11/2018	5.5	<50	<100	<50	<1	<1	<1	<3	<0.2	<0.5	<2.00	<0.5	<2	<0.1	<1	<0.5	<0.5
B6	1/11/2018	5.5	<49.7	<99.5	<50	<1	<1	<1	<3	<0.2	<0.5	11	<0.5	<2	<0.1	<1	5.24	<0.5
B7	1/11/2018	5.5	<49.8	115.0	<50	<1	<1	<1	<3	<0.2	<0.5	5.76	<0.5	<2	<0.1	<1	2.62	<0.5
MTCA Method A Standards			500	500	1,000	5	700	1,000	1,000	0.2	5		0.1		2	5	50	15

NOTES:

-- = not analyzed

µg/L = micrograms per liter, equivalent to parts per billion (ppb)

<XX= Indicates analyte was not detected above the method reporting limit

Bold indicates analyte detected above MTCA Method A standard

* = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Table 4- Groundwater Parameter Field Measurements

**Phase II Subsurface Soils Report
2301 & 2325 Lincoln Avenue
Tacoma, Washington**

PBS Project No. 41357.005

Sample ID	Date	Depth (feet bgs)	Temperature (C)	Dissolved Oxygen (mg/L)	Specific Conductivity (μ S/cm)	pH	ORP (mV)
B1	1/11/2018	5.5	10.0	1.54	472.60	6.17	58.0
B2	1/11/2018	5.5	10.6	3.58	418.70	6.21	46.5
B3	1/11/2018	5.5	11.3	1.46	531.00	6.36	56.4
B4	1/11/2018	5.5	11.5	1.32	431.60	6.29	48.3
B5	1/11/2018	5.5	10.5	5.98	467.20	6.61	47.2
B6	1/11/2018	5.5	10.7	0.98	360.40	6.29	59.7
B7	1/11/2018	5.5	10.6	1.26	546.20	5.97	70.1



APPENDIX A

Boring Logs
Site Photographs



LINCOLN AVENUE
2301 AND 2325 LINCOLN AVE.
TACOMA, WASHINGTON

BORING B1

PBS PROJECT NUMBER:
41237.005

BORING B1 LOCATION:
(See Site Plan)

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	GROUND- WATER	PID (PPM)	SAMPLE NUMBER	SAMPLE/ TEMPORARY WELL(S)	RECOVERY (%)	COMMENTS/ WELL INSTALLATION
0.0		Loose grey SAND (SP); nonplastic; fine sand; moist; FILL						
2.0								
4.0								
6.0		Soft grey CLAY (CH); high plasticity; fine sand; wet	1/11/2018 ▼	0.0	B1-1			
8.0								
10.0		Final depth 10.0 ft bgs; groundwater encountered at 6.0 ft bgs		0.0	B1-2			
12.0								

BORING METHOD: Direct Push
DRILLED BY: Holocene Drilling
BORING BIT DIAMETER: 3-inch

LOGGED BY: M. Bagley
COMPLETED: 1/11/18

BORING LOG-ENV CORE 41237.005 B1-B7_JHD.GPJ DATATMPL.GDT PRINT DATE: 2/9/18_JHD



LINCOLN AVENUE
2301 AND 2325 LINCOLN AVE.
TACOMA, WASHINGTON

BORING B2

PBS PROJECT NUMBER:
41237.005

BORING B2 LOCATION:
(See Site Plan)

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	GROUND- WATER	PID (PPM)	SAMPLE NUMBER	SAMPLE/ TEMPORARY WELL(S)	RECOVERY (%)	COMMENTS/ WELL INSTALLATION
0.0		Loose dark brown to black SAND (SP); nonplastic; fine sand; moist; FILL						
2.0								
4.0								
6.0		Soft dark brown to dark grey CLAY (CH); high plasticity; fine sand; wet	1/11/2018 ▼	0.0	B2-1			
8.0								
10.0		Final depth 10.0 ft bgs; groundwater encountered at 6.0 ft bgs		0.0	B2-2			
12.0								

BORING LOG-ENV CORE 41237.005 B1-B7_JHD.GPJ DATATMPL.GDT PRINT DATE: 29/18_JHD

BORING METHOD: Direct Push
DRILLED BY: Holocene Drilling
BORING BIT DIAMETER: 3-inch

LOGGED BY: M. Bagley
COMPLETED: 1/11/18



LINCOLN AVENUE
2301 AND 2325 LINCOLN AVE.
TACOMA, WASHINGTON

BORING B3

PBS PROJECT NUMBER:
41237.005

BORING B3 LOCATION:
(See Site Plan)

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	GROUND- WATER	PID (PPM)	SAMPLE NUMBER	SAMPLE/ TEMPORARY WELL(S)	RECOVERY (%)	COMMENTS/ WELL INSTALLATION
0.0		Loose grey silty SAND (SP); low plasticity; medium sand; moist; FILL						
2.0								
4.0								
6.0		Loose dark grey silty SAND (SP) with organics; low plasticity; fine sand; wet	1/11/2018 ▼	0.0	B3-1			
8.0								
10.0		Final depth 10.0 ft bgs; groundwater encountered at 6.0 ft bgs		0.0	B3-2			
12.0								

BORING METHOD: Direct Push
DRILLED BY: Holocene Drilling
BORING BIT DIAMETER: 3-inch

LOGGED BY: M. Bagley
COMPLETED: 1/11/18



LINCOLN AVENUE
2301 AND 2325 LINCOLN AVE.
TACOMA, WASHINGTON

BORING B4

PBS PROJECT NUMBER:
41237.005

BORING B4 LOCATION:
(See Site Plan)

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	GROUND- WATER	PID (PPM)	SAMPLE NUMBER	SAMPLE/ TEMPORARY WELL(S)	RECOVERY (%)	COMMENTS/ WELL INSTALLATION
0.0		Loose grey silty SAND (SP); low plasticity; medium sand; moist; FILL						
2.0								
4.0								
6.0		Loose dark grey silty SAND (SP) with organics; low plasticity; fine sand; wet	1/11/2018 ▼	0.0	B4-1			
8.0								
10.0		Final depth 10.0 ft bgs; groundwater encountered at 6.0 ft bgs		0.0	B4-2			
12.0								

BORING METHOD: Direct Push
DRILLED BY: Holocene Drilling
BORING BIT DIAMETER: 3-inch

LOGGED BY: M. Bagley
COMPLETED: 1/11/18



LINCOLN AVENUE
2301 AND 2325 LINCOLN AVE.
TACOMA, WASHINGTON

BORING B5

PBS PROJECT NUMBER:
41237.005

BORING B5 LOCATION:
(See Site Plan)

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	GROUND- WATER	PID (PPM)	SAMPLE NUMBER	SAMPLE/ TEMPORARY WELL(S)	RECOVERY (%)	COMMENTS/ WELL INSTALLATION
0.0		Loose grey SAND (SP); nonplastic; fine sand; moist; FILL						
2.0								
4.0								
6.0		Soft grey CLAY (CH); high plasticity; fine sand; wet	1/11/2018 ▼	0.0	B5-1			
8.0								
10.0		Final depth 10.0 ft bgs; groundwater encountered at 6.0 ft bgs		0.0	B5-2			
12.0								

BORING METHOD: Direct Push
DRILLED BY: Holocene Drilling
BORING BIT DIAMETER: 3-inch

LOGGED BY: M. Bagley
COMPLETED: 1/11/18

BORING LOG-ENV CORE 41237.005 B1-B7_JHD.GPJ DATATMPL.GDT PRINT DATE: 2/9/18_JHD



LINCOLN AVENUE
2301 AND 2325 LINCOLN AVE.
TACOMA, WASHINGTON

BORING B6

PBS PROJECT NUMBER:
41237.005

BORING B6 LOCATION:
(See Site Plan)

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	GROUND- WATER	PID (PPM)	SAMPLE NUMBER	SAMPLE/ TEMPORARY WELL(S)	RECOVERY (%)	COMMENTS/ WELL INSTALLATION
0.0		Loose grey SAND (SW); nonplastic; medium sand; moist; FILL						
2.0								
4.0								
6.0		Loose grey silty SAND (SM) with mixed organics; low plasticity; fine sand; wet	1/11/2018 ▼	0.0	B6-1			
8.0								
10.0		Final depth 10.0 ft bgs; groundwater encountered at 6.0 ft bgs		0.0	B6-2			
12.0								

BORING METHOD: Direct Push
DRILLED BY: Holocene Drilling
BORING BIT DIAMETER: 3-inch

LOGGED BY: M. Bagley
COMPLETED: 1/11/18

BORING LOG-ENV CORE 41237.005 B1-B7_JHD.GPJ DATATMPL.GDT PRINT DATE: 2/9/18_JHD



LINCOLN AVENUE
2301 AND 2325 LINCOLN AVE.
TACOMA, WASHINGTON

BORING B7

PBS PROJECT NUMBER:
41237.005

BORING B7 LOCATION:
(See Site Plan)

DEPTH FEET	GRAPHIC LOG	MATERIAL DESCRIPTION	GROUND- WATER	PID (PPM)	SAMPLE NUMBER	SAMPLE/ TEMPORARY WELL(S)	RECOVERY (%)	COMMENTS/ WELL INSTALLATION
0.0		Loose brown SAND (SW); nonplastic; medium sand; moist; FILL						
2.0								
4.0								
6.0		Loose grey SAND (SP); nonplastic; fine sand; wet	1/11/2018 ▼	0.0	B7-1			
8.0								
10.0		Final depth 10.0 ft bgs; groundwater encountered at 6.0 ft bgs		0.0	B7-2			
12.0								

BORING METHOD: Direct Push
DRILLED BY: Holocene Drilling
BORING BIT DIAMETER: 3-inch

LOGGED BY: M. Bagley
COMPLETED: 1/11/18

BORING LOG-ENV CORE 41237.005 B1-B7_JHD.GPJ DATATMPL.GDT PRINT DATE: 2/9/18_JHD



Photo 1. Drill rig set up at location B2.



Photo 2. Setting up for groundwater sampling at location B-6.



Photo 3. CCTV van on site at CB-1.

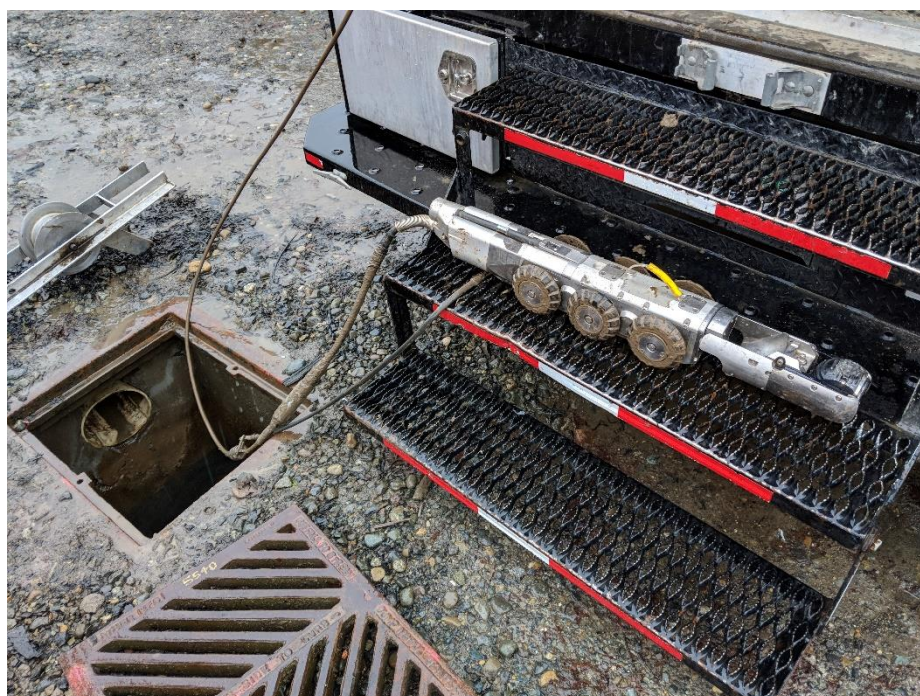


Photo 4. CCTV device after retrieval from CB-1.



Photo 5. CB-4, with faint marking pointing towards off-site manhole near rail.



Photo 6. Marking shows approximately location and orientation of storm water "T"-junction.

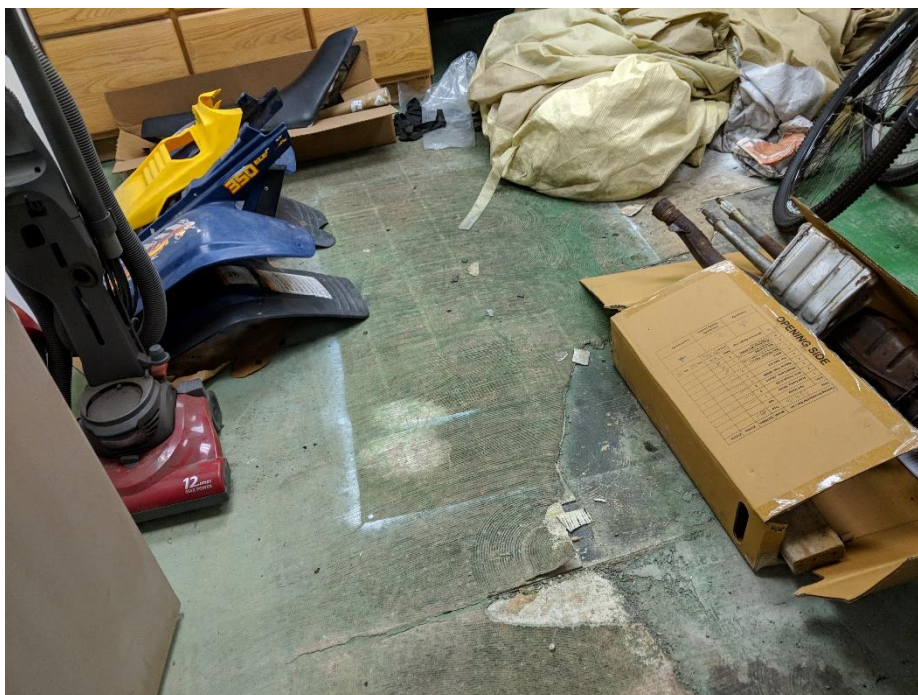


Photo 7. Store room in 2301 building office area, source of "hot" asbestos sample.



Photo 8. CB-7 CCTV operations.

APPENDIX B

Soil and Groundwater Laboratory Reports

Chain of Custody

Communications with US Oil



PBS Engineering & Environmental

Mike Bagley
2517 Eastlake Ave, E #100
Seattle, WA 98102

RE: 2301 & 2325 Lincoln Ave
Work Order Number: 1801177

January 31, 2018

Attention Mike Bagley:

Fremont Analytical, Inc. received 24 sample(s) on 1/11/2018 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.
Dissolved Mercury by EPA Method 245.1
Dissolved Metals by EPA Method 200.8
Gasoline by NWTPH-Gx
Mercury by EPA Method 7471
Polychlorinated Biphenyls (PCB) by EPA 8082
Sample Moisture (Percent Moisture)
Semi-Volatile Organic Compounds by EPA Method 8270
Total Metals by EPA Method 6020
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave
Work Order: 1801177

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1801177-001	B2-1	01/11/2018 9:30 AM	01/11/2018 5:24 PM
1801177-002	B2-2	01/11/2018 9:35 AM	01/11/2018 5:24 PM
1801177-003	B1-1	01/11/2018 10:45 AM	01/11/2018 5:24 PM
1801177-004	B1-2	01/11/2018 10:50 AM	01/11/2018 5:24 PM
1801177-005	B5-1	01/11/2018 11:30 AM	01/11/2018 5:24 PM
1801177-006	B5-2	01/11/2018 11:45 AM	01/11/2018 5:24 PM
1801177-007	B7-1	01/11/2018 1:00 PM	01/11/2018 5:24 PM
1801177-008	B7-2	01/11/2018 1:05 PM	01/11/2018 5:24 PM
1801177-009	B6-1	01/11/2018 1:40 PM	01/11/2018 5:24 PM
1801177-010	B6-2	01/11/2018 1:45 PM	01/11/2018 5:24 PM
1801177-011	B4-2	01/11/2018 2:45 PM	01/11/2018 5:24 PM
1801177-012	B4-1	01/11/2018 2:50 PM	01/11/2018 5:24 PM
1801177-013	B3-1	01/11/2018 3:30 PM	01/11/2018 5:24 PM
1801177-014	B3-2	01/11/2018 3:35 PM	01/11/2018 5:24 PM
1801177-015	B2	01/11/2018 9:45 AM	01/11/2018 5:24 PM
1801177-016	B1	01/11/2018 11:00 AM	01/11/2018 5:24 PM
1801177-017	B5	01/11/2018 11:45 AM	01/11/2018 5:24 PM
1801177-018	B7	01/11/2018 1:15 PM	01/11/2018 5:24 PM
1801177-019	B6	01/11/2018 2:00 PM	01/11/2018 5:24 PM
1801177-020	B4	01/11/2018 3:00 PM	01/11/2018 5:24 PM
1801177-021	B3	01/11/2018 3:45 PM	01/11/2018 5:24 PM
1801177-022	Trip Blank	12/20/2017 12:00 PM	01/11/2018 5:24 PM
1801177-023	Trip Blank	01/09/2018 5:45 PM	01/11/2018 5:24 PM
1801177-024	Trip Blank	12/20/2017 12:00 PM	01/11/2018 5:24 PM

CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

Work Order: 1801177
Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 9:35:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-002

Matrix: Soil

Client Sample ID: B2-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Polychlorinated Biphenyls (PCB) by EPA 8082</u>				Batch ID: 19507	Analyst: SB	
Aroclor 1016	ND	0.117		mg/Kg-dry	1	1/17/2018 10:20:44 AM
Aroclor 1221	ND	0.117		mg/Kg-dry	1	1/17/2018 10:20:44 AM
Aroclor 1232	ND	0.117		mg/Kg-dry	1	1/17/2018 10:20:44 AM
Aroclor 1242	ND	0.117		mg/Kg-dry	1	1/17/2018 10:20:44 AM
Aroclor 1248	ND	0.117		mg/Kg-dry	1	1/17/2018 10:20:44 AM
Aroclor 1254	ND	0.117		mg/Kg-dry	1	1/17/2018 10:20:44 AM
Aroclor 1260	ND	0.117		mg/Kg-dry	1	1/17/2018 10:20:44 AM
Aroclor 1262	ND	0.117		mg/Kg-dry	1	1/17/2018 10:20:44 AM
Aroclor 1268	ND	0.117		mg/Kg-dry	1	1/17/2018 10:20:44 AM
Total PCBs	ND	0.117		mg/Kg-dry	1	1/17/2018 10:20:44 AM
Surr: Decachlorobiphenyl	102	30.8 - 168		%Rec	1	1/17/2018 10:20:44 AM
Surr: Tetrachloro-m-xylene	98.9	30.3 - 157		%Rec	1	1/17/2018 10:20:44 AM

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 19492 Analyst: SB

Diesel (Fuel Oil)	ND	26.2		mg/Kg-dry	1	1/15/2018 2:35:42 PM
Heavy Oil	ND	65.6		mg/Kg-dry	1	1/15/2018 2:35:42 PM
Surr: 2-Fluorobiphenyl	83.1	50 - 150		%Rec	1	1/15/2018 2:35:42 PM
Surr: o-Terphenyl	86.4	50 - 150		%Rec	1	1/15/2018 2:35:42 PM

Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19533 Analyst: IH

Phenol	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Bis(2-chloroethyl) ether	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
2-Chlorophenol	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
1,3-Dichlorobenzene	ND	98.5		µg/Kg-dry	1	1/26/2018 6:15:17 PM
1,4-Dichlorobenzene	ND	98.5		µg/Kg-dry	1	1/26/2018 6:15:17 PM
1,2-Dichlorobenzene	ND	98.5		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Benzyl alcohol	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
2-Methylphenol (o-cresol)	ND	131	Q	µg/Kg-dry	1	1/26/2018 6:15:17 PM
Hexachloroethane	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
N-Nitrosodi-n-propylamine	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Nitrobenzene	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Isophorone	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
3&4-Methylphenol (m, p-cresol)	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
2-Nitrophenol	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
2,4-Dimethylphenol	ND	131	Q	µg/Kg-dry	1	1/26/2018 6:15:17 PM
Bis(2-chloroethoxy)methane	ND	98.5		µg/Kg-dry	1	1/26/2018 6:15:17 PM
2,4-Dichlorophenol	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 9:35:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-002

Matrix: Soil

Client Sample ID: B2-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19533

Analyst: IH

1,2,4-Trichlorobenzene	ND	98.5		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Naphthalene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
4-Chloroaniline	ND	98.5		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Hexachlorobutadiene	ND	98.5		µg/Kg-dry	1	1/26/2018 6:15:17 PM
4-Chloro-3-methylphenol	ND	263		µg/Kg-dry	1	1/26/2018 6:15:17 PM
2-Methylnaphthalene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
1-Methylnaphthalene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Hexachlorocyclopentadiene	ND	131	Q	µg/Kg-dry	1	1/26/2018 6:15:17 PM
2,4,6-Trichlorophenol	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
2,4,5-Trichlorophenol	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
2-Chloronaphthalene	ND	98.5		µg/Kg-dry	1	1/26/2018 6:15:17 PM
2-Nitroaniline	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Acenaphthene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Dimethylphthalate	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
2,6-Dinitrotoluene	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Acenaphthylene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
2,4-Dinitrophenol	ND	690	Q	µg/Kg-dry	1	1/26/2018 6:15:17 PM
Dibenzofuran	ND	98.5		µg/Kg-dry	1	1/26/2018 6:15:17 PM
2,4-Dinitrotoluene	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
4-Nitrophenol	ND	657	Q	µg/Kg-dry	1	1/26/2018 6:15:17 PM
Fluorene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
4-Chlorophenyl phenyl ether	ND	98.5		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Diethylphthalate	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
4,6-Dinitro-2-methylphenol	ND	263		µg/Kg-dry	1	1/26/2018 6:15:17 PM
4-Bromophenyl phenyl ether	ND	98.5		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Hexachlorobenzene	ND	98.5		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Pentachlorophenol	ND	131	Q	µg/Kg-dry	1	1/26/2018 6:15:17 PM
Phenanthrene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Anthracene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Carbazole	ND	98.5		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Di-n-butylphthalate	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Fluoranthene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Pyrene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Butyl Benzylphthalate	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
bis(2-Ethylhexyl)adipate	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Benz(a)anthracene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Chrysene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
bis (2-Ethylhexyl) phthalate	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Di-n-octyl phthalate	ND	131		µg/Kg-dry	1	1/26/2018 6:15:17 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 9:35:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-002

Matrix: Soil

Client Sample ID: B2-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19533

Analyst: IH

Benzo(b)fluoranthene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Benzo(k)fluoranthene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Benzo(a)pyrene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Indeno(1,2,3-cd)pyrene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Dibenz(a,h)anthracene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Benzo(g,h,i)perylene	ND	65.7		µg/Kg-dry	1	1/26/2018 6:15:17 PM
Surr: 2,4,6-Tribromophenol	41.9	14.8 - 165		%Rec	1	1/26/2018 6:15:17 PM
Surr: 2-Fluorobiphenyl	41.4	17.8 - 151		%Rec	1	1/26/2018 6:15:17 PM
Surr: Nitrobenzene-d5	44.5	12.5 - 163		%Rec	1	1/26/2018 6:15:17 PM
Surr: Phenol-d6	30.6	11.6 - 133		%Rec	1	1/26/2018 6:15:17 PM
Surr: p-Terphenyl	77.3	22 - 176		%Rec	1	1/26/2018 6:15:17 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Gasoline by NWTPH-Gx

Batch ID: 19498

Analyst: MW

Gasoline	ND	8.12		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Surr: Toluene-d8	100	65 - 135		%Rec	1	1/15/2018 9:55:06 PM
Surr: 4-Bromofluorobenzene	94.0	65 - 135		%Rec	1	1/15/2018 9:55:06 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19498

Analyst: MW

Dichlorodifluoromethane (CFC-12)	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Chloromethane	ND	0.0817		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Vinyl chloride	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Bromomethane	ND	0.0817		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Trichlorofluoromethane (CFC-11)	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Chloroethane	ND	0.0817		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,1-Dichloroethene	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Methylene chloride	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
trans-1,2-Dichloroethene	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Methyl tert-butyl ether (MTBE)	ND	0.0817		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,1-Dichloroethane	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
2,2-Dichloropropane	ND	0.163		mg/Kg-dry	1	1/15/2018 9:55:06 PM
cis-1,2-Dichloroethene	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Chloroform	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,1,1-Trichloroethane (TCA)	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,1-Dichloropropene	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 9:35:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-002

Matrix: Soil

Client Sample ID: B2-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19498

Analyst: MW

Carbon tetrachloride	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,2-Dichloroethane (EDC)	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Benzene	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Trichloroethene (TCE)	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,2-Dichloropropane	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Bromodichloromethane	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Dibromomethane	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
cis-1,3-Dichloropropene	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Toluene	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
trans-1,3-Dichloropropylene	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,1,2-Trichloroethane	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,3-Dichloropropane	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Tetrachloroethene (PCE)	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Dibromochloromethane	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,2-Dibromoethane (EDB)	ND	0.00817		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Chlorobenzene	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,1,1,2-Tetrachloroethane	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Ethylbenzene	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
m,p-Xylene	ND	0.0817		mg/Kg-dry	1	1/15/2018 9:55:06 PM
o-Xylene	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Styrene	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Isopropylbenzene	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Bromoform	ND	0.0817		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,1,2,2-Tetrachloroethane	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
n-Propylbenzene	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Bromobenzene	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,3,5-Trimethylbenzene	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
2-Chlorotoluene	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
4-Chlorotoluene	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
tert-Butylbenzene	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,2,3-Trichloropropane	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,2,4-Trichlorobenzene	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
sec-Butylbenzene	ND	0.0817		mg/Kg-dry	1	1/15/2018 9:55:06 PM
4-Isopropyltoluene	ND	0.0817		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,3-Dichlorobenzene	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,4-Dichlorobenzene	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
n-Butylbenzene	ND	0.0408		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,2-Dichlorobenzene	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,2-Dibromo-3-chloropropane	ND	0.817		mg/Kg-dry	1	1/15/2018 9:55:06 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 9:35:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-002

Matrix: Soil

Client Sample ID: B2-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Volatile Organic Compounds by EPA Method 8260C</u>				Batch ID: 19498	Analyst: MW	
1,2,4-Trimethylbenzene	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Hexachlorobutadiene	ND	0.0817		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Naphthalene	ND	0.0817		mg/Kg-dry	1	1/15/2018 9:55:06 PM
1,2,3-Trichlorobenzene	ND	0.0327		mg/Kg-dry	1	1/15/2018 9:55:06 PM
Surr: Dibromofluoromethane	101	56.5 - 129		%Rec	1	1/15/2018 9:55:06 PM
Surr: Toluene-d8	94.5	64.5 - 151		%Rec	1	1/15/2018 9:55:06 PM
Surr: 1-Bromo-4-fluorobenzene	92.5	43.2 - 143		%Rec	1	1/15/2018 9:55:06 PM

Mercury by EPA Method 7471

Batch ID: 19521 Analyst: WF

Mercury	ND	0.317		mg/Kg-dry	1	1/17/2018 7:59:34 PM
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Total Metals by EPA Method 6020

Batch ID: 19520 Analyst: TN

Antimony	ND	0.193		mg/Kg-dry	1	1/17/2018 5:24:51 PM
Arsenic	4.15	0.0963		mg/Kg-dry	1	1/17/2018 5:24:51 PM
Beryllium	0.202	0.193		mg/Kg-dry	1	1/17/2018 5:24:51 PM
Cadmium	ND	0.193		mg/Kg-dry	1	1/17/2018 5:24:51 PM
Chromium	17.8	0.0963		mg/Kg-dry	1	1/17/2018 5:24:51 PM
Copper	16.1	0.193		mg/Kg-dry	1	1/17/2018 5:24:51 PM
Lead	1.92	0.193		mg/Kg-dry	1	1/17/2018 5:24:51 PM
Nickel	9.02	0.0963	B	mg/Kg-dry	1	1/17/2018 5:24:51 PM
Selenium	1.81	0.482		mg/Kg-dry	1	1/17/2018 5:24:51 PM
Silver	0.116	0.0963		mg/Kg-dry	1	1/17/2018 5:24:51 PM
Thallium	ND	0.193		mg/Kg-dry	1	1/17/2018 5:24:51 PM
Zinc	25.5	0.385		mg/Kg-dry	1	1/17/2018 5:24:51 PM

Sample Moisture (Percent Moisture)

Batch ID: R41080 Analyst: CG

Percent Moisture	26.9			wt%	1	1/15/2018 11:07:10 AM
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Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 11:45:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-006

Matrix: Soil

Client Sample ID: B5-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Polychlorinated Biphenyls (PCB) by EPA 8082

Batch ID: 19507

Analyst: SB

Aroclor 1016	ND	0.127		mg/Kg-dry	1	1/17/2018 9:35:12 AM
Aroclor 1221	ND	0.127		mg/Kg-dry	1	1/17/2018 9:35:12 AM
Aroclor 1232	ND	0.127		mg/Kg-dry	1	1/17/2018 9:35:12 AM
Aroclor 1242	ND	0.127		mg/Kg-dry	1	1/17/2018 9:35:12 AM
Aroclor 1248	ND	0.127		mg/Kg-dry	1	1/17/2018 9:35:12 AM
Aroclor 1254	ND	0.127		mg/Kg-dry	1	1/17/2018 9:35:12 AM
Aroclor 1260	ND	0.127		mg/Kg-dry	1	1/17/2018 9:35:12 AM
Aroclor 1262	ND	0.127		mg/Kg-dry	1	1/17/2018 9:35:12 AM
Aroclor 1268	ND	0.127		mg/Kg-dry	1	1/17/2018 9:35:12 AM
Total PCBs	ND	0.127		mg/Kg-dry	1	1/17/2018 9:35:12 AM
Surr: Decachlorobiphenyl	97.3	30.8 - 168		%Rec	1	1/17/2018 9:35:12 AM
Surr: Tetrachloro-m-xylene	107	30.3 - 157		%Rec	1	1/17/2018 9:35:12 AM

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 19492

Analyst: SB

Diesel (Fuel Oil)	ND	27.8		mg/Kg-dry	1	1/15/2018 4:36:04 PM
Heavy Oil	ND	69.4		mg/Kg-dry	1	1/15/2018 4:36:04 PM
Surr: 2-Fluorobiphenyl	88.4	50 - 150		%Rec	1	1/15/2018 4:36:04 PM
Surr: o-Terphenyl	92.7	50 - 150		%Rec	1	1/15/2018 4:36:04 PM

Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19533

Analyst: IH

Phenol	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Bis(2-chloroethyl) ether	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
2-Chlorophenol	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
1,3-Dichlorobenzene	ND	110		µg/Kg-dry	1	1/26/2018 5:09:55 PM
1,4-Dichlorobenzene	ND	110		µg/Kg-dry	1	1/26/2018 5:09:55 PM
1,2-Dichlorobenzene	ND	110		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Benzyl alcohol	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
2-Methylphenol (o-cresol)	ND	146	Q	µg/Kg-dry	1	1/26/2018 5:09:55 PM
Hexachloroethane	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
N-Nitrosodi-n-propylamine	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Nitrobenzene	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Isophorone	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
3&4-Methylphenol (m, p-cresol)	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
2-Nitrophenol	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
2,4-Dimethylphenol	ND	146	Q	µg/Kg-dry	1	1/26/2018 5:09:55 PM
Bis(2-chloroethoxy)methane	ND	110		µg/Kg-dry	1	1/26/2018 5:09:55 PM
2,4-Dichlorophenol	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 11:45:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-006

Matrix: Soil

Client Sample ID: B5-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19533

Analyst: IH

1,2,4-Trichlorobenzene	ND	110		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Naphthalene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
4-Chloroaniline	ND	110		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Hexachlorobutadiene	ND	110		µg/Kg-dry	1	1/26/2018 5:09:55 PM
4-Chloro-3-methylphenol	ND	292		µg/Kg-dry	1	1/26/2018 5:09:55 PM
2-Methylnaphthalene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
1-Methylnaphthalene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Hexachlorocyclopentadiene	ND	146	Q	µg/Kg-dry	1	1/26/2018 5:09:55 PM
2,4,6-Trichlorophenol	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
2,4,5-Trichlorophenol	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
2-Chloronaphthalene	ND	110		µg/Kg-dry	1	1/26/2018 5:09:55 PM
2-Nitroaniline	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Acenaphthene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Dimethylphthalate	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
2,6-Dinitrotoluene	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Acenaphthylene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
2,4-Dinitrophenol	ND	767	Q	µg/Kg-dry	1	1/26/2018 5:09:55 PM
Dibenzofuran	ND	110		µg/Kg-dry	1	1/26/2018 5:09:55 PM
2,4-Dinitrotoluene	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
4-Nitrophenol	ND	731	Q	µg/Kg-dry	1	1/26/2018 5:09:55 PM
Fluorene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
4-Chlorophenyl phenyl ether	ND	110		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Diethylphthalate	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
4,6-Dinitro-2-methylphenol	ND	292		µg/Kg-dry	1	1/26/2018 5:09:55 PM
4-Bromophenyl phenyl ether	ND	110		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Hexachlorobenzene	ND	110		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Pentachlorophenol	ND	146	Q	µg/Kg-dry	1	1/26/2018 5:09:55 PM
Phenanthrene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Anthracene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Carbazole	ND	110		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Di-n-butylphthalate	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Fluoranthene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Pyrene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Butyl Benzylphthalate	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
bis(2-Ethylhexyl)adipate	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Benz(a)anthracene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Chrysene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
bis (2-Ethylhexyl) phthalate	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Di-n-octyl phthalate	ND	146		µg/Kg-dry	1	1/26/2018 5:09:55 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 11:45:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-006

Matrix: Soil

Client Sample ID: B5-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19533

Analyst: IH

Benzo(b)fluoranthene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Benzo(k)fluoranthene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Benzo(a)pyrene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Indeno(1,2,3-cd)pyrene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Dibenz(a,h)anthracene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Benzo(g,h,i)perylene	ND	73.1		µg/Kg-dry	1	1/26/2018 5:09:55 PM
Surr: 2,4,6-Tribromophenol	47.0	14.8 - 165		%Rec	1	1/26/2018 5:09:55 PM
Surr: 2-Fluorobiphenyl	60.5	17.8 - 151		%Rec	1	1/26/2018 5:09:55 PM
Surr: Nitrobenzene-d5	59.6	12.5 - 163		%Rec	1	1/26/2018 5:09:55 PM
Surr: Phenol-d6	40.1	11.6 - 133		%Rec	1	1/26/2018 5:09:55 PM
Surr: p-Terphenyl	80.5	22 - 176		%Rec	1	1/26/2018 5:09:55 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Gasoline by NWTPH-Gx

Batch ID: 19498

Analyst: MW

Gasoline	ND	9.36		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Surr: Toluene-d8	100	65 - 135		%Rec	1	1/15/2018 10:25:44 PM
Surr: 4-Bromofluorobenzene	90.6	65 - 135		%Rec	1	1/15/2018 10:25:44 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19498

Analyst: MW

Dichlorodifluoromethane (CFC-12)	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Chloromethane	ND	0.0936		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Vinyl chloride	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Bromomethane	ND	0.0936		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Trichlorofluoromethane (CFC-11)	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Chloroethane	ND	0.0936		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,1-Dichloroethene	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Methylene chloride	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
trans-1,2-Dichloroethene	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Methyl tert-butyl ether (MTBE)	ND	0.0936		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,1-Dichloroethane	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
2,2-Dichloropropane	ND	0.187		mg/Kg-dry	1	1/15/2018 10:25:44 PM
cis-1,2-Dichloroethene	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Chloroform	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,1,1-Trichloroethane (TCA)	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,1-Dichloropropene	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 11:45:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-006

Matrix: Soil

Client Sample ID: B5-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Volatile Organic Compounds by EPA Method 8260C</u>				Batch ID: 19498	Analyst: MW	
Carbon tetrachloride	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,2-Dichloroethane (EDC)	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Benzene	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Trichloroethene (TCE)	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,2-Dichloropropane	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Bromodichloromethane	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Dibromomethane	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
cis-1,3-Dichloropropene	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Toluene	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
trans-1,3-Dichloropropylene	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,1,2-Trichloroethane	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,3-Dichloropropane	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Tetrachloroethene (PCE)	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Dibromochloromethane	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,2-Dibromoethane (EDB)	ND	0.00936		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Chlorobenzene	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,1,1,2-Tetrachloroethane	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Ethylbenzene	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
m,p-Xylene	ND	0.0936		mg/Kg-dry	1	1/15/2018 10:25:44 PM
o-Xylene	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Styrene	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Isopropylbenzene	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Bromoform	ND	0.0936		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,1,2,2-Tetrachloroethane	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
n-Propylbenzene	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Bromobenzene	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,3,5-Trimethylbenzene	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
2-Chlorotoluene	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
4-Chlorotoluene	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
tert-Butylbenzene	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,2,3-Trichloropropane	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,2,4-Trichlorobenzene	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
sec-Butylbenzene	ND	0.0936		mg/Kg-dry	1	1/15/2018 10:25:44 PM
4-Isopropyltoluene	ND	0.0936		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,3-Dichlorobenzene	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,4-Dichlorobenzene	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
n-Butylbenzene	ND	0.0468		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,2-Dichlorobenzene	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,2-Dibromo-3-chloropropane	ND	0.936		mg/Kg-dry	1	1/15/2018 10:25:44 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 11:45:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-006

Matrix: Soil

Client Sample ID: B5-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Volatile Organic Compounds by EPA Method 8260C</u>				Batch ID: 19498		Analyst: MW
1,2,4-Trimethylbenzene	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Hexachlorobutadiene	ND	0.0936		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Naphthalene	ND	0.0936		mg/Kg-dry	1	1/15/2018 10:25:44 PM
1,2,3-Trichlorobenzene	ND	0.0374		mg/Kg-dry	1	1/15/2018 10:25:44 PM
Surr: Dibromofluoromethane	100	56.5 - 129		%Rec	1	1/15/2018 10:25:44 PM
Surr: Toluene-d8	97.1	64.5 - 151		%Rec	1	1/15/2018 10:25:44 PM
Surr: 1-Bromo-4-fluorobenzene	89.2	43.2 - 143		%Rec	1	1/15/2018 10:25:44 PM

Mercury by EPA Method 7471

Batch ID: 19521 Analyst: WF

Mercury	ND	0.353		mg/Kg-dry	1	1/17/2018 8:01:12 PM
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Total Metals by EPA Method 6020

Batch ID: 19520 Analyst: TN

Antimony	ND	0.207		mg/Kg-dry	1	1/17/2018 5:48:59 PM
Arsenic	4.11	0.103		mg/Kg-dry	1	1/17/2018 5:48:59 PM
Beryllium	0.227	0.207		mg/Kg-dry	1	1/17/2018 5:48:59 PM
Cadmium	ND	0.207		mg/Kg-dry	1	1/17/2018 5:48:59 PM
Chromium	19.6	0.103		mg/Kg-dry	1	1/17/2018 5:48:59 PM
Copper	30.4	0.207		mg/Kg-dry	1	1/17/2018 5:48:59 PM
Lead	3.31	0.207		mg/Kg-dry	1	1/17/2018 5:48:59 PM
Nickel	14.2	0.103	B	mg/Kg-dry	1	1/17/2018 5:48:59 PM
Selenium	2.16	0.517		mg/Kg-dry	1	1/17/2018 5:48:59 PM
Silver	ND	0.103		mg/Kg-dry	1	1/17/2018 5:48:59 PM
Thallium	ND	0.207		mg/Kg-dry	1	1/17/2018 5:48:59 PM
Zinc	34.9	0.413		mg/Kg-dry	1	1/17/2018 5:48:59 PM

Sample Moisture (Percent Moisture)

Batch ID: R41080 Analyst: CG

Percent Moisture	31.8			wt%	1	1/15/2018 11:07:10 AM
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Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 1:45:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-010

Matrix: Soil

Client Sample ID: B6-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Polychlorinated Biphenyls (PCB) by EPA 8082</u>				Batch ID: 19507	Analyst: SB	
Aroclor 1016	ND	0.0985		mg/Kg-dry	1	1/17/2018 10:32:09 AM
Aroclor 1221	ND	0.0985		mg/Kg-dry	1	1/17/2018 10:32:09 AM
Aroclor 1232	ND	0.0985		mg/Kg-dry	1	1/17/2018 10:32:09 AM
Aroclor 1242	ND	0.0985		mg/Kg-dry	1	1/17/2018 10:32:09 AM
Aroclor 1248	ND	0.0985		mg/Kg-dry	1	1/17/2018 10:32:09 AM
Aroclor 1254	ND	0.0985		mg/Kg-dry	1	1/17/2018 10:32:09 AM
Aroclor 1260	ND	0.0985		mg/Kg-dry	1	1/17/2018 10:32:09 AM
Aroclor 1262	ND	0.0985		mg/Kg-dry	1	1/17/2018 10:32:09 AM
Aroclor 1268	ND	0.0985		mg/Kg-dry	1	1/17/2018 10:32:09 AM
Total PCBs	ND	0.0985		mg/Kg-dry	1	1/17/2018 10:32:09 AM
Surr: Decachlorobiphenyl	92.8	30.8 - 168		%Rec	1	1/17/2018 10:32:09 AM
Surr: Tetrachloro-m-xylene	97.4	30.3 - 157		%Rec	1	1/17/2018 10:32:09 AM

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 19492

Analyst: SB

Diesel (Fuel Oil)	ND	39.0		mg/Kg-dry	1	1/15/2018 6:35:20 PM
Heavy Oil	ND	97.5		mg/Kg-dry	1	1/15/2018 6:35:20 PM
Surr: 2-Fluorobiphenyl	81.7	50 - 150		%Rec	1	1/15/2018 6:35:20 PM
Surr: o-Terphenyl	89.2	50 - 150		%Rec	1	1/15/2018 6:35:20 PM

Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19533

Analyst: IH

Phenol	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Bis(2-chloroethyl) ether	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
2-Chlorophenol	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
1,3-Dichlorobenzene	ND	74.5		µg/Kg-dry	1	1/26/2018 5:31:46 PM
1,4-Dichlorobenzene	ND	74.5		µg/Kg-dry	1	1/26/2018 5:31:46 PM
1,2-Dichlorobenzene	ND	74.5		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Benzyl alcohol	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
2-Methylphenol (o-cresol)	ND	99.3	Q	µg/Kg-dry	1	1/26/2018 5:31:46 PM
Hexachloroethane	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
N-Nitrosodi-n-propylamine	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Nitrobenzene	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Isophorone	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
3&4-Methylphenol (m, p-cresol)	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
2-Nitrophenol	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
2,4-Dimethylphenol	ND	99.3	Q	µg/Kg-dry	1	1/26/2018 5:31:46 PM
Bis(2-chloroethoxy)methane	ND	74.5		µg/Kg-dry	1	1/26/2018 5:31:46 PM
2,4-Dichlorophenol	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM



Analytical Report

Work Order: 1801177
Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 1:45:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-010

Matrix: Soil

Client Sample ID: B6-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19533

Analyst: IH

1,2,4-Trichlorobenzene	ND	74.5		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Naphthalene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
4-Chloroaniline	ND	74.5		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Hexachlorobutadiene	ND	74.5		µg/Kg-dry	1	1/26/2018 5:31:46 PM
4-Chloro-3-methylphenol	ND	199		µg/Kg-dry	1	1/26/2018 5:31:46 PM
2-Methylnaphthalene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
1-Methylnaphthalene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Hexachlorocyclopentadiene	ND	99.3	Q	µg/Kg-dry	1	1/26/2018 5:31:46 PM
2,4,6-Trichlorophenol	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
2,4,5-Trichlorophenol	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
2-Chloronaphthalene	ND	74.5		µg/Kg-dry	1	1/26/2018 5:31:46 PM
2-Nitroaniline	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Acenaphthene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Dimethylphthalate	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
2,6-Dinitrotoluene	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Acenaphthylene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
2,4-Dinitrophenol	ND	521	Q	µg/Kg-dry	1	1/26/2018 5:31:46 PM
Dibenzofuran	ND	74.5		µg/Kg-dry	1	1/26/2018 5:31:46 PM
2,4-Dinitrotoluene	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
4-Nitrophenol	ND	496	Q	µg/Kg-dry	1	1/26/2018 5:31:46 PM
Fluorene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
4-Chlorophenyl phenyl ether	ND	74.5		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Diethylphthalate	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
4,6-Dinitro-2-methylphenol	ND	199		µg/Kg-dry	1	1/26/2018 5:31:46 PM
4-Bromophenyl phenyl ether	ND	74.5		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Hexachlorobenzene	ND	74.5		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Pentachlorophenol	ND	99.3	Q	µg/Kg-dry	1	1/26/2018 5:31:46 PM
Phenanthrene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Anthracene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Carbazole	ND	74.5		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Di-n-butylphthalate	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Fluoranthene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Pyrene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Butyl Benzylphthalate	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
bis(2-Ethylhexyl)adipate	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Benz(a)anthracene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Chrysene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
bis (2-Ethylhexyl) phthalate	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Di-n-octyl phthalate	ND	99.3		µg/Kg-dry	1	1/26/2018 5:31:46 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 1:45:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-010

Matrix: Soil

Client Sample ID: B6-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19533

Analyst: IH

Benzo(b)fluoranthene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Benzo(k)fluoranthene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Benzo(a)pyrene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Indeno(1,2,3-cd)pyrene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Dibenz(a,h)anthracene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Benzo(g,h,i)perylene	ND	49.6		µg/Kg-dry	1	1/26/2018 5:31:46 PM
Surr: 2,4,6-Tribromophenol	46.4	14.8 - 165		%Rec	1	1/26/2018 5:31:46 PM
Surr: 2-Fluorobiphenyl	50.0	17.8 - 151		%Rec	1	1/26/2018 5:31:46 PM
Surr: Nitrobenzene-d5	53.8	12.5 - 163		%Rec	1	1/26/2018 5:31:46 PM
Surr: Phenol-d6	32.8	11.6 - 133		%Rec	1	1/26/2018 5:31:46 PM
Surr: p-Terphenyl	73.2	22 - 176		%Rec	1	1/26/2018 5:31:46 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Gasoline by NWTPH-Gx

Batch ID: 19498

Analyst: MW

Gasoline	ND	12.4		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Surr: Toluene-d8	96.8	65 - 135		%Rec	1	1/15/2018 11:26:57 PM
Surr: 4-Bromofluorobenzene	89.9	65 - 135		%Rec	1	1/15/2018 11:26:57 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19498

Analyst: MW

Dichlorodifluoromethane (CFC-12)	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Chloromethane	ND	0.124		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Vinyl chloride	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Bromomethane	ND	0.124		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Trichlorofluoromethane (CFC-11)	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Chloroethane	ND	0.124		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,1-Dichloroethene	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Methylene chloride	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
trans-1,2-Dichloroethene	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Methyl tert-butyl ether (MTBE)	ND	0.124		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,1-Dichloroethane	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
2,2-Dichloropropane	ND	0.248		mg/Kg-dry	1	1/15/2018 11:26:57 PM
cis-1,2-Dichloroethene	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Chloroform	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,1,1-Trichloroethane (TCA)	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,1-Dichloropropene	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 1:45:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-010

Matrix: Soil

Client Sample ID: B6-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Volatile Organic Compounds by EPA Method 8260C</u>				Batch ID: 19498	Analyst: MW	
Carbon tetrachloride	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,2-Dichloroethane (EDC)	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Benzene	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Trichloroethene (TCE)	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,2-Dichloropropane	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Bromodichloromethane	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Dibromomethane	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
cis-1,3-Dichloropropene	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Toluene	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
trans-1,3-Dichloropropylene	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,1,2-Trichloroethane	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,3-Dichloropropane	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Tetrachloroethene (PCE)	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Dibromochloromethane	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,2-Dibromoethane (EDB)	ND	0.0124		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Chlorobenzene	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,1,1,2-Tetrachloroethane	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Ethylbenzene	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
m,p-Xylene	ND	0.124		mg/Kg-dry	1	1/15/2018 11:26:57 PM
o-Xylene	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Styrene	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Isopropylbenzene	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Bromoform	ND	0.124		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,1,2,2-Tetrachloroethane	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
n-Propylbenzene	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Bromobenzene	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,3,5-Trimethylbenzene	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
2-Chlorotoluene	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
4-Chlorotoluene	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
tert-Butylbenzene	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,2,3-Trichloropropane	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,2,4-Trichlorobenzene	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
sec-Butylbenzene	ND	0.124		mg/Kg-dry	1	1/15/2018 11:26:57 PM
4-Isopropyltoluene	ND	0.124		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,3-Dichlorobenzene	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,4-Dichlorobenzene	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
n-Butylbenzene	ND	0.0620		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,2-Dichlorobenzene	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,2-Dibromo-3-chloropropane	ND	1.24		mg/Kg-dry	1	1/15/2018 11:26:57 PM



Analytical Report

Work Order: 1801177
Date Reported: 1/31/2018

Client: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave
Lab ID: 1801177-010
Client Sample ID: B6-2

Collection Date: 1/11/2018 1:45:00 PM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Volatile Organic Compounds by EPA Method 8260C</u>				Batch ID: 19498		Analyst: MW
1,2,4-Trimethylbenzene	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Hexachlorobutadiene	ND	0.124		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Naphthalene	ND	0.124		mg/Kg-dry	1	1/15/2018 11:26:57 PM
1,2,3-Trichlorobenzene	ND	0.0496		mg/Kg-dry	1	1/15/2018 11:26:57 PM
Surr: Dibromofluoromethane	95.1	56.5 - 129		%Rec	1	1/15/2018 11:26:57 PM
Surr: Toluene-d8	97.6	64.5 - 151		%Rec	1	1/15/2018 11:26:57 PM
Surr: 1-Bromo-4-fluorobenzene	88.5	43.2 - 143		%Rec	1	1/15/2018 11:26:57 PM

Mercury by EPA Method 7471

Batch ID: 19521 Analyst: WF

Mercury	ND	0.502		mg/Kg-dry	1	1/17/2018 8:02:49 PM
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Total Metals by EPA Method 6020

Batch ID: 19520 Analyst: TN

Antimony	ND	0.291		mg/Kg-dry	1	1/17/2018 5:53:01 PM
Arsenic	9.14	0.145		mg/Kg-dry	1	1/17/2018 5:53:01 PM
Beryllium	0.340	0.291		mg/Kg-dry	1	1/17/2018 5:53:01 PM
Cadmium	ND	0.291		mg/Kg-dry	1	1/17/2018 5:53:01 PM
Chromium	23.0	0.145		mg/Kg-dry	1	1/17/2018 5:53:01 PM
Copper	40.0	0.291		mg/Kg-dry	1	1/17/2018 5:53:01 PM
Lead	3.69	0.291		mg/Kg-dry	1	1/17/2018 5:53:01 PM
Nickel	16.2	0.145		mg/Kg-dry	1	1/17/2018 5:53:01 PM
Selenium	2.72	0.727		mg/Kg-dry	1	1/17/2018 5:53:01 PM
Silver	ND	0.145		mg/Kg-dry	1	1/17/2018 5:53:01 PM
Thallium	ND	0.291		mg/Kg-dry	1	1/17/2018 5:53:01 PM
Zinc	36.3	0.581		mg/Kg-dry	1	1/17/2018 5:53:01 PM

Sample Moisture (Percent Moisture)

Batch ID: R41080 Analyst: CG

Percent Moisture	51.2			wt%	1	1/15/2018 11:07:10 AM
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Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 2:50:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-012

Matrix: Soil

Client Sample ID: B4-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Polychlorinated Biphenyls (PCB) by EPA 8082</u>				Batch ID: 19507	Analyst: SB	
Aroclor 1016	ND	0.0993		mg/Kg-dry	1	1/17/2018 10:43:33 AM
Aroclor 1221	ND	0.0993		mg/Kg-dry	1	1/17/2018 10:43:33 AM
Aroclor 1232	ND	0.0993		mg/Kg-dry	1	1/17/2018 10:43:33 AM
Aroclor 1242	ND	0.0993		mg/Kg-dry	1	1/17/2018 10:43:33 AM
Aroclor 1248	ND	0.0993		mg/Kg-dry	1	1/17/2018 10:43:33 AM
Aroclor 1254	ND	0.0993		mg/Kg-dry	1	1/17/2018 10:43:33 AM
Aroclor 1260	ND	0.0993		mg/Kg-dry	1	1/17/2018 10:43:33 AM
Aroclor 1262	ND	0.0993		mg/Kg-dry	1	1/17/2018 10:43:33 AM
Aroclor 1268	ND	0.0993		mg/Kg-dry	1	1/17/2018 10:43:33 AM
Total PCBs	ND	0.0993		mg/Kg-dry	1	1/17/2018 10:43:33 AM
Surr: Decachlorobiphenyl	89.8	30.8 - 168		%Rec	1	1/17/2018 10:43:33 AM
Surr: Tetrachloro-m-xylene	117	30.3 - 157		%Rec	1	1/17/2018 10:43:33 AM

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 19492 Analyst: SB

Diesel (Fuel Oil)	ND	33.7		mg/Kg-dry	1	1/15/2018 7:05:01 PM
Heavy Oil	ND	84.4		mg/Kg-dry	1	1/15/2018 7:05:01 PM
Surr: 2-Fluorobiphenyl	90.3	50 - 150		%Rec	1	1/15/2018 7:05:01 PM
Surr: o-Terphenyl	98.1	50 - 150		%Rec	1	1/15/2018 7:05:01 PM

Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19533 Analyst: IH

Phenol	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Bis(2-chloroethyl) ether	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
2-Chlorophenol	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
1,3-Dichlorobenzene	ND	74.2		µg/Kg-dry	1	1/26/2018 5:53:33 PM
1,4-Dichlorobenzene	ND	74.2		µg/Kg-dry	1	1/26/2018 5:53:33 PM
1,2-Dichlorobenzene	ND	74.2		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Benzyl alcohol	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
2-Methylphenol (o-cresol)	ND	98.9	Q	µg/Kg-dry	1	1/26/2018 5:53:33 PM
Hexachloroethane	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
N-Nitrosodi-n-propylamine	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Nitrobenzene	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Isophorone	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
3&4-Methylphenol (m, p-cresol)	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
2-Nitrophenol	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
2,4-Dimethylphenol	ND	98.9	Q	µg/Kg-dry	1	1/26/2018 5:53:33 PM
Bis(2-chloroethoxy)methane	ND	74.2		µg/Kg-dry	1	1/26/2018 5:53:33 PM
2,4-Dichlorophenol	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 2:50:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-012

Matrix: Soil

Client Sample ID: B4-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19533

Analyst: IH

1,2,4-Trichlorobenzene	ND	74.2		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Naphthalene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
4-Chloroaniline	ND	74.2		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Hexachlorobutadiene	ND	74.2		µg/Kg-dry	1	1/26/2018 5:53:33 PM
4-Chloro-3-methylphenol	ND	198		µg/Kg-dry	1	1/26/2018 5:53:33 PM
2-Methylnaphthalene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
1-Methylnaphthalene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Hexachlorocyclopentadiene	ND	98.9	Q	µg/Kg-dry	1	1/26/2018 5:53:33 PM
2,4,6-Trichlorophenol	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
2,4,5-Trichlorophenol	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
2-Chloronaphthalene	ND	74.2		µg/Kg-dry	1	1/26/2018 5:53:33 PM
2-Nitroaniline	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Acenaphthene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Dimethylphthalate	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
2,6-Dinitrotoluene	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Acenaphthylene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
2,4-Dinitrophenol	ND	519	Q	µg/Kg-dry	1	1/26/2018 5:53:33 PM
Dibenzofuran	ND	74.2		µg/Kg-dry	1	1/26/2018 5:53:33 PM
2,4-Dinitrotoluene	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
4-Nitrophenol	ND	495	Q	µg/Kg-dry	1	1/26/2018 5:53:33 PM
Fluorene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
4-Chlorophenyl phenyl ether	ND	74.2		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Diethylphthalate	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
4,6-Dinitro-2-methylphenol	ND	198		µg/Kg-dry	1	1/26/2018 5:53:33 PM
4-Bromophenyl phenyl ether	ND	74.2		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Hexachlorobenzene	ND	74.2		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Pentachlorophenol	ND	98.9	Q	µg/Kg-dry	1	1/26/2018 5:53:33 PM
Phenanthrene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Anthracene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Carbazole	ND	74.2		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Di-n-butylphthalate	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Fluoranthene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Pyrene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Butyl Benzylphthalate	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
bis(2-Ethylhexyl)adipate	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Benz(a)anthracene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Chrysene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
bis (2-Ethylhexyl) phthalate	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Di-n-octyl phthalate	ND	98.9		µg/Kg-dry	1	1/26/2018 5:53:33 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 2:50:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-012

Matrix: Soil

Client Sample ID: B4-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19533

Analyst: IH

Benzo(b)fluoranthene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Benzo(k)fluoranthene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Benzo(a)pyrene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Indeno(1,2,3-cd)pyrene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Dibenz(a,h)anthracene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Benzo(g,h,i)perylene	ND	49.5		µg/Kg-dry	1	1/26/2018 5:53:33 PM
Surr: 2,4,6-Tribromophenol	39.7	14.8 - 165		%Rec	1	1/26/2018 5:53:33 PM
Surr: 2-Fluorobiphenyl	58.5	17.8 - 151		%Rec	1	1/26/2018 5:53:33 PM
Surr: Nitrobenzene-d5	62.0	12.5 - 163		%Rec	1	1/26/2018 5:53:33 PM
Surr: Phenol-d6	36.1	11.6 - 133		%Rec	1	1/26/2018 5:53:33 PM
Surr: p-Terphenyl	80.0	22 - 176		%Rec	1	1/26/2018 5:53:33 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Gasoline by NWTPH-Gx

Batch ID: 19498

Analyst: MW

Gasoline	ND	10.1		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Surr: Toluene-d8	97.6	65 - 135		%Rec	1	1/15/2018 11:57:29 PM
Surr: 4-Bromofluorobenzene	96.1	65 - 135		%Rec	1	1/15/2018 11:57:29 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19498

Analyst: MW

Dichlorodifluoromethane (CFC-12)	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Chloromethane	ND	0.101		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Vinyl chloride	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Bromomethane	ND	0.101		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Trichlorofluoromethane (CFC-11)	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Chloroethane	ND	0.101		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,1-Dichloroethene	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Methylene chloride	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
trans-1,2-Dichloroethene	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Methyl tert-butyl ether (MTBE)	ND	0.101		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,1-Dichloroethane	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
2,2-Dichloropropane	ND	0.202		mg/Kg-dry	1	1/15/2018 11:57:29 PM
cis-1,2-Dichloroethene	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Chloroform	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,1,1-Trichloroethane (TCA)	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,1-Dichloropropene	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 2:50:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-012

Matrix: Soil

Client Sample ID: B4-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19498

Analyst: MW

Carbon tetrachloride	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,2-Dichloroethane (EDC)	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Benzene	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Trichloroethene (TCE)	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,2-Dichloropropane	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Bromodichloromethane	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Dibromomethane	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
cis-1,3-Dichloropropene	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Toluene	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
trans-1,3-Dichloropropylene	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,1,2-Trichloroethane	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,3-Dichloropropane	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Tetrachloroethene (PCE)	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Dibromochloromethane	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,2-Dibromoethane (EDB)	ND	0.0101		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Chlorobenzene	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,1,1,2-Tetrachloroethane	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Ethylbenzene	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
m,p-Xylene	ND	0.101		mg/Kg-dry	1	1/15/2018 11:57:29 PM
o-Xylene	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Styrene	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Isopropylbenzene	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Bromoform	ND	0.101		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,1,2,2-Tetrachloroethane	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
n-Propylbenzene	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Bromobenzene	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,3,5-Trimethylbenzene	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
2-Chlorotoluene	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
4-Chlorotoluene	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
tert-Butylbenzene	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,2,3-Trichloropropane	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,2,4-Trichlorobenzene	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
sec-Butylbenzene	ND	0.101		mg/Kg-dry	1	1/15/2018 11:57:29 PM
4-Isopropyltoluene	ND	0.101		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,3-Dichlorobenzene	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,4-Dichlorobenzene	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
n-Butylbenzene	ND	0.0506		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,2-Dichlorobenzene	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,2-Dibromo-3-chloropropane	ND	1.01		mg/Kg-dry	1	1/15/2018 11:57:29 PM



Analytical Report

Work Order: 1801177
Date Reported: 1/31/2018

Client: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave
Lab ID: 1801177-012
Client Sample ID: B4-1

Collection Date: 1/11/2018 2:50:00 PM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Volatile Organic Compounds by EPA Method 8260C</u>				Batch ID: 19498		Analyst: MW
1,2,4-Trimethylbenzene	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Hexachlorobutadiene	ND	0.101		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Naphthalene	ND	0.101		mg/Kg-dry	1	1/15/2018 11:57:29 PM
1,2,3-Trichlorobenzene	ND	0.0405		mg/Kg-dry	1	1/15/2018 11:57:29 PM
Surr: Dibromofluoromethane	99.1	56.5 - 129		%Rec	1	1/15/2018 11:57:29 PM
Surr: Toluene-d8	96.3	64.5 - 151		%Rec	1	1/15/2018 11:57:29 PM
Surr: 1-Bromo-4-fluorobenzene	94.6	43.2 - 143		%Rec	1	1/15/2018 11:57:29 PM

Mercury by EPA Method 7471

Batch ID: 19521 Analyst: WF

Mercury	ND	0.437		mg/Kg-dry	1	1/17/2018 8:04:28 PM
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Total Metals by EPA Method 6020

Batch ID: 19520 Analyst: TN

Antimony	ND	0.274		mg/Kg-dry	1	1/17/2018 5:57:02 PM
Arsenic	24.5	0.137		mg/Kg-dry	1	1/17/2018 5:57:02 PM
Beryllium	ND	0.274		mg/Kg-dry	1	1/17/2018 5:57:02 PM
Cadmium	ND	0.274		mg/Kg-dry	1	1/17/2018 5:57:02 PM
Chromium	20.1	0.137		mg/Kg-dry	1	1/17/2018 5:57:02 PM
Copper	45.8	0.274		mg/Kg-dry	1	1/17/2018 5:57:02 PM
Lead	44.2	0.274		mg/Kg-dry	1	1/17/2018 5:57:02 PM
Nickel	14.4	0.137		mg/Kg-dry	1	1/17/2018 5:57:02 PM
Selenium	2.40	0.684		mg/Kg-dry	1	1/17/2018 5:57:02 PM
Silver	0.154	0.137		mg/Kg-dry	1	1/17/2018 5:57:02 PM
Thallium	ND	0.274		mg/Kg-dry	1	1/17/2018 5:57:02 PM
Zinc	41.0	0.547		mg/Kg-dry	1	1/17/2018 5:57:02 PM

Sample Moisture (Percent Moisture)

Batch ID: R41080 Analyst: CG

Percent Moisture	47.0			wt%	1	1/15/2018 11:07:10 AM
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Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 9:45:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-015

Matrix: Groundwater

Client Sample ID: B2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 19485

Analyst: SB

Diesel (Fuel Oil)	155	49.6		µg/L	1	1/15/2018 2:05:33 PM
Heavy Oil	112	99.1		µg/L	1	1/15/2018 2:05:33 PM
Surr: 2-Fluorobiphenyl	76.3	50 - 150		%Rec	1	1/15/2018 2:05:33 PM
Surr: o-Terphenyl	50.7	50 - 150		%Rec	1	1/15/2018 2:05:33 PM

Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19514

Analyst: IH

Phenol	ND	2.00		µg/L	1	1/26/2018 10:35:25 PM
2-Chlorophenol	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
Benzyl alcohol	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
Bis(2-chloroethyl) ether	ND	2.00		µg/L	1	1/26/2018 10:35:25 PM
2-Methylphenol (o-cresol)	ND	1.00	Q	µg/L	1	1/26/2018 10:35:25 PM
Hexachloroethane	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
N-Nitrosodi-n-propylamine	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
Nitrobenzene	ND	2.00		µg/L	1	1/26/2018 10:35:25 PM
Isophorone	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
3&4-Methylphenol (m, p-cresol)	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
2-Nitrophenol	ND	2.00		µg/L	1	1/26/2018 10:35:25 PM
2,4-Dimethylphenol	ND	1.00	Q	µg/L	1	1/26/2018 10:35:25 PM
Bis(2-chloroethoxy)methane	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
2,4-Dichlorophenol	ND	2.00		µg/L	1	1/26/2018 10:35:25 PM
1,2,4-Trichlorobenzene	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
Naphthalene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
4-Chloroaniline	ND	5.00		µg/L	1	1/26/2018 10:35:25 PM
Hexachlorobutadiene	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
4-Chloro-3-methylphenol	ND	5.00		µg/L	1	1/26/2018 10:35:25 PM
2-Methylnaphthalene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
1-Methylnaphthalene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
Hexachlorocyclopentadiene	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
2,4,6-Trichlorophenol	ND	2.00		µg/L	1	1/26/2018 10:35:25 PM
2,4,5-Trichlorophenol	ND	2.00		µg/L	1	1/26/2018 10:35:25 PM
2-Chloronaphthalene	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
2-Nitroaniline	ND	5.00		µg/L	1	1/26/2018 10:35:25 PM
Acenaphthene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
Dimethylphthalate	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
2,6-Dinitrotoluene	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 9:45:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-015

Matrix: Groundwater

Client Sample ID: B2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semi-Volatile Organic Compounds by EPA Method 8270				Batch ID: 19514	Analyst: IH	
Acenaphthylene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
2,4-Dinitrophenol	ND	2.00	Q	µg/L	1	1/26/2018 10:35:25 PM
Dibenzofuran	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
2,4-Dinitrotoluene	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
4-Nitrophenol	ND	5.00	Q	µg/L	1	1/26/2018 10:35:25 PM
Fluorene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
4-Chlorophenyl phenyl ether	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
Diethylphthalate	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
4,6-Dinitro-2-methylphenol	ND	5.00		µg/L	1	1/26/2018 10:35:25 PM
4-Bromophenyl phenyl ether	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
Hexachlorobenzene	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
Pentachlorophenol	ND	2.00	Q	µg/L	1	1/26/2018 10:35:25 PM
Phenanthrene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
Anthracene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
Carbazole	ND	5.00		µg/L	1	1/26/2018 10:35:25 PM
Di-n-butyl phthalate	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
Fluoranthene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
Pyrene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
Benzyl Butylphthalate	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
bis(2-Ethylhexyl)adipate	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
Benz(a)anthracene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
Chrysene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
Bis(2-ethylhexyl) phthalate	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
Di-n-octyl phthalate	ND	1.00		µg/L	1	1/26/2018 10:35:25 PM
Benzo(b)fluoranthene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
Benzo(k)fluoranthene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
Benzo(a)pyrene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
Indeno(1,2,3-cd)pyrene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
Dibenz(a,h)anthracene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
Benzo(g,h,i)perylene	ND	0.500		µg/L	1	1/26/2018 10:35:25 PM
Surr: 2,4,6-Tribromophenol	45.0	5 - 159		%Rec	1	1/26/2018 10:35:25 PM
Surr: 2-Fluorobiphenyl	99.8	26.8 - 131		%Rec	1	1/26/2018 10:35:25 PM
Surr: Nitrobenzene-d5	112	19.7 - 124		%Rec	1	1/26/2018 10:35:25 PM
Surr: Phenol-d6	11.1	10.3 - 128		%Rec	1	1/26/2018 10:35:25 PM
Surr: p-Terphenyl	89.8	23.5 - 156		%Rec	1	1/26/2018 10:35:25 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).



Analytical Report

Work Order: 1801177
Date Reported: 1/31/2018

Client: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave
Lab ID: 1801177-015
Client Sample ID: B2

Collection Date: 1/11/2018 9:45:00 AM

Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Gasoline by NWTPH-Gx</u>				Batch ID: 19488		Analyst: NG
Gasoline	ND	50.0		µg/L	1	1/13/2018 12:42:18 PM
Surr: Toluene-d8	101	65 - 135		%Rec	1	1/13/2018 12:42:18 PM
Surr: 4-Bromofluorobenzene	97.4	65 - 135		%Rec	1	1/13/2018 12:42:18 PM
<u>Volatile Organic Compounds by EPA Method 8260C</u>				Batch ID: 19488		Analyst: NG
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Chloromethane	ND	2.00		µg/L	1	1/13/2018 12:42:18 PM
Vinyl chloride	2.24	0.200		µg/L	1	1/13/2018 12:42:18 PM
Bromomethane	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Chloroethane	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Methylene chloride	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
trans-1,2-Dichloroethene	49.6	10.0	D	µg/L	10	1/15/2018 7:15:23 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	1/13/2018 12:42:18 PM
cis-1,2-Dichloroethene	773	100	D	µg/L	100	1/15/2018 6:46:47 PM
Chloroform	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Carbon tetrachloride	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Benzene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Trichloroethene (TCE)	9.38	0.500		µg/L	1	1/13/2018 12:42:18 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Bromodichloromethane	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Dibromomethane	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Toluene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Dibromochloromethane	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/13/2018 12:42:18 PM
Chlorobenzene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 9:45:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-015

Matrix: Groundwater

Client Sample ID: B2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19488

Analyst: NG

Ethylbenzene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
m,p-Xylene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
o-Xylene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Styrene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Isopropylbenzene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Bromoform	ND	2.00		µg/L	1	1/13/2018 12:42:18 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
n-Propylbenzene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Bromobenzene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
2-Chlorotoluene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
4-Chlorotoluene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
tert-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,2,3-Trichloropropane	ND	1.00	Q	µg/L	1	1/13/2018 12:42:18 PM
1,2,4-Trichlorobenzene	ND	2.00	Q	µg/L	1	1/13/2018 12:42:18 PM
sec-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
n-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/13/2018 12:42:18 PM
Naphthalene	ND	1.00		µg/L	1	1/13/2018 12:42:18 PM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	1/13/2018 12:42:18 PM
Surr: Dibromofluoromethane	112	45.4 - 152		%Rec	1	1/13/2018 12:42:18 PM
Surr: Toluene-d8	101	40.1 - 139		%Rec	1	1/13/2018 12:42:18 PM
Surr: 1-Bromo-4-fluorobenzene	94.9	64.2 - 128		%Rec	1	1/13/2018 12:42:18 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Dissolved Mercury by EPA Method 245.1

Batch ID: 19522

Analyst: WF

Mercury	ND	0.100		µg/L	1	1/17/2018 2:53:11 PM
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Analytical Report

Work Order: 1801177
Date Reported: 1/31/2018

Client: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave
Lab ID: 1801177-015
Client Sample ID: B2

Collection Date: 1/11/2018 9:45:00 AM

Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 19524		Analyst: TN
Antimony	0.244	0.200		µg/L	1	1/17/2018 11:44:37 AM
Arsenic	4.22	1.00		µg/L	1	1/17/2018 11:44:37 AM
Beryllium	ND	0.200		µg/L	1	1/17/2018 11:44:37 AM
Cadmium	ND	0.200		µg/L	1	1/17/2018 11:44:37 AM
Chromium	0.958	0.500		µg/L	1	1/17/2018 11:44:37 AM
Copper	3.18	0.500		µg/L	1	1/17/2018 11:44:37 AM
Lead	ND	0.500		µg/L	1	1/17/2018 11:44:37 AM
Nickel	0.636	0.500		µg/L	1	1/17/2018 11:44:37 AM
Selenium	ND	1.00		µg/L	1	1/17/2018 11:44:37 AM
Silver	ND	0.200		µg/L	1	1/17/2018 11:44:37 AM
Thallium	ND	0.200		µg/L	1	1/17/2018 11:44:37 AM
Zinc	ND	1.50		µg/L	1	1/17/2018 11:44:37 AM



Analytical Report

Work Order: 1801177
Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 11:00:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-016

Matrix: Groundwater

Client Sample ID: B1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.</u>				Batch ID: 19485	Analyst: SB	
Diesel (Fuel Oil)	ND	49.5		µg/L	1	1/15/2018 3:36:01 PM
Heavy Oil	ND	99.0		µg/L	1	1/15/2018 3:36:01 PM
Surr: 2-Fluorobiphenyl	73.7	50 - 150		%Rec	1	1/15/2018 3:36:01 PM
Surr: o-Terphenyl	61.4	50 - 150		%Rec	1	1/15/2018 3:36:01 PM
<u>Semi-Volatile Organic Compounds by EPA Method 8270</u>				Batch ID: 19514	Analyst: IH	
Phenol	ND	1.99		µg/L	1	1/26/2018 10:57:12 PM
2-Chlorophenol	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
1,3-Dichlorobenzene	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
1,4-Dichlorobenzene	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
1,2-Dichlorobenzene	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
Benzyl alcohol	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
Bis(2-chloroethyl) ether	ND	1.99		µg/L	1	1/26/2018 10:57:12 PM
2-Methylphenol (o-cresol)	ND	0.997	Q	µg/L	1	1/26/2018 10:57:12 PM
Hexachloroethane	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
N-Nitrosodi-n-propylamine	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
Nitrobenzene	ND	1.99		µg/L	1	1/26/2018 10:57:12 PM
Isophorone	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
3&4-Methylphenol (m, p-cresol)	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
2-Nitrophenol	ND	1.99		µg/L	1	1/26/2018 10:57:12 PM
2,4-Dimethylphenol	ND	0.997	Q	µg/L	1	1/26/2018 10:57:12 PM
Bis(2-chloroethoxy)methane	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
2,4-Dichlorophenol	ND	1.99		µg/L	1	1/26/2018 10:57:12 PM
1,2,4-Trichlorobenzene	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
Naphthalene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
4-Chloroaniline	ND	4.99		µg/L	1	1/26/2018 10:57:12 PM
Hexachlorobutadiene	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
4-Chloro-3-methylphenol	ND	4.99		µg/L	1	1/26/2018 10:57:12 PM
2-Methylnaphthalene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
1-Methylnaphthalene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
Hexachlorocyclopentadiene	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
2,4,6-Trichlorophenol	ND	1.99		µg/L	1	1/26/2018 10:57:12 PM
2,4,5-Trichlorophenol	ND	1.99		µg/L	1	1/26/2018 10:57:12 PM
2-Chloronaphthalene	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
2-Nitroaniline	ND	4.99		µg/L	1	1/26/2018 10:57:12 PM
Acenaphthene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
Dimethylphthalate	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
2,6-Dinitrotoluene	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 11:00:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-016

Matrix: Groundwater

Client Sample ID: B1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semi-Volatile Organic Compounds by EPA Method 8270				Batch ID: 19514	Analyst: IH	
Acenaphthylene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
2,4-Dinitrophenol	ND	1.99	Q	µg/L	1	1/26/2018 10:57:12 PM
Dibenzofuran	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
2,4-Dinitrotoluene	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
4-Nitrophenol	ND	4.99	Q	µg/L	1	1/26/2018 10:57:12 PM
Fluorene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
4-Chlorophenyl phenyl ether	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
Diethylphthalate	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
4,6-Dinitro-2-methylphenol	ND	4.99		µg/L	1	1/26/2018 10:57:12 PM
4-Bromophenyl phenyl ether	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
Hexachlorobenzene	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
Pentachlorophenol	ND	1.99	Q	µg/L	1	1/26/2018 10:57:12 PM
Phenanthrene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
Anthracene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
Carbazole	ND	4.99		µg/L	1	1/26/2018 10:57:12 PM
Di-n-butyl phthalate	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
Fluoranthene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
Pyrene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
Benzyl Butylphthalate	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
bis(2-Ethylhexyl)adipate	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
Benz(a)anthracene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
Chrysene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
Bis(2-ethylhexyl) phthalate	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
Di-n-octyl phthalate	ND	0.997		µg/L	1	1/26/2018 10:57:12 PM
Benzo(b)fluoranthene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
Benzo(k)fluoranthene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
Benzo(a)pyrene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
Indeno(1,2,3-cd)pyrene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
Dibenz(a,h)anthracene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
Benzo(g,h,i)perylene	ND	0.499		µg/L	1	1/26/2018 10:57:12 PM
Surr: 2,4,6-Tribromophenol	45.9	5 - 159		%Rec	1	1/26/2018 10:57:12 PM
Surr: 2-Fluorobiphenyl	86.9	26.8 - 131		%Rec	1	1/26/2018 10:57:12 PM
Surr: Nitrobenzene-d5	95.1	19.7 - 124		%Rec	1	1/26/2018 10:57:12 PM
Surr: Phenol-d6	18.4	10.3 - 128		%Rec	1	1/26/2018 10:57:12 PM
Surr: p-Terphenyl	80.0	23.5 - 156		%Rec	1	1/26/2018 10:57:12 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 11:00:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-016

Matrix: Groundwater

Client Sample ID: B1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 19488

Analyst: NG

Gasoline	ND	50.0		µg/L	1	1/13/2018 1:10:48 PM
Surr: Toluene-d8	100	65 - 135		%Rec	1	1/13/2018 1:10:48 PM
Surr: 4-Bromofluorobenzene	96.9	65 - 135		%Rec	1	1/13/2018 1:10:48 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19488

Analyst: NG

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Chloromethane	4.31	2.00		µg/L	1	1/13/2018 1:10:48 PM
Vinyl chloride	ND	0.200		µg/L	1	1/13/2018 1:10:48 PM
Bromomethane	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Chloroethane	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Methylene chloride	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	1/13/2018 1:10:48 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Chloroform	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Carbon tetrachloride	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Benzene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	1/13/2018 1:10:48 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Bromodichloromethane	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Dibromomethane	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Toluene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Dibromochloromethane	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/13/2018 1:10:48 PM
Chlorobenzene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 11:00:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-016

Matrix: Groundwater

Client Sample ID: B1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19488

Analyst: NG

Ethylbenzene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
m,p-Xylene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
o-Xylene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Styrene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Isopropylbenzene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Bromoform	ND	2.00		µg/L	1	1/13/2018 1:10:48 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
n-Propylbenzene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Bromobenzene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
2-Chlorotoluene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
4-Chlorotoluene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
tert-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,2,3-Trichloropropane	ND	1.00	Q	µg/L	1	1/13/2018 1:10:48 PM
1,2,4-Trichlorobenzene	ND	2.00	Q	µg/L	1	1/13/2018 1:10:48 PM
sec-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
n-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/13/2018 1:10:48 PM
Naphthalene	ND	1.00		µg/L	1	1/13/2018 1:10:48 PM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	1/13/2018 1:10:48 PM
Surr: Dibromofluoromethane	110	45.4 - 152		%Rec	1	1/13/2018 1:10:48 PM
Surr: Toluene-d8	103	40.1 - 139		%Rec	1	1/13/2018 1:10:48 PM
Surr: 1-Bromo-4-fluorobenzene	94.4	64.2 - 128		%Rec	1	1/13/2018 1:10:48 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Dissolved Mercury by EPA Method 245.1

Batch ID: 19522

Analyst: WF

Mercury	ND	0.100		µg/L	1	1/17/2018 2:54:52 PM
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Analytical Report

Work Order: 1801177
Date Reported: 1/31/2018

Client: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave
Lab ID: 1801177-016
Client Sample ID: B1

Collection Date: 1/11/2018 11:00:00 AM

Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 19524		Analyst: TN
Antimony	0.446	0.200		µg/L	1	1/17/2018 11:48:38 AM
Arsenic	ND	1.00		µg/L	1	1/17/2018 11:48:38 AM
Beryllium	ND	0.200		µg/L	1	1/17/2018 11:48:38 AM
Cadmium	ND	0.200		µg/L	1	1/17/2018 11:48:38 AM
Chromium	ND	0.500		µg/L	1	1/17/2018 11:48:38 AM
Copper	21.2	0.500		µg/L	1	1/17/2018 11:48:38 AM
Lead	ND	0.500		µg/L	1	1/17/2018 11:48:38 AM
Nickel	0.636	0.500		µg/L	1	1/17/2018 11:48:38 AM
Selenium	ND	1.00		µg/L	1	1/17/2018 11:48:38 AM
Silver	ND	0.200		µg/L	1	1/17/2018 11:48:38 AM
Thallium	ND	0.200		µg/L	1	1/17/2018 11:48:38 AM
Zinc	ND	1.50		µg/L	1	1/17/2018 11:48:38 AM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 11:45:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-017

Matrix: Groundwater

Client Sample ID: B5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 19485

Analyst: SB

Diesel (Fuel Oil)	ND	50.0		µg/L	1	1/15/2018 4:06:02 PM
Heavy Oil	ND	100		µg/L	1	1/15/2018 4:06:02 PM
Surr: 2-Fluorobiphenyl	69.8	50 - 150		%Rec	1	1/15/2018 4:06:02 PM
Surr: o-Terphenyl	73.0	50 - 150		%Rec	1	1/15/2018 4:06:02 PM

Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19514

Analyst: IH

Phenol	ND	1.99		µg/L	1	1/26/2018 11:18:49 PM
2-Chlorophenol	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
1,3-Dichlorobenzene	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
1,4-Dichlorobenzene	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
1,2-Dichlorobenzene	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
Benzyl alcohol	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
Bis(2-chloroethyl) ether	ND	1.99		µg/L	1	1/26/2018 11:18:49 PM
2-Methylphenol (o-cresol)	ND	0.997	Q	µg/L	1	1/26/2018 11:18:49 PM
Hexachloroethane	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
N-Nitrosodi-n-propylamine	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
Nitrobenzene	ND	1.99		µg/L	1	1/26/2018 11:18:49 PM
Isophorone	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
3&4-Methylphenol (m, p-cresol)	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
2-Nitrophenol	ND	1.99		µg/L	1	1/26/2018 11:18:49 PM
2,4-Dimethylphenol	ND	0.997	Q	µg/L	1	1/26/2018 11:18:49 PM
Bis(2-chloroethoxy)methane	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
2,4-Dichlorophenol	ND	1.99		µg/L	1	1/26/2018 11:18:49 PM
1,2,4-Trichlorobenzene	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
Naphthalene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
4-Chloroaniline	ND	4.99		µg/L	1	1/26/2018 11:18:49 PM
Hexachlorobutadiene	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
4-Chloro-3-methylphenol	ND	4.99		µg/L	1	1/26/2018 11:18:49 PM
2-Methylnaphthalene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
1-Methylnaphthalene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
Hexachlorocyclopentadiene	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
2,4,6-Trichlorophenol	ND	1.99		µg/L	1	1/26/2018 11:18:49 PM
2,4,5-Trichlorophenol	ND	1.99		µg/L	1	1/26/2018 11:18:49 PM
2-Chloronaphthalene	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
2-Nitroaniline	ND	4.99		µg/L	1	1/26/2018 11:18:49 PM
Acenaphthene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
Dimethylphthalate	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
2,6-Dinitrotoluene	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM



Analytical Report

Work Order: 1801177
Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 11:45:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-017

Matrix: Groundwater

Client Sample ID: B5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19514

Analyst: IH

Acenaphthylene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
2,4-Dinitrophenol	ND	1.99	Q	µg/L	1	1/26/2018 11:18:49 PM
Dibenzofuran	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
2,4-Dinitrotoluene	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
4-Nitrophenol	ND	4.99	Q	µg/L	1	1/26/2018 11:18:49 PM
Fluorene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
4-Chlorophenyl phenyl ether	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
Diethylphthalate	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
4,6-Dinitro-2-methylphenol	ND	4.99		µg/L	1	1/26/2018 11:18:49 PM
4-Bromophenyl phenyl ether	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
Hexachlorobenzene	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
Pentachlorophenol	ND	1.99	Q	µg/L	1	1/26/2018 11:18:49 PM
Phenanthrene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
Anthracene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
Carbazole	ND	4.99		µg/L	1	1/26/2018 11:18:49 PM
Di-n-butyl phthalate	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
Fluoranthene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
Pyrene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
Benzyl Butylphthalate	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
bis(2-Ethylhexyl)adipate	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
Benz(a)anthracene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
Chrysene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
Bis(2-ethylhexyl) phthalate	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
Di-n-octyl phthalate	ND	0.997		µg/L	1	1/26/2018 11:18:49 PM
Benzo(b)fluoranthene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
Benzo(k)fluoranthene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
Benzo(a)pyrene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
Indeno(1,2,3-cd)pyrene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
Dibenz(a,h)anthracene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
Benzo(g,h,i)perylene	ND	0.499		µg/L	1	1/26/2018 11:18:49 PM
Surr: 2,4,6-Tribromophenol	62.7	5 - 159		%Rec	1	1/26/2018 11:18:49 PM
Surr: 2-Fluorobiphenyl	89.3	26.8 - 131		%Rec	1	1/26/2018 11:18:49 PM
Surr: Nitrobenzene-d5	102	19.7 - 124		%Rec	1	1/26/2018 11:18:49 PM
Surr: Phenol-d6	22.4	10.3 - 128		%Rec	1	1/26/2018 11:18:49 PM
Surr: p-Terphenyl	89.4	23.5 - 156		%Rec	1	1/26/2018 11:18:49 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 11:45:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-017

Matrix: Groundwater

Client Sample ID: B5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 19488

Analyst: NG

Gasoline	ND	50.0		µg/L	1	1/13/2018 1:39:19 PM
Surr: Toluene-d8	100	65 - 135		%Rec	1	1/13/2018 1:39:19 PM
Surr: 4-Bromofluorobenzene	101	65 - 135		%Rec	1	1/13/2018 1:39:19 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19488

Analyst: NG

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Chloromethane	ND	2.00		µg/L	1	1/13/2018 1:39:19 PM
Vinyl chloride	ND	0.200		µg/L	1	1/13/2018 1:39:19 PM
Bromomethane	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Chloroethane	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Methylene chloride	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	1/13/2018 1:39:19 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Chloroform	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Carbon tetrachloride	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Benzene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	1/13/2018 1:39:19 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Bromodichloromethane	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Dibromomethane	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Toluene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Dibromochloromethane	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/13/2018 1:39:19 PM
Chlorobenzene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 11:45:00 AM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-017

Matrix: Groundwater

Client Sample ID: B5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19488

Analyst: NG

Ethylbenzene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
m,p-Xylene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
o-Xylene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Styrene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Isopropylbenzene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Bromoform	ND	2.00		µg/L	1	1/13/2018 1:39:19 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
n-Propylbenzene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Bromobenzene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
2-Chlorotoluene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
4-Chlorotoluene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
tert-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,2,3-Trichloropropane	ND	1.00	Q	µg/L	1	1/13/2018 1:39:19 PM
1,2,4-Trichlorobenzene	ND	2.00	Q	µg/L	1	1/13/2018 1:39:19 PM
sec-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
n-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/13/2018 1:39:19 PM
Naphthalene	ND	1.00		µg/L	1	1/13/2018 1:39:19 PM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	1/13/2018 1:39:19 PM
Surr: Dibromofluoromethane	109	45.4 - 152		%Rec	1	1/13/2018 1:39:19 PM
Surr: Toluene-d8	104	40.1 - 139		%Rec	1	1/13/2018 1:39:19 PM
Surr: 1-Bromo-4-fluorobenzene	98.7	64.2 - 128		%Rec	1	1/13/2018 1:39:19 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Dissolved Mercury by EPA Method 245.1

Batch ID: 19522

Analyst: WF

Mercury	ND	0.100		µg/L	1	1/17/2018 2:59:58 PM
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Analytical Report

Work Order: 1801177
Date Reported: 1/31/2018

Client: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave
Lab ID: 1801177-017
Client Sample ID: B5

Collection Date: 1/11/2018 11:45:00 AM

Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 19524		Analyst: TN
Antimony	0.201	0.200		µg/L	1	1/17/2018 11:52:40 AM
Arsenic	ND	1.00		µg/L	1	1/17/2018 11:52:40 AM
Beryllium	ND	0.200		µg/L	1	1/17/2018 11:52:40 AM
Cadmium	ND	0.200		µg/L	1	1/17/2018 11:52:40 AM
Chromium	ND	0.500		µg/L	1	1/17/2018 11:52:40 AM
Copper	ND	0.500		µg/L	1	1/17/2018 11:52:40 AM
Lead	ND	0.500		µg/L	1	1/17/2018 11:52:40 AM
Nickel	ND	0.500		µg/L	1	1/17/2018 11:52:40 AM
Selenium	ND	1.00		µg/L	1	1/17/2018 11:52:40 AM
Silver	ND	0.200		µg/L	1	1/17/2018 11:52:40 AM
Thallium	ND	0.200		µg/L	1	1/17/2018 11:52:40 AM
Zinc	ND	1.50		µg/L	1	1/17/2018 11:52:40 AM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 1:15:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-018

Matrix: Groundwater

Client Sample ID: B7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 19485

Analyst: SB

Diesel (Fuel Oil)	ND	49.8		µg/L	1	1/15/2018 4:36:04 PM
Heavy Oil	115	99.5		µg/L	1	1/15/2018 4:36:04 PM
Surr: 2-Fluorobiphenyl	85.3	50 - 150		%Rec	1	1/15/2018 4:36:04 PM
Surr: o-Terphenyl	79.6	50 - 150		%Rec	1	1/15/2018 4:36:04 PM

Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19514

Analyst: IH

Phenol	ND	2.00		µg/L	1	1/26/2018 11:40:25 PM
2-Chlorophenol	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
1,3-Dichlorobenzene	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
1,4-Dichlorobenzene	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
1,2-Dichlorobenzene	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
Benzyl alcohol	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
Bis(2-chloroethyl) ether	ND	2.00		µg/L	1	1/26/2018 11:40:25 PM
2-Methylphenol (o-cresol)	ND	0.998	Q	µg/L	1	1/26/2018 11:40:25 PM
Hexachloroethane	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
N-Nitrosodi-n-propylamine	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
Nitrobenzene	ND	2.00		µg/L	1	1/26/2018 11:40:25 PM
Isophorone	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
3&4-Methylphenol (m, p-cresol)	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
2-Nitrophenol	ND	2.00		µg/L	1	1/26/2018 11:40:25 PM
2,4-Dimethylphenol	ND	0.998	Q	µg/L	1	1/26/2018 11:40:25 PM
Bis(2-chloroethoxy)methane	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
2,4-Dichlorophenol	ND	2.00		µg/L	1	1/26/2018 11:40:25 PM
1,2,4-Trichlorobenzene	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
Naphthalene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
4-Chloroaniline	ND	4.99		µg/L	1	1/26/2018 11:40:25 PM
Hexachlorobutadiene	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
4-Chloro-3-methylphenol	ND	4.99		µg/L	1	1/26/2018 11:40:25 PM
2-Methylnaphthalene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
1-Methylnaphthalene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
Hexachlorocyclopentadiene	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
2,4,6-Trichlorophenol	ND	2.00		µg/L	1	1/26/2018 11:40:25 PM
2,4,5-Trichlorophenol	ND	2.00		µg/L	1	1/26/2018 11:40:25 PM
2-Chloronaphthalene	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
2-Nitroaniline	ND	4.99		µg/L	1	1/26/2018 11:40:25 PM
Acenaphthene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
Dimethylphthalate	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
2,6-Dinitrotoluene	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 1:15:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-018

Matrix: Groundwater

Client Sample ID: B7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19514

Analyst: IH

Acenaphthylene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
2,4-Dinitrophenol	ND	2.00	Q	µg/L	1	1/26/2018 11:40:25 PM
Dibenzofuran	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
2,4-Dinitrotoluene	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
4-Nitrophenol	ND	4.99	Q	µg/L	1	1/26/2018 11:40:25 PM
Fluorene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
4-Chlorophenyl phenyl ether	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
Diethylphthalate	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
4,6-Dinitro-2-methylphenol	ND	4.99		µg/L	1	1/26/2018 11:40:25 PM
4-Bromophenyl phenyl ether	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
Hexachlorobenzene	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
Pentachlorophenol	ND	2.00	Q	µg/L	1	1/26/2018 11:40:25 PM
Phenanthrene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
Anthracene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
Carbazole	ND	4.99		µg/L	1	1/26/2018 11:40:25 PM
Di-n-butyl phthalate	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
Fluoranthene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
Pyrene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
Benzyl Butylphthalate	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
bis(2-Ethylhexyl)adipate	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
Benz(a)anthracene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
Chrysene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
Bis(2-ethylhexyl) phthalate	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
Di-n-octyl phthalate	ND	0.998		µg/L	1	1/26/2018 11:40:25 PM
Benzo(b)fluoranthene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
Benzo(k)fluoranthene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
Benzo(a)pyrene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
Indeno(1,2,3-cd)pyrene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
Dibenz(a,h)anthracene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
Benzo(g,h,i)perylene	ND	0.499		µg/L	1	1/26/2018 11:40:25 PM
Surr: 2,4,6-Tribromophenol	46.7	5 - 159		%Rec	1	1/26/2018 11:40:25 PM
Surr: 2-Fluorobiphenyl	96.8	26.8 - 131		%Rec	1	1/26/2018 11:40:25 PM
Surr: Nitrobenzene-d5	108	19.7 - 124		%Rec	1	1/26/2018 11:40:25 PM
Surr: Phenol-d6	15.5	10.3 - 128		%Rec	1	1/26/2018 11:40:25 PM
Surr: p-Terphenyl	93.3	23.5 - 156		%Rec	1	1/26/2018 11:40:25 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).



Analytical Report

Work Order: 1801177
Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 1:15:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-018

Matrix: Groundwater

Client Sample ID: B7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 19488 Analyst: NG

Gasoline	ND	50.0		µg/L	1	1/13/2018 2:36:22 PM
Surr: Toluene-d8	100	65 - 135		%Rec	1	1/13/2018 2:36:22 PM
Surr: 4-Bromofluorobenzene	102	65 - 135		%Rec	1	1/13/2018 2:36:22 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19488 Analyst: NG

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Chloromethane	5.76	2.00		µg/L	1	1/13/2018 2:36:22 PM
Vinyl chloride	ND	0.200		µg/L	1	1/13/2018 2:36:22 PM
Bromomethane	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Chloroethane	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Methylene chloride	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	1/13/2018 2:36:22 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Chloroform	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Carbon tetrachloride	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,2-Dichloroethane (EDC)	2.99	1.00		µg/L	1	1/13/2018 2:36:22 PM
Benzene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	1/13/2018 2:36:22 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Bromodichloromethane	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Dibromomethane	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Toluene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Dibromochloromethane	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/13/2018 2:36:22 PM
Chlorobenzene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 1:15:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-018

Matrix: Groundwater

Client Sample ID: B7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19488

Analyst: NG

Ethylbenzene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
m,p-Xylene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
o-Xylene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Styrene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Isopropylbenzene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Bromoform	ND	2.00		µg/L	1	1/13/2018 2:36:22 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
n-Propylbenzene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Bromobenzene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
2-Chlorotoluene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
4-Chlorotoluene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
tert-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,2,3-Trichloropropane	ND	1.00	Q	µg/L	1	1/13/2018 2:36:22 PM
1,2,4-Trichlorobenzene	ND	2.00	Q	µg/L	1	1/13/2018 2:36:22 PM
sec-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
n-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/13/2018 2:36:22 PM
Naphthalene	ND	1.00		µg/L	1	1/13/2018 2:36:22 PM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	1/13/2018 2:36:22 PM
Surr: Dibromofluoromethane	110	45.4 - 152		%Rec	1	1/13/2018 2:36:22 PM
Surr: Toluene-d8	104	40.1 - 139		%Rec	1	1/13/2018 2:36:22 PM
Surr: 1-Bromo-4-fluorobenzene	99.6	64.2 - 128		%Rec	1	1/13/2018 2:36:22 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Dissolved Mercury by EPA Method 245.1

Batch ID: 19522

Analyst: WF

Mercury	ND	0.100		µg/L	1	1/17/2018 3:01:40 PM
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Analytical Report

Work Order: 1801177
Date Reported: 1/31/2018

Client: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave
Lab ID: 1801177-018
Client Sample ID: B7

Collection Date: 1/11/2018 1:15:00 PM

Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 19524		Analyst: TN
Antimony	0.436	0.200		µg/L	1	1/17/2018 11:56:41 AM
Arsenic	ND	1.00		µg/L	1	1/17/2018 11:56:41 AM
Beryllium	ND	0.200		µg/L	1	1/17/2018 11:56:41 AM
Cadmium	ND	0.200		µg/L	1	1/17/2018 11:56:41 AM
Chromium	2.62	0.500		µg/L	1	1/17/2018 11:56:41 AM
Copper	ND	0.500		µg/L	1	1/17/2018 11:56:41 AM
Lead	ND	0.500		µg/L	1	1/17/2018 11:56:41 AM
Nickel	18.0	0.500		µg/L	1	1/17/2018 11:56:41 AM
Selenium	ND	1.00		µg/L	1	1/17/2018 11:56:41 AM
Silver	ND	0.200		µg/L	1	1/17/2018 11:56:41 AM
Thallium	ND	0.200		µg/L	1	1/17/2018 11:56:41 AM
Zinc	8.24	1.50		µg/L	1	1/17/2018 11:56:41 AM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 2:00:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-019

Matrix: Groundwater

Client Sample ID: B6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 19485

Analyst: SB

Diesel (Fuel Oil)	ND	49.7		µg/L	1	1/15/2018 7:05:01 PM
Heavy Oil	ND	99.5		µg/L	1	1/15/2018 7:05:01 PM
Surr: 2-Fluorobiphenyl	72.0	50 - 150		%Rec	1	1/15/2018 7:05:01 PM
Surr: o-Terphenyl	66.3	50 - 150		%Rec	1	1/15/2018 7:05:01 PM

Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19514

Analyst: IH

Phenol	ND	2.00		µg/L	1	1/27/2018 12:02:06 AM
2-Chlorophenol	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
1,3-Dichlorobenzene	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
1,4-Dichlorobenzene	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
1,2-Dichlorobenzene	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
Benzyl alcohol	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
Bis(2-chloroethyl) ether	ND	2.00		µg/L	1	1/27/2018 12:02:06 AM
2-Methylphenol (o-cresol)	ND	0.999	Q	µg/L	1	1/27/2018 12:02:06 AM
Hexachloroethane	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
N-Nitrosodi-n-propylamine	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
Nitrobenzene	ND	2.00		µg/L	1	1/27/2018 12:02:06 AM
Isophorone	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
3&4-Methylphenol (m, p-cresol)	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
2-Nitrophenol	ND	2.00		µg/L	1	1/27/2018 12:02:06 AM
2,4-Dimethylphenol	ND	0.999	Q	µg/L	1	1/27/2018 12:02:06 AM
Bis(2-chloroethoxy)methane	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
2,4-Dichlorophenol	ND	2.00		µg/L	1	1/27/2018 12:02:06 AM
1,2,4-Trichlorobenzene	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
Naphthalene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
4-Chloroaniline	ND	4.99		µg/L	1	1/27/2018 12:02:06 AM
Hexachlorobutadiene	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
4-Chloro-3-methylphenol	ND	4.99		µg/L	1	1/27/2018 12:02:06 AM
2-Methylnaphthalene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
1-Methylnaphthalene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
Hexachlorocyclopentadiene	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
2,4,6-Trichlorophenol	ND	2.00		µg/L	1	1/27/2018 12:02:06 AM
2,4,5-Trichlorophenol	ND	2.00		µg/L	1	1/27/2018 12:02:06 AM
2-Chloronaphthalene	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
2-Nitroaniline	ND	4.99		µg/L	1	1/27/2018 12:02:06 AM
Acenaphthene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
Dimethylphthalate	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
2,6-Dinitrotoluene	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 2:00:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-019

Matrix: Groundwater

Client Sample ID: B6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19514

Analyst: IH

Acenaphthylene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
2,4-Dinitrophenol	ND	2.00	Q	µg/L	1	1/27/2018 12:02:06 AM
Dibenzofuran	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
2,4-Dinitrotoluene	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
4-Nitrophenol	ND	4.99	Q	µg/L	1	1/27/2018 12:02:06 AM
Fluorene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
4-Chlorophenyl phenyl ether	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
Diethylphthalate	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
4,6-Dinitro-2-methylphenol	ND	4.99		µg/L	1	1/27/2018 12:02:06 AM
4-Bromophenyl phenyl ether	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
Hexachlorobenzene	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
Pentachlorophenol	ND	2.00	Q	µg/L	1	1/27/2018 12:02:06 AM
Phenanthrene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
Anthracene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
Carbazole	ND	4.99		µg/L	1	1/27/2018 12:02:06 AM
Di-n-butyl phthalate	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
Fluoranthene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
Pyrene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
Benzyl Butylphthalate	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
bis(2-Ethylhexyl)adipate	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
Benz(a)anthracene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
Chrysene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
Bis(2-ethylhexyl) phthalate	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
Di-n-octyl phthalate	ND	0.999		µg/L	1	1/27/2018 12:02:06 AM
Benzo(b)fluoranthene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
Benzo(k)fluoranthene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
Benzo(a)pyrene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
Indeno(1,2,3-cd)pyrene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
Dibenz(a,h)anthracene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
Benzo(g,h,i)perylene	ND	0.499		µg/L	1	1/27/2018 12:02:06 AM
Surr: 2,4,6-Tribromophenol	58.9	5 - 159		%Rec	1	1/27/2018 12:02:06 AM
Surr: 2-Fluorobiphenyl	86.0	26.8 - 131		%Rec	1	1/27/2018 12:02:06 AM
Surr: Nitrobenzene-d5	97.0	19.7 - 124		%Rec	1	1/27/2018 12:02:06 AM
Surr: Phenol-d6	18.2	10.3 - 128		%Rec	1	1/27/2018 12:02:06 AM
Surr: p-Terphenyl	80.1	23.5 - 156		%Rec	1	1/27/2018 12:02:06 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 2:00:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-019

Matrix: Groundwater

Client Sample ID: B6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Gasoline by NWTPH-Gx</u>				Batch ID: 19488		Analyst: NG
Gasoline	ND	50.0		µg/L	1	1/13/2018 3:04:52 PM
Surr: Toluene-d8	100	65 - 135		%Rec	1	1/13/2018 3:04:52 PM
Surr: 4-Bromofluorobenzene	96.9	65 - 135		%Rec	1	1/13/2018 3:04:52 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19488 Analyst: NG

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Chloromethane	11.0	2.00		µg/L	1	1/13/2018 3:04:52 PM
Vinyl chloride	ND	0.200		µg/L	1	1/13/2018 3:04:52 PM
Bromomethane	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Chloroethane	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Methylene chloride	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	1/13/2018 3:04:52 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Chloroform	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Carbon tetrachloride	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Benzene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	1/13/2018 3:04:52 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Bromodichloromethane	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Dibromomethane	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Toluene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Dibromochloromethane	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/13/2018 3:04:52 PM
Chlorobenzene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 2:00:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-019

Matrix: Groundwater

Client Sample ID: B6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19488

Analyst: NG

Ethylbenzene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
m,p-Xylene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
o-Xylene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Styrene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Isopropylbenzene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Bromoform	ND	2.00		µg/L	1	1/13/2018 3:04:52 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
n-Propylbenzene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Bromobenzene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
2-Chlorotoluene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
4-Chlorotoluene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
tert-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,2,3-Trichloropropane	ND	1.00	Q	µg/L	1	1/13/2018 3:04:52 PM
1,2,4-Trichlorobenzene	ND	2.00	Q	µg/L	1	1/13/2018 3:04:52 PM
sec-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
n-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/13/2018 3:04:52 PM
Naphthalene	ND	1.00		µg/L	1	1/13/2018 3:04:52 PM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	1/13/2018 3:04:52 PM
Surr: Dibromofluoromethane	108	45.4 - 152		%Rec	1	1/13/2018 3:04:52 PM
Surr: Toluene-d8	104	40.1 - 139		%Rec	1	1/13/2018 3:04:52 PM
Surr: 1-Bromo-4-fluorobenzene	94.5	64.2 - 128		%Rec	1	1/13/2018 3:04:52 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Dissolved Mercury by EPA Method 245.1

Batch ID: 19522

Analyst: WF

Mercury	ND	0.100		µg/L	1	1/17/2018 3:03:21 PM
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Analytical Report

Work Order: 1801177
Date Reported: 1/31/2018

Client: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave
Lab ID: 1801177-019
Client Sample ID: B6

Collection Date: 1/11/2018 2:00:00 PM

Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 19524		Analyst: TN
Antimony	0.696	0.200		µg/L	1	1/17/2018 12:00:42 PM
Arsenic	ND	1.00		µg/L	1	1/17/2018 12:00:42 PM
Beryllium	ND	0.200		µg/L	1	1/17/2018 12:00:42 PM
Cadmium	ND	0.200		µg/L	1	1/17/2018 12:00:42 PM
Chromium	5.24	0.500		µg/L	1	1/17/2018 12:00:42 PM
Copper	ND	0.500		µg/L	1	1/17/2018 12:00:42 PM
Lead	ND	0.500		µg/L	1	1/17/2018 12:00:42 PM
Nickel	ND	0.500		µg/L	1	1/17/2018 12:00:42 PM
Selenium	ND	1.00		µg/L	1	1/17/2018 12:00:42 PM
Silver	ND	0.200		µg/L	1	1/17/2018 12:00:42 PM
Thallium	ND	0.200		µg/L	1	1/17/2018 12:00:42 PM
Zinc	2.04	1.50		µg/L	1	1/17/2018 12:00:42 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 3:00:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-020

Matrix: Groundwater

Client Sample ID: B4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 19485

Analyst: SB

Diesel (Fuel Oil)	ND	50.0		µg/L	1	1/15/2018 7:34:42 PM
Heavy Oil	110	99.9		µg/L	1	1/15/2018 7:34:42 PM
Surr: 2-Fluorobiphenyl	75.2	50 - 150		%Rec	1	1/15/2018 7:34:42 PM
Surr: o-Terphenyl	62.2	50 - 150		%Rec	1	1/15/2018 7:34:42 PM

Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19514

Analyst: IH

Phenol	ND	2.00		µg/L	1	1/27/2018 12:23:42 AM
2-Chlorophenol	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
1,3-Dichlorobenzene	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
1,4-Dichlorobenzene	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
1,2-Dichlorobenzene	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
Benzyl alcohol	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
Bis(2-chloroethyl) ether	ND	2.00		µg/L	1	1/27/2018 12:23:42 AM
2-Methylphenol (o-cresol)	ND	0.999	Q	µg/L	1	1/27/2018 12:23:42 AM
Hexachloroethane	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
N-Nitrosodi-n-propylamine	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
Nitrobenzene	ND	2.00		µg/L	1	1/27/2018 12:23:42 AM
Isophorone	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
3&4-Methylphenol (m, p-cresol)	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
2-Nitrophenol	ND	2.00		µg/L	1	1/27/2018 12:23:42 AM
2,4-Dimethylphenol	ND	0.999	Q	µg/L	1	1/27/2018 12:23:42 AM
Bis(2-chloroethoxy)methane	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
2,4-Dichlorophenol	ND	2.00		µg/L	1	1/27/2018 12:23:42 AM
1,2,4-Trichlorobenzene	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
Naphthalene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
4-Chloroaniline	ND	4.99		µg/L	1	1/27/2018 12:23:42 AM
Hexachlorobutadiene	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
4-Chloro-3-methylphenol	ND	4.99		µg/L	1	1/27/2018 12:23:42 AM
2-Methylnaphthalene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
1-Methylnaphthalene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
Hexachlorocyclopentadiene	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
2,4,6-Trichlorophenol	ND	2.00		µg/L	1	1/27/2018 12:23:42 AM
2,4,5-Trichlorophenol	ND	2.00		µg/L	1	1/27/2018 12:23:42 AM
2-Chloronaphthalene	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
2-Nitroaniline	ND	4.99		µg/L	1	1/27/2018 12:23:42 AM
Acenaphthene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
Dimethylphthalate	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
2,6-Dinitrotoluene	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 3:00:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-020

Matrix: Groundwater

Client Sample ID: B4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semi-Volatile Organic Compounds by EPA Method 8270				Batch ID: 19514	Analyst: IH	
Acenaphthylene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
2,4-Dinitrophenol	ND	2.00	Q	µg/L	1	1/27/2018 12:23:42 AM
Dibenzofuran	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
2,4-Dinitrotoluene	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
4-Nitrophenol	ND	4.99	Q	µg/L	1	1/27/2018 12:23:42 AM
Fluorene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
4-Chlorophenyl phenyl ether	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
Diethylphthalate	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
4,6-Dinitro-2-methylphenol	ND	4.99		µg/L	1	1/27/2018 12:23:42 AM
4-Bromophenyl phenyl ether	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
Hexachlorobenzene	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
Pentachlorophenol	ND	2.00	Q	µg/L	1	1/27/2018 12:23:42 AM
Phenanthrene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
Anthracene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
Carbazole	ND	4.99		µg/L	1	1/27/2018 12:23:42 AM
Di-n-butyl phthalate	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
Fluoranthene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
Pyrene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
Benzyl Butylphthalate	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
bis(2-Ethylhexyl)adipate	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
Benz(a)anthracene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
Chrysene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
Bis(2-ethylhexyl) phthalate	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
Di-n-octyl phthalate	ND	0.999		µg/L	1	1/27/2018 12:23:42 AM
Benzo(b)fluoranthene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
Benzo(k)fluoranthene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
Benzo(a)pyrene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
Indeno(1,2,3-cd)pyrene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
Dibenz(a,h)anthracene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
Benzo(g,h,i)perylene	ND	0.499		µg/L	1	1/27/2018 12:23:42 AM
Surr: 2,4,6-Tribromophenol	47.8	5 - 159		%Rec	1	1/27/2018 12:23:42 AM
Surr: 2-Fluorobiphenyl	106	26.8 - 131		%Rec	1	1/27/2018 12:23:42 AM
Surr: Nitrobenzene-d5	113	19.7 - 124		%Rec	1	1/27/2018 12:23:42 AM
Surr: Phenol-d6	20.2	10.3 - 128		%Rec	1	1/27/2018 12:23:42 AM
Surr: p-Terphenyl	99.9	23.5 - 156		%Rec	1	1/27/2018 12:23:42 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 3:00:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-020

Matrix: Groundwater

Client Sample ID: B4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Gasoline by NWTPH-Gx

Batch ID: 19488

Analyst: NG

Gasoline	ND	50.0		µg/L	1	1/13/2018 4:01:59 PM
Surr: Toluene-d8	99.3	65 - 135		%Rec	1	1/13/2018 4:01:59 PM
Surr: 4-Bromofluorobenzene	101	65 - 135		%Rec	1	1/13/2018 4:01:59 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19488

Analyst: NG

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Chloromethane	5.80	2.00		µg/L	1	1/13/2018 4:01:59 PM
Vinyl chloride	ND	0.200		µg/L	1	1/13/2018 4:01:59 PM
Bromomethane	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Chloroethane	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Methylene chloride	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	1/13/2018 4:01:59 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Chloroform	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Carbon tetrachloride	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Benzene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	1/13/2018 4:01:59 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Bromodichloromethane	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Dibromomethane	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Toluene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Dibromochloromethane	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/13/2018 4:01:59 PM
Chlorobenzene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 3:00:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-020

Matrix: Groundwater

Client Sample ID: B4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19488

Analyst: NG

Ethylbenzene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
m,p-Xylene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
o-Xylene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Styrene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Isopropylbenzene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Bromoform	ND	2.00		µg/L	1	1/13/2018 4:01:59 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
n-Propylbenzene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Bromobenzene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
2-Chlorotoluene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
4-Chlorotoluene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
tert-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,2,3-Trichloropropane	ND	1.00	Q	µg/L	1	1/13/2018 4:01:59 PM
1,2,4-Trichlorobenzene	ND	2.00	Q	µg/L	1	1/13/2018 4:01:59 PM
sec-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
n-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/13/2018 4:01:59 PM
Naphthalene	ND	1.00		µg/L	1	1/13/2018 4:01:59 PM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	1/13/2018 4:01:59 PM
Surr: Dibromofluoromethane	110	45.4 - 152		%Rec	1	1/13/2018 4:01:59 PM
Surr: Toluene-d8	104	40.1 - 139		%Rec	1	1/13/2018 4:01:59 PM
Surr: 1-Bromo-4-fluorobenzene	98.4	64.2 - 128		%Rec	1	1/13/2018 4:01:59 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Dissolved Mercury by EPA Method 245.1

Batch ID: 19522

Analyst: WF

Mercury	ND	0.100		µg/L	1	1/17/2018 3:05:04 PM
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Analytical Report

Work Order: 1801177
Date Reported: 1/31/2018

Client: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave
Lab ID: 1801177-020
Client Sample ID: B4

Collection Date: 1/11/2018 3:00:00 PM

Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 19524		Analyst: TN
Antimony	0.245	0.200		µg/L	1	1/17/2018 12:04:43 PM
Arsenic	ND	1.00		µg/L	1	1/17/2018 12:04:43 PM
Beryllium	ND	0.200		µg/L	1	1/17/2018 12:04:43 PM
Cadmium	ND	0.200		µg/L	1	1/17/2018 12:04:43 PM
Chromium	ND	0.500		µg/L	1	1/17/2018 12:04:43 PM
Copper	ND	0.500		µg/L	1	1/17/2018 12:04:43 PM
Lead	ND	0.500		µg/L	1	1/17/2018 12:04:43 PM
Nickel	ND	0.500		µg/L	1	1/17/2018 12:04:43 PM
Selenium	ND	1.00		µg/L	1	1/17/2018 12:04:43 PM
Silver	ND	0.200		µg/L	1	1/17/2018 12:04:43 PM
Thallium	ND	0.200		µg/L	1	1/17/2018 12:04:43 PM
Zinc	ND	1.50		µg/L	1	1/17/2018 12:04:43 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 3:45:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-021

Matrix: Groundwater

Client Sample ID: B3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 19485

Analyst: SB

Diesel (Fuel Oil)	ND	49.6		µg/L	1	1/15/2018 8:04:30 PM
Heavy Oil	ND	99.3		µg/L	1	1/15/2018 8:04:30 PM
Surr: 2-Fluorobiphenyl	67.3	50 - 150		%Rec	1	1/15/2018 8:04:30 PM
Surr: o-Terphenyl	74.0	50 - 150		%Rec	1	1/15/2018 8:04:30 PM

Semi-Volatile Organic Compounds by EPA Method 8270

Batch ID: 19514

Analyst: IH

Phenol	ND	1.99		µg/L	1	1/27/2018 12:45:18 AM
2-Chlorophenol	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
1,3-Dichlorobenzene	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
1,4-Dichlorobenzene	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
1,2-Dichlorobenzene	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
Benzyl alcohol	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
Bis(2-chloroethyl) ether	ND	1.99		µg/L	1	1/27/2018 12:45:18 AM
2-Methylphenol (o-cresol)	ND	0.993	Q	µg/L	1	1/27/2018 12:45:18 AM
Hexachloroethane	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
N-Nitrosodi-n-propylamine	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
Nitrobenzene	ND	1.99		µg/L	1	1/27/2018 12:45:18 AM
Isophorone	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
3&4-Methylphenol (m, p-cresol)	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
2-Nitrophenol	ND	1.99		µg/L	1	1/27/2018 12:45:18 AM
2,4-Dimethylphenol	ND	0.993	Q	µg/L	1	1/27/2018 12:45:18 AM
Bis(2-chloroethoxy)methane	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
2,4-Dichlorophenol	ND	1.99		µg/L	1	1/27/2018 12:45:18 AM
1,2,4-Trichlorobenzene	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
Naphthalene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
4-Chloroaniline	ND	4.97		µg/L	1	1/27/2018 12:45:18 AM
Hexachlorobutadiene	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
4-Chloro-3-methylphenol	ND	4.97		µg/L	1	1/27/2018 12:45:18 AM
2-Methylnaphthalene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
1-Methylnaphthalene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
Hexachlorocyclopentadiene	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
2,4,6-Trichlorophenol	ND	1.99		µg/L	1	1/27/2018 12:45:18 AM
2,4,5-Trichlorophenol	ND	1.99		µg/L	1	1/27/2018 12:45:18 AM
2-Chloronaphthalene	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
2-Nitroaniline	ND	4.97		µg/L	1	1/27/2018 12:45:18 AM
Acenaphthene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
Dimethylphthalate	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
2,6-Dinitrotoluene	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 3:45:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-021

Matrix: Groundwater

Client Sample ID: B3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Semi-Volatile Organic Compounds by EPA Method 8270				Batch ID: 19514	Analyst: IH	
Acenaphthylene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
2,4-Dinitrophenol	ND	1.99	Q	µg/L	1	1/27/2018 12:45:18 AM
Dibenzofuran	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
2,4-Dinitrotoluene	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
4-Nitrophenol	ND	4.97	Q	µg/L	1	1/27/2018 12:45:18 AM
Fluorene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
4-Chlorophenyl phenyl ether	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
Diethylphthalate	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
4,6-Dinitro-2-methylphenol	ND	4.97		µg/L	1	1/27/2018 12:45:18 AM
4-Bromophenyl phenyl ether	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
Hexachlorobenzene	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
Pentachlorophenol	ND	1.99	Q	µg/L	1	1/27/2018 12:45:18 AM
Phenanthrene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
Anthracene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
Carbazole	ND	4.97		µg/L	1	1/27/2018 12:45:18 AM
Di-n-butyl phthalate	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
Fluoranthene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
Pyrene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
Benzyl Butylphthalate	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
bis(2-Ethylhexyl)adipate	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
Benz(a)anthracene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
Chrysene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
Bis(2-ethylhexyl) phthalate	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
Di-n-octyl phthalate	ND	0.993		µg/L	1	1/27/2018 12:45:18 AM
Benzo(b)fluoranthene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
Benzo(k)fluoranthene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
Benzo(a)pyrene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
Indeno(1,2,3-cd)pyrene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
Dibenz(a,h)anthracene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
Benzo(g,h,i)perylene	ND	0.497		µg/L	1	1/27/2018 12:45:18 AM
Surr: 2,4,6-Tribromophenol	50.0	5 - 159		%Rec	1	1/27/2018 12:45:18 AM
Surr: 2-Fluorobiphenyl	92.4	26.8 - 131		%Rec	1	1/27/2018 12:45:18 AM
Surr: Nitrobenzene-d5	104	19.7 - 124		%Rec	1	1/27/2018 12:45:18 AM
Surr: Phenol-d6	19.9	10.3 - 128		%Rec	1	1/27/2018 12:45:18 AM
Surr: p-Terphenyl	88.0	23.5 - 156		%Rec	1	1/27/2018 12:45:18 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 3:45:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-021

Matrix: Groundwater

Client Sample ID: B3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Gasoline by NWTPH-Gx</u>				Batch ID: 19488	Analyst: NG	
Gasoline	ND	50.0		µg/L	1	1/13/2018 4:30:26 PM
Surr: Toluene-d8	99.3	65 - 135		%Rec	1	1/13/2018 4:30:26 PM
Surr: 4-Bromofluorobenzene	101	65 - 135		%Rec	1	1/13/2018 4:30:26 PM

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19488 Analyst: NG

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Chloromethane	5.50	2.00		µg/L	1	1/13/2018 4:30:26 PM
Vinyl chloride	ND	0.200		µg/L	1	1/13/2018 4:30:26 PM
Bromomethane	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Chloroethane	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Methylene chloride	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	1/13/2018 4:30:26 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Chloroform	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Carbon tetrachloride	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Benzene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	1/13/2018 4:30:26 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Bromodichloromethane	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Dibromomethane	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Toluene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Dibromochloromethane	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/13/2018 4:30:26 PM
Chlorobenzene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM



Analytical Report

Work Order: 1801177

Date Reported: 1/31/2018

Client: PBS Engineering & Environmental

Collection Date: 1/11/2018 3:45:00 PM

Project: 2301 & 2325 Lincoln Ave

Lab ID: 1801177-021

Matrix: Groundwater

Client Sample ID: B3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 19488

Analyst: NG

Ethylbenzene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
m,p-Xylene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
o-Xylene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Styrene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Isopropylbenzene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Bromoform	ND	2.00		µg/L	1	1/13/2018 4:30:26 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
n-Propylbenzene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Bromobenzene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
2-Chlorotoluene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
4-Chlorotoluene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
tert-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,2,3-Trichloropropane	ND	1.00	Q	µg/L	1	1/13/2018 4:30:26 PM
1,2,4-Trichlorobenzene	ND	2.00	Q	µg/L	1	1/13/2018 4:30:26 PM
sec-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
n-Butylbenzene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/13/2018 4:30:26 PM
Naphthalene	ND	1.00		µg/L	1	1/13/2018 4:30:26 PM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	1/13/2018 4:30:26 PM
Surr: Dibromofluoromethane	109	45.4 - 152		%Rec	1	1/13/2018 4:30:26 PM
Surr: Toluene-d8	103	40.1 - 139		%Rec	1	1/13/2018 4:30:26 PM
Surr: 1-Bromo-4-fluorobenzene	98.8	64.2 - 128		%Rec	1	1/13/2018 4:30:26 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Dissolved Mercury by EPA Method 245.1

Batch ID: 19522

Analyst: WF

Mercury	ND	0.100		µg/L	1	1/17/2018 3:06:47 PM
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Client: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave
Lab ID: 1801177-021
Client Sample ID: B3

Collection Date: 1/11/2018 3:45:00 PM

Matrix: Groundwater

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Dissolved Metals by EPA Method 200.8</u>				Batch ID: 19524		Analyst: TN
Antimony	ND	0.200		µg/L	1	1/17/2018 12:16:51 PM
Arsenic	ND	1.00		µg/L	1	1/17/2018 12:16:51 PM
Beryllium	ND	0.200		µg/L	1	1/17/2018 12:16:51 PM
Cadmium	ND	0.200		µg/L	1	1/17/2018 12:16:51 PM
Chromium	ND	0.500		µg/L	1	1/17/2018 12:16:51 PM
Copper	ND	0.500		µg/L	1	1/17/2018 12:16:51 PM
Lead	ND	0.500		µg/L	1	1/17/2018 12:16:51 PM
Nickel	ND	0.500		µg/L	1	1/17/2018 12:16:51 PM
Selenium	ND	1.00		µg/L	1	1/17/2018 12:16:51 PM
Silver	ND	0.200		µg/L	1	1/17/2018 12:16:51 PM
Thallium	ND	0.200		µg/L	1	1/17/2018 12:16:51 PM
Zinc	ND	1.50		µg/L	1	1/17/2018 12:16:51 PM

Work Order: 1801177

CLIENT: PBS Engineering & Environmental

Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID	MB-19492	SampType:	MBLK	Units:	mg/Kg	Prep Date:	1/15/2018	RunNo:	41128		
Client ID:	MBLKS	Batch ID:	19492			Analysis Date:	1/15/2018	SeqNo:	792418		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel (Fuel Oil)	ND	20.0									
Heavy Oil	ND	50.0									
Surr: 2-Fluorobiphenyl	18.4		20.00		92.0	50	150				
Surr: o-Terphenyl	18.9		20.00		94.6	50	150				

Sample ID	LCS-19492	SampType:	LCS	Units:	mg/Kg	Prep Date:	1/15/2018	RunNo:	41128		
Client ID:	LCSS	Batch ID:	19492			Analysis Date:	1/15/2018	SeqNo:	792419		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel (Fuel Oil)	472	20.0	500.0	0	94.4	65	135				
Surr: 2-Fluorobiphenyl	19.5		20.00		97.7	50	150				
Surr: o-Terphenyl	20.5		20.00		102	50	150				

Sample ID	1801177-002ADUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	1/15/2018	RunNo:	41128		
Client ID:	B2-2	Batch ID:	19492			Analysis Date:	1/15/2018	SeqNo:	792421		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel (Fuel Oil)	ND	24.9						0		30	
Heavy Oil	ND	62.3						0		30	
Surr: 2-Fluorobiphenyl	25.5		24.94		102	50	150		0		
Surr: o-Terphenyl	26.1		24.94		105	50	150		0		

Sample ID	1801177-002AMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	1/15/2018	RunNo:	41128		
Client ID:	B2-2	Batch ID:	19492			Analysis Date:	1/15/2018	SeqNo:	792422		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel (Fuel Oil)	629	24.2	604.6	0	104	65	135				
Surr: 2-Fluorobiphenyl	24.5		24.19		101	50	150				
Surr: o-Terphenyl	25.6		24.19		106	50	150				

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID	1801177-002AMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	1/15/2018	RunNo:	41128		
Client ID:	B2-2	Batch ID:	19492	Analysis Date:				1/15/2018	SeqNo:	792422	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	1801177-002AMSD	SampType:	MSD	Units:	mg/Kg-dry	Prep Date:	1/15/2018	RunNo:	41128		
Client ID:	B2-2	Batch ID:	19492			Analysis Date:	1/15/2018	SeqNo:	792423		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	613	27.3	682.5	0	89.8	65	135	629.0	2.63	30	
Surr: 2-Fluorobiphenyl	27.5		27.30		101	50	150		0		
Surr: o-Terphenyl	28.5		27.30		104	50	150		0		

Sample ID	1801181-008ADUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	1/15/2018	RunNo:	41128		
Client ID:	BATCH	Batch ID:	19492			Analysis Date:	1/15/2018	SeqNo:	792435		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	20.8						0		30	
Heavy Oil	ND	52.0						0		30	
Surr: 2-Fluorobiphenyl	16.1		20.78		77.4	50	150		0		
Surr: o-Terphenyl	18.0		20.78		86.4	50	150		0		



Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID	MB-19485	SampType:	MBLK		Units:	µg/L		Prep Date:	1/12/2018		RunNo:	41132	
Client ID:	MBLKW	Batch ID:	19485		Analysis Date:				1/15/2018		SeqNo:	792504	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Diesel (Fuel Oil)		ND	50.0										
Heavy Oil		ND	100										
Surr: 2-Fluorobiphenyl		54.1		79.99		67.7	50	150					
Surr: o-Terphenyl		56.0		79.99		70.0	50	150					

Sample ID	LCS-19485	SampType:	LCS		Units:	µg/L		Prep Date:	1/12/2018		RunNo:	41132	
Client ID:	LCSW	Batch ID:	19485		Analysis Date:				1/15/2018		SeqNo:	792505	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Diesel (Fuel Oil)		767	49.9	998.2	0	76.8	65	135					
Surr: 2-Fluorobiphenyl		58.3		79.86		73.0	50	150					
Surr: o-Terphenyl		59.8		79.86		74.9	50	150					

Sample ID	LCSD-19485	SampType:	LCSD		Units:	µg/L		Prep Date:	1/12/2018		RunNo:	41132	
Client ID:	LCSW02	Batch ID:	19485		Analysis Date:				1/15/2018		SeqNo:	792506	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Diesel (Fuel Oil)		764	49.8	996.0	0	76.7	65	135	766.8	0.422	30		
Surr: 2-Fluorobiphenyl		58.8		79.68		73.8	50	150		0			
Surr: o-Terphenyl		64.4		79.68		80.8	50	150		0			

Sample ID	1801177-015BDUP	SampType:	DUP		Units:	µg/L		Prep Date:	1/12/2018		RunNo:	41132	
Client ID:	B2	Batch ID:	19485		Analysis Date:				1/15/2018		SeqNo:	792508	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Diesel (Fuel Oil)		238	49.5						155.4	42.1	30	R	
Heavy Oil		196	99.1						112.3	54.4	30		
Surr: 2-Fluorobiphenyl		59.4		79.26		74.9	50	150		0			
Surr: o-Terphenyl		36.3		79.26		45.8	50	150		0		S	



Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID 1801177-015BDUP	SampType: DUP	Units: µg/L		Prep Date: 1/12/2018	RunNo: 41132
Client ID: B2	Batch ID: 19485	Analysis Date: 1/15/2018		SeqNo: 792508	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

NOTES:

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed and recovered within range.

R - High RPD due to suspected sample inhomogeneity. The method is in control as indicated by the Laboratory Control Sample (LCS).

Sample ID 1801152-001ADUP	SampType: DUP	Units: µg/L		Prep Date: 1/12/2018	RunNo: 41132
Client ID: BATCH	Batch ID: 19485	Analysis Date: 1/15/2018		SeqNo: 792522	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Diesel (Fuel Oil)	ND	49.9			0 30
Heavy Oil	2,690	99.8			2,177 20.9 30
Surr: 2-Fluorobiphenyl	58.8		79.81		73.7 50 150 0
Surr: o-Terphenyl	58.3		79.81		73.0 50 150 0

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Dissolved Mercury by EPA Method 245.1

Sample ID MB-19522	SampType: MBLK	Units: µg/L		Prep Date: 1/16/2018	RunNo: 41139
Client ID: MBLKW	Batch ID: 19522	Analysis Date: 1/17/2018		SeqNo: 792819	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Mercury ND 0.100

Sample ID LCS-19522	SampType: LCS	Units: µg/L		Prep Date: 1/16/2018	RunNo: 41139
Client ID: LCSW	Batch ID: 19522	Analysis Date: 1/17/2018		SeqNo: 792820	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Mercury 2.37 0.100 2.500 0 94.8 85 115

Sample ID 1801133-005ADUP	SampType: DUP	Units: µg/L		Prep Date: 1/16/2018	RunNo: 41139
Client ID: BATCH	Batch ID: 19522	Analysis Date: 1/17/2018		SeqNo: 792822	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Mercury ND 0.100 0 20

Sample ID 1801133-005AMS	SampType: MS	Units: µg/L		Prep Date: 1/16/2018	RunNo: 41139
Client ID: BATCH	Batch ID: 19522	Analysis Date: 1/17/2018		SeqNo: 792823	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Mercury 2.39 0.100 2.500 0 95.6 70 130

Sample ID 1801133-005AMSD	SampType: MSD	Units: µg/L		Prep Date: 1/16/2018	RunNo: 41139
Client ID: BATCH	Batch ID: 19522	Analysis Date: 1/17/2018		SeqNo: 792824	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Mercury 2.94 0.100 2.500 0 118 70 130 2.390 20.6 20 R

NOTES:

R - High RPD observed, spike recoveries are within range.

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Dissolved Mercury by EPA Method 245.1

Sample ID	MB-19466FB	SampType:	MBLK			Units:	µg/L			Prep Date:	1/16/2018		RunNo:	41139	
Client ID:	MBLKW	Batch ID:	19522							Analysis Date:	1/17/2018		SeqNo:	792831	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual			

Mercury ND 0.100

NOTES:
 Filter Blank

Sample ID	MB-19496FB	SampType:	MBLK			Units:	µg/L			Prep Date:	1/16/2018		RunNo:	41139	
Client ID:	MBLKW	Batch ID:	19522							Analysis Date:	1/17/2018		SeqNo:	792832	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual		

Mercury ND 0.100

NOTES:
 Filter Blank

Work Order: 1801177

CLIENT: PBS Engineering & Environmental

Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID	MB-19515FB	SampType:	MBLK		Units:	µg/L		Prep Date:	1/17/2018		RunNo:	41140	
Client ID:	MBLKW	Batch ID:	19524					Analysis Date:	1/17/2018		SeqNo:	792655	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Antimony		ND	0.200										
Arsenic		ND	1.00										
Beryllium		ND	0.200										
Cadmium		ND	0.200										
Chromium		ND	0.500										
Copper		ND	0.500										
Lead		ND	0.500										
Nickel		ND	0.500										
Selenium		ND	1.00										
Silver		ND	0.200										
Thallium		ND	0.200										
Zinc		ND	1.50										

NOTES:

Filter Blank

Sample ID	MB-19496FB	SampType:	MBLK		Units:	µg/L		Prep Date:	1/17/2018		RunNo:	41140	
Client ID:	MBLKW	Batch ID:	19524					Analysis Date:	1/17/2018		SeqNo:	792656	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Antimony		ND	0.200										
Arsenic		ND	1.00										
Beryllium		ND	0.200										
Cadmium		ND	0.200										
Chromium		ND	0.500										
Copper		ND	0.500										
Lead		ND	0.500										
Nickel		ND	0.500										
Selenium		ND	1.00										
Silver		ND	0.200										
Thallium		ND	0.200										
Zinc		ND	1.50										



Date: 1/31/2018

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT
Dissolved Metals by EPA Method 200.8

Sample ID	MB-19496FB	SampType:	MBLK			Units:	µg/L			Prep Date:	1/17/2018		RunNo:	41140	
Client ID:	MBLKW	Batch ID:	19524							Analysis Date:	1/17/2018		SeqNo:	792656	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual		

NOTES:
Filter Blank

Sample ID	MB-19524	SampType:	MBLK			Units:	µg/L			Prep Date:	1/17/2018		RunNo:	41140	
Client ID:	MBLKW	Batch ID:	19524						Analysis Date:	1/17/2018			SeqNo:	792657	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual		

Antimony	ND	0.200
Arsenic	ND	1.00
Beryllium	ND	0.200
Cadmium	ND	0.200
Chromium	ND	0.500
Copper	ND	0.500
Lead	ND	0.500
Nickel	ND	0.500
Selenium	ND	1.00
Silver	ND	0.200
Thallium	ND	0.200
Zinc	ND	1.50

Sample ID	LCS-19524		SampType:	LCS		Units:	µg/L		Prep Date:	1/17/2018		RunNo:	41140	
Client ID:	LCSW		Batch ID:	19524					Analysis Date:	1/17/2018		SeqNo:	792658	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual	

Antimony	4.60	0.200	5.000	0	92.0	85	115
Arsenic	102	1.00	100.0	0	102	85	115
Beryllium	4.82	0.200	5.000	0	96.4	85	115
Cadmium	4.97	0.200	5.000	0	99.3	85	115
Chromium	101	0.500	100.0	0	101	85	115
Copper	100	0.500	100.0	0	100	85	115
Lead	45.2	0.500	50.00	0	90.3	85	115

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID	LCS-19524	SampType:	LCS	Units:	µg/L	Prep Date:	1/17/2018	RunNo:	41140		
Client ID:	LCSW	Batch ID:	19524			Analysis Date:	1/17/2018	SeqNo:	792658		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nickel	104	0.500	100.0	0	104	85	115				
Selenium	10.3	1.00	10.00	0	103	85	115				
Silver	4.93	0.200	5.000	0	98.5	85	115				
Thallium	2.28	0.200	2.500	0	91.1	85	115				
Zinc	99.0	1.50	100.0	0	99.0	85	115				

Sample ID	1801200-001DDUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/17/2018	RunNo:	41140		
Client ID:	BATCH	Batch ID:	19524			Analysis Date:	1/17/2018	SeqNo:	792660		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.214	0.200						0.4760	75.7	30	R
Arsenic	5.90	1.00						5.984	1.43	30	
Beryllium	ND	0.200						0		30	
Cadmium	ND	0.200						0		30	
Chromium	ND	0.500						0		30	
Copper	ND	0.500						0		30	
Lead	ND	0.500						0		30	
Nickel	5.03	0.500						5.072	0.792	30	
Selenium	ND	1.00						0		30	
Silver	ND	0.200						0		30	
Thallium	ND	0.200						0		30	
Zinc	ND	1.50						0		30	

NOTES:

R - High RPD observed. The method is in control as indicated by the LCS.

Sample ID	1801200-001DMS	SampType:	MS	Units:	µg/L	Prep Date:	1/17/2018	RunNo:	41140		
Client ID:	BATCH	Batch ID:	19524			Analysis Date:	1/17/2018	SeqNo:	792663		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	23.5	0.200	25.00	0.4760	92.0	70	130				
Arsenic	535	1.00	500.0	5.984	106	70	130				

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Dissolved Metals by EPA Method 200.8

Sample ID	1801200-001DMS	SampType: MS		Units: µg/L		Prep Date: 1/17/2018			RunNo: 41140		
Client ID:	BATCH	Batch ID: 19524		Analysis Date: 1/17/2018					SeqNo: 792663		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	24.5	0.200	25.00	0	97.8	70	130				
Cadmium	26.0	0.200	25.00	0.07300	104	70	130				
Chromium	497	0.500	500.0	0	99.4	70	130				
Copper	493	0.500	500.0	0	98.6	70	130				
Lead	226	0.500	250.0	0	90.4	70	130				
Nickel	502	0.500	500.0	5.072	99.4	70	130				
Selenium	52.4	1.00	50.00	0	105	70	130				
Silver	20.4	0.200	25.00	0	81.8	70	130				
Thallium	11.6	0.200	12.50	0.008500	92.6	70	130				
Zinc	529	1.50	500.0	0	106	70	130				

Sample ID	1801200-001DMSD	SampType: MSD	Units: µg/L			Prep Date: 1/17/2018			RunNo: 41140		
Client ID:	BATCH	Batch ID: 19524				Analysis Date: 1/17/2018			SeqNo: 792664		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	23.9	0.200	25.00	0.4760	93.9	70	130	23.47	2.00	30	
Arsenic	532	1.00	500.0	5.984	105	70	130	535.4	0.652	30	
Beryllium	24.7	0.200	25.00	0	98.7	70	130	24.45	0.944	30	
Cadmium	25.1	0.200	25.00	0.07300	99.9	70	130	26.05	3.86	30	
Chromium	492	0.500	500.0	0	98.4	70	130	496.9	0.985	30	
Copper	496	0.500	500.0	0	99.2	70	130	492.8	0.620	30	
Lead	216	0.500	250.0	0	86.3	70	130	226.0	4.59	30	
Nickel	490	0.500	500.0	5.072	96.9	70	130	501.9	2.49	30	
Selenium	52.6	1.00	50.00	0	105	70	130	52.37	0.424	30	
Silver	22.1	0.200	25.00	0	88.2	70	130	20.44	7.64	30	
Thallium	10.9	0.200	12.50	0.008500	87.4	70	130	11.58	5.81	30	
Zinc	504	1.50	500.0	0	101	70	130	528.8	4.73	30	

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID	LCS-19498	SampType:	LCS	Units:	mg/Kg	Prep Date:	1/15/2018	RunNo:	41118		
Client ID:	LCSS	Batch ID:	19498			Analysis Date:	1/15/2018	SeqNo:	792058		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	24.0	5.00	25.00	0	96.2	65	135				
Surr: Toluene-d8	1.23		1.250		98.1	65	135				
Surr: 4-Bromofluorobenzene	1.26		1.250		101	65	135				

Sample ID	MB-19498	SampType:	MBLK	Units:	mg/Kg	Prep Date:	1/15/2018	RunNo:	41118		
Client ID:	MBLKS	Batch ID:	19498			Analysis Date:	1/15/2018	SeqNo:	792059		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.00									
Surr: Toluene-d8	1.24		1.250		99.1	65	135				
Surr: 4-Bromofluorobenzene	1.19		1.250		95.3	65	135				

Sample ID	1801177-006BDUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	1/15/2018	RunNo:	41118		
Client ID:	B5-2	Batch ID:	19498			Analysis Date:	1/15/2018	SeqNo:	792034		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	9.36						0		30	
Surr: Toluene-d8	2.27		2.340		96.8	65	135		0		
Surr: 4-Bromofluorobenzene	2.19		2.340		93.8	65	135		0		

Sample ID	1801181-017BDUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	1/15/2018	RunNo:	41118		
Client ID:	BATCH	Batch ID:	19498			Analysis Date:	1/16/2018	SeqNo:	792051		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	4.27						0		30	
Surr: Toluene-d8	1.20		1.068		112	65	135		0		
Surr: 4-Bromofluorobenzene	1.04		1.068		96.9	65	135		0		

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID	1801181-012BMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	1/15/2018	RunNo:	41118		
Client ID:	BATCH	Batch ID:	19498	Analysis Date:				1/16/2018	SeqNo:	792045	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	17.3	4.22	21.11	0	81.9	65	135				
Surr: Toluene-d8	1.01		1.056		95.3	65	135				
Surr: 4-Bromofluorobenzene	1.06		1.056		100	65	135				

Sample ID	1801181-012BMSD	SampType:	MSD	Units:	mg/Kg-dry	Prep Date:	1/15/2018	RunNo:	41118		
Client ID:	BATCH	Batch ID:	19498			Analysis Date:	1/16/2018	SeqNo:	792046		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	16.2	4.22	21.11	0	76.6	65	135	17.28	6.60	30	
Surr: Toluene-d8	1.10		1.056		105	65	135		0		
Surr: 4-Bromofluorobenzene	1.04		1.056		98.6	65	135		0		

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID	LCS-19488	SampType:	LCS	Units:	µg/L	Prep Date:	1/12/2018	RunNo:	41073		
Client ID:	LCSW	Batch ID:	19488			Analysis Date:	1/13/2018	SeqNo:	791376		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	529	50.0	500.0	0	106	65	135				
Surr: Toluene-d8	25.3		25.00		101	65	135				
Surr: 4-Bromofluorobenzene	25.1		25.00		100	65	135				

Sample ID	LCSD-19488	SampType:	LCSD	Units:	µg/L	Prep Date:	1/12/2018	RunNo:	41073		
Client ID:	LCSW02	Batch ID:	19488			Analysis Date:	1/13/2018	SeqNo:	791375		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	553	50.0	500.0	0	111	65	135	529.4	4.32	20	
Surr: Toluene-d8	25.0		25.00		100	65	135		0		
Surr: 4-Bromofluorobenzene	25.7		25.00		103	65	135		0		

Sample ID	MB-19488	SampType:	MBLK	Units:	µg/L	Prep Date:	1/12/2018	RunNo:	41073		
Client ID:	MBLKW	Batch ID:	19488			Analysis Date:	1/13/2018	SeqNo:	791377		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	50.0									
Surr: Toluene-d8	25.1		25.00		100	65	135				
Surr: 4-Bromofluorobenzene	24.7		25.00		98.9	65	135				

Sample ID	1801177-017ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/12/2018	RunNo:	41073		
Client ID:	B5	Batch ID:	19488			Analysis Date:	1/13/2018	SeqNo:	791366		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	50.0						0		30	
Surr: Toluene-d8	24.9		25.00		99.7	65	135		0		
Surr: 4-Bromofluorobenzene	25.7		25.00		103	65	135		0		



Work Order: 1801177
CLIENT: PBS Engineering & Environmental
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QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID	1801177-019ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/12/2018	RunNo:	41073		
Client ID:	B6	Batch ID:	19488			Analysis Date:	1/13/2018	SeqNo:	791369		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	50.0						0		30	
Surr: Toluene-d8	24.9		25.00		99.6	65	135		0		
Surr: 4-Bromofluorobenzene	25.4		25.00		102	65	135		0		

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Mercury by EPA Method 7471

Sample ID	MB-19521	SampType:	MBLK	Units:	mg/Kg	Prep Date:	1/16/2018	RunNo:	41148			
Client ID:	MBLKS	Batch ID:	19521			Analysis Date:	1/17/2018	SeqNo:	793244			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.250

Sample ID	LCS-19521	SampType:	LCS	Units:	mg/Kg	Prep Date:	1/16/2018	RunNo:	41148			
Client ID:	LCSS	Batch ID:	19521			Analysis Date:	1/17/2018	SeqNo:	793245			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.529 0.250 0.5000 0 106 80 120

Sample ID	1801181-001ADUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	1/16/2018	RunNo:	41148			
Client ID:	BATCH	Batch ID:	19521			Analysis Date:	1/17/2018	SeqNo:	793247			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.262 0 20

Sample ID	1801181-001AMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	1/16/2018	RunNo:	41148			
Client ID:	BATCH	Batch ID:	19521			Analysis Date:	1/17/2018	SeqNo:	793248			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.592 0.262 0.5235 0.02826 108 70 130

Sample ID	1801181-001AMSD	SampType:	MSD	Units:	mg/Kg-dry	Prep Date:	1/16/2018	RunNo:	41148			
Client ID:	BATCH	Batch ID:	19521			Analysis Date:	1/17/2018	SeqNo:	793249			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.594 0.262 0.5235 0.02826 108 70 130 0.5916 0.353 20

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID	MB-19507	SampType:	MBLK		Units:	mg/Kg		Prep Date:	1/16/2018		RunNo:	41141	
Client ID:	MBLKS	Batch ID:	19507					Analysis Date:	1/17/2018		SeqNo:	792693	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Aroclor 1016		ND	0.100										
Aroclor 1221		ND	0.100										
Aroclor 1232		ND	0.100										
Aroclor 1242		ND	0.100										
Aroclor 1248		ND	0.100										
Aroclor 1254		ND	0.100										
Aroclor 1260		ND	0.100										
Aroclor 1262		ND	0.100										
Aroclor 1268		ND	0.100										
Total PCBs		ND	0.100										
Surr: Decachlorobiphenyl		49.1		50.00		98.2	30.8	168					
Surr: Tetrachloro-m-xylene		53.6		50.00		107	30.3	157					

Sample ID	LCS1-19507	SampType:	LCS	Units:	mg/Kg	Prep Date:	1/16/2018	RunNo:	41141		
Client ID:	LCSS	Batch ID:	19507			Analysis Date:	1/17/2018	SeqNo:	792694		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.921	0.100	1.000	0	92.1	38.5	149				
Aroclor 1260	0.884	0.100	1.000	0	88.4	35.4	154				
Surr: Decachlorobiphenyl	48.7		50.00		97.4	30.8	168				
Surr: Tetrachloro-m-xylene	53.0		50.00		106	30.3	157				

Sample ID	LCS2-19507	SampType:	LCS	Units:	mg/Kg	Prep Date:	1/16/2018	RunNo:	41141		
Client ID:	LCSS	Batch ID:	19507	Analysis Date:				1/17/2018	SeqNo:	792695	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1254	0.910	0.100	1.000	0	91.0	31.9	167				
Surr: Decachlorobiphenyl	48.3		50.00		96.6	30.8	168				
Surr: Tetrachloro-m-xylene	50.8		50.00		102	30.3	157				

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID	1801177-006ADUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	1/16/2018	RunNo:	41141		
Client ID:	B5-2	Batch ID:	19507			Analysis Date:	1/17/2018	SeqNo:	792697		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.123						0		30	
Aroclor 1221	ND	0.123						0		30	
Aroclor 1232	ND	0.123						0		30	
Aroclor 1242	ND	0.123						0		30	
Aroclor 1248	ND	0.123						0		30	
Aroclor 1254	ND	0.123						0		30	
Aroclor 1260	ND	0.123						0		30	
Aroclor 1262	ND	0.123						0		30	
Aroclor 1268	ND	0.123						0		30	
Total PCBs	ND	0.123						0		30	
Surr: Decachlorobiphenyl	58.4		61.28		95.2	30.8	168		0		
Surr: Tetrachloro-m-xylene	59.3		61.28		96.8	30.3	157		0		

Sample ID	1801177-006AMS	SampType:	MS			Units:	mg/Kg-dry			Prep Date:	1/16/2018			RunNo:	41141		
Client ID:	B5-2	Batch ID:	19507						Analysis Date:	1/17/2018			SeqNo:	792698			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual				
Aroclor 1016		1.31	0.130	1.304	0	101	27.1	166									
Aroclor 1260		1.19	0.130	1.304	0	91.4	20.6	168									
Surr: Decachlorobiphenyl		59.9		65.21		91.8	30.8	168									
Surr: Tetrachloro-m-xylene		66.9		65.21		103	30.3	157									

Sample ID	1801177-006AMSD	SampType:	MSD	Units:	mg/Kg-dry	Prep Date:	1/16/2018	RunNo:	41141		
Client ID:	B5-2	Batch ID:	19507			Analysis Date:	1/17/2018	SeqNo:	792699		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aroclor 1016	0.851	0.134	1.337	0	63.6	27.1	166	1.312	42.7	30	R
Aroclor 1260	0.746	0.134	1.337	0	55.8	20.6	168	1.192	46.0	30	R
Surr: Decachlorobiphenyl	36.7		66.87		54.8	30.8	168		0		
Surr: Tetrachloro-m-xylene	39.3		66.87		58.8	30.3	157		0		



Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Polychlorinated Biphenyls (PCB) by EPA 8082

Sample ID	1801177-006AMSD	SampType:	MSD	Units:	mg/Kg-dry	Prep Date:	1/16/2018	RunNo:	41141		
Client ID:	B5-2	Batch ID:	19507			Analysis Date:	1/17/2018	SeqNo:	792699		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

R - High RPD observed, spike recoveries are within range.



Work Order: 1801177
CLIENT: PBS Engineering & Environmental
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QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID 1801177-002ADUP	SampType: DUP	Units: wt%		Prep Date: 1/15/2018	RunNo: 41080
Client ID: B2-2	Batch ID: R41080	Analysis Date: 1/15/2018		SeqNo: 791425	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Percent Moisture	27.3	0.500			26.88 1.55 20

Sample ID 1801181-008ADUP	SampType: DUP	Units: wt%		Prep Date: 1/15/2018	RunNo: 41080
Client ID: BATCH	Batch ID: R41080	Analysis Date: 1/15/2018		SeqNo: 791435	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Percent Moisture	10.8	0.500			11.38 5.58 20

Work Order: 1801177

CLIENT: PBS Engineering & Environmental

Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	MB-19514	SampType:	MBLK		Units:	µg/L		Prep Date:	1/16/2018		RunNo:	41398	
Client ID:	MBLKW	Batch ID:	19514					Analysis Date:	1/26/2018		SeqNo:	797975	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Phenol		ND	2.00										
2-Chlorophenol		ND	1.00										
1,3-Dichlorobenzene		ND	1.00										
1,4-Dichlorobenzene		ND	1.00										
1,2-Dichlorobenzene		ND	1.00										
Benzyl alcohol		ND	1.00										
Bis(2-chloroethyl) ether		ND	2.00										
2-Methylphenol (o-cresol)		ND	1.00										Q
Hexachloroethane		ND	1.00										
N-Nitrosodi-n-propylamine		ND	1.00										
Nitrobenzene		ND	2.00										
Isophorone		ND	1.00										
3&4-Methylphenol (m, p-cresol)		ND	1.00										
2-Nitrophenol		ND	2.00										
2,4-Dimethylphenol		ND	1.00										Q
Bis(2-chloroethoxy)methane		ND	1.00										
2,4-Dichlorophenol		ND	2.00										
1,2,4-Trichlorobenzene		ND	1.00										
Naphthalene		ND	0.500										
4-Chloroaniline		ND	5.00										
Hexachlorobutadiene		ND	1.00										
4-Chloro-3-methylphenol		ND	5.00										
2-Methylnaphthalene		ND	0.500										
1-Methylnaphthalene		ND	0.500										
Hexachlorocyclopentadiene		ND	1.00										
2,4,6-Trichlorophenol		ND	2.00										
2,4,5-Trichlorophenol		ND	2.00										
2-Chloronaphthalene		ND	1.00										
2-Nitroaniline		ND	5.00										
Acenaphthene		ND	0.500										
Dimethylphthalate		ND	1.00										

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	MB-19514	SampType: MBLK		Units: µg/L		Prep Date: 1/16/2018			RunNo: 41398		
Client ID:	MBLKW	Batch ID: 19514		Analysis Date: 1/26/2018					SeqNo: 797975		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,6-Dinitrotoluene	ND	1.00									
Acenaphthylene	ND	0.500									
2,4-Dinitrophenol	ND	2.00									Q
Dibenzofuran	ND	1.00									
2,4-Dinitrotoluene	ND	1.00									
4-Nitrophenol	ND	5.00									Q
Fluorene	ND	0.500									
4-Chlorophenyl phenyl ether	ND	1.00									
Diethylphthalate	ND	1.00									
4,6-Dinitro-2-methylphenol	ND	5.00									
4-Bromophenyl phenyl ether	ND	1.00									
Hexachlorobenzene	ND	1.00									
Pentachlorophenol	ND	2.00									Q
Phenanthrene	ND	0.500									
Anthracene	ND	0.500									
Carbazole	ND	5.00									
Di-n-butyl phthalate	ND	1.00									
Fluoranthene	ND	0.500									
Pyrene	ND	0.500									
Benzyl Butylphthalate	ND	1.00									
bis(2-Ethylhexyl)adipate	ND	1.00									
Benz(a)anthracene	ND	0.500									
Chrysene	ND	0.500									
Bis(2-ethylhexyl) phthalate	ND	1.00									
Di-n-octyl phthalate	ND	1.00									
Benzo(b)fluoranthene	ND	0.500									
Benzo(k)fluoranthene	ND	0.500									
Benzo(a)pyrene	ND	0.500									
Indeno(1,2,3-cd)pyrene	ND	0.500									
Dibenz(a,h)anthracene	ND	0.500									
Benzo(g,h,i)perylene	ND	0.500									

Work Order: 1801177

CLIENT: PBS Engineering & Environmental

Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	MB-19514	SampType:	MBLK		Units:	µg/L			Prep Date:	1/16/2018		RunNo:	41398	
Client ID:	MBLKW	Batch ID:	19514						Analysis Date:	1/26/2018		SeqNo:	797975	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual	
Surr: 2,4,6-Tribromophenol		2.63		3.999		65.7	5	159						
Surr: 2-Fluorobiphenyl		1.94		2.000		97.2	26.8	131						
Surr: Nitrobenzene-d5		2.08		2.000		104	19.7	124						
Surr: Phenol-d6		0.727		3.999		18.2	10.3	128						
Surr: p-Terphenyl		2.08		2.000		104	23.5	156						

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample ID	LCS-19514	SampType: LCS		Units: µg/L		Prep Date: 1/16/2018			RunNo: 41398		
Client ID:	LCSW	Batch ID: 19514		Analysis Date: 1/26/2018					SeqNo: 797976		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	1.04	2.00	4.000	0	25.9	10	63.1				
2-Chlorophenol	2.50	1.00	4.000	0	62.4	25	112				
1,3-Dichlorobenzene	2.93	1.00	4.000	0	73.2	25	108				
1,4-Dichlorobenzene	2.98	1.00	4.000	0	74.6	25	110				
1,2-Dichlorobenzene	2.99	1.00	4.000	0	74.7	25	109				
Benzyl alcohol	5.42	1.00	4.000	0	136	20	96.5				S
Bis(2-chloroethyl) ether	3.32	2.00	4.000	0	82.9	25	111				
2-Methylphenol (o-cresol)	2.01	1.00	4.000	0	50.3	25	101				
Hexachloroethane	3.17	1.00	4.000	0	79.2	25	109				
N-Nitrosodi-n-propylamine	3.73	1.00	4.000	0	93.3	25	122				
Nitrobenzene	3.71	2.00	4.000	0	92.7	25	110				
Isophorone	3.95	1.00	4.000	0	98.8	25	126				
3&4-Methylphenol (m, p-cresol)	0.990	1.00	2.000	0	49.5	5	100				
2-Nitrophenol	3.85	2.00	4.000	0	96.4	25	126				
2,4-Dimethylphenol	1.70	1.00	4.000	0	42.5	25	124				
Bis(2-chloroethoxy)methane	3.67	1.00	4.000	0	91.8	25	121				
2,4-Dichlorophenol	3.01	2.00	4.000	0	75.3	29.1	110				
1,2,4-Trichlorobenzene	3.25	1.00	4.000	0	81.3	25	113				
Naphthalene	3.00	0.500	4.000	0	74.9	25	115				

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	LCS-19514	SampType: LCS		Units: µg/L		Prep Date: 1/16/2018			RunNo: 41398		
Client ID:	LCSW	Batch ID: 19514		Analysis Date: 1/26/2018						SeqNo: 797976	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chloroaniline	2.85	5.00	4.000	0	71.1	10	113				
Hexachlorobutadiene	2.76	1.00	4.000	0	68.9	25	111				
4-Chloro-3-methylphenol	2.90	5.00	4.000	0	72.6	32.3	122				
2-Methylnaphthalene	3.40	0.500	4.000	0	85.1	25	119				
1-Methylnaphthalene	3.38	0.500	4.000	0	84.5	25	117				
Hexachlorocyclopentadiene	2.52	1.00	4.000	0	63.0	25	125				
2,4,6-Trichlorophenol	3.78	2.00	4.000	0	94.6	25	133				
2,4,5-Trichlorophenol	2.55	2.00	4.000	0	63.6	25	125				
2-Chloronaphthalene	3.41	1.00	4.000	0	85.4	25	121				
2-Nitroaniline	3.96	5.00	4.000	0	99.1	25	121				
Acenaphthene	3.45	0.500	4.000	0	86.3	25	120				
Dimethylphthalate	3.67	1.00	4.000	0	91.8	25	133				
2,6-Dinitrotoluene	3.94	1.00	4.000	0	98.5	25	131				
Acenaphthylene	3.48	0.500	4.000	0	87.0	25	128				
2,4-Dinitrophenol	2.63	2.00	7.999	0	32.9	10	121				
Dibenzofuran	3.37	1.00	4.000	0	84.2	25	121				
2,4-Dinitrotoluene	3.71	1.00	4.000	0	92.7	25	132				
4-Nitrophenol	0.576	5.00	4.000	0	14.4	5	141				
Fluorene	3.49	0.500	4.000	0	87.2	25	127				
4-Chlorophenyl phenyl ether	3.31	1.00	4.000	0	82.8	25	124				
Diethylphthalate	3.89	1.00	4.000	0	97.2	31.3	142				
4,6-Dinitro-2-methylphenol	3.00	5.00	4.000	0	74.9	10	118				
4-Bromophenyl phenyl ether	3.28	1.00	4.000	0	82.1	25	130				
Hexachlorobenzene	3.07	1.00	4.000	0	76.9	21.1	128				
Pentachlorophenol	1.67	2.00	4.000	0	41.9	10	117				
Phenanthrene	3.71	0.500	4.000	0	92.6	32.6	104				
Anthracene	3.27	0.500	4.000	0	81.9	27.7	134				
Carbazole	3.74	5.00	4.000	0	93.5	27.9	150				
Di-n-butyl phthalate	4.07	1.00	4.000	0	102	28.6	121				
Fluoranthene	3.50	0.500	4.000	0	87.6	34.8	143				
Pyrene	3.59	0.500	4.000	0	89.7	31.9	109				

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	LCS-19514	SampType:	LCS	Units:	µg/L	Prep Date:	1/16/2018	RunNo:	41398		
Client ID:	LCSW	Batch ID:	19514			Analysis Date:	1/26/2018	SeqNo:	797976		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzyl Butylphthalate	4.17	1.00	4.000	0	104	31	149				
bis(2-Ethylhexyl)adipate	3.55	1.00	4.000	0	88.8	38.1	140				
Benz(a)anthracene	3.34	0.500	4.000	0	83.4	27.2	132				
Chrysene	3.32	0.500	4.000	0	82.9	31.3	107				
Bis(2-ethylhexyl) phthalate	3.79	1.00	4.000	0	94.7	36.2	123				
Di-n-octyl phthalate	3.90	1.00	4.000	0	97.4	40.1	149				
Benzo(b)fluoranthene	3.80	0.500	4.000	0	95.0	32.5	119				
Benzo(k)fluoranthene	2.76	0.500	4.000	0	69.0	25	144				
Benzo(a)pyrene	3.01	0.500	4.000	0	75.2	24.9	125				
Indeno(1,2,3-cd)pyrene	3.35	0.500	4.000	0	83.8	25	127				
Dibenz(a,h)anthracene	3.17	0.500	4.000	0	79.2	25	132				
Benzo(g,h,i)perylene	3.45	0.500	4.000	0	86.3	25	133				
Surr: 2,4,6-Tribromophenol	3.17		4.000		79.3	5	159				
Surr: 2-Fluorobiphenyl	1.88		2.000		94.1	26.8	131				
Surr: Nitrobenzene-d5	2.10		2.000		105	19.7	124				
Surr: Phenol-d6	0.627		4.000		15.7	10.3	128				
Surr: p-Terphenyl	1.99		2.000		99.6	23.5	156				

NOTES:

S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Sample ID	LCSD-19514	SampType:	LCSD	Units:	µg/L	Prep Date:	1/16/2018	RunNo:	41398		
Client ID:	LCSW02	Batch ID:	19514			Analysis Date:	1/26/2018	SeqNo:	797977		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	0.921	2.00	3.998	0	23.0	10	63.1	0		30	
2-Chlorophenol	2.02	1.00	3.998	0	50.6	25	112	2.497	20.9	30	
1,3-Dichlorobenzene	2.49	1.00	3.998	0	62.3	25	108	2.929	16.1	30	
1,4-Dichlorobenzene	2.54	1.00	3.998	0	63.5	25	110	2.982	16.1	30	
1,2-Dichlorobenzene	2.58	1.00	3.998	0	64.6	25	109	2.988	14.5	30	
Benzyl alcohol	4.23	1.00	3.998	0	106	20	96.5	5.422	24.8	30	S
Bis(2-chloroethyl) ether	2.75	2.00	3.998	0	68.7	25	111	3.318	18.8	30	

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	LCSD-19514	SampType: LCSD	Units: µg/L			Prep Date: 1/16/2018			RunNo: 41398		
Client ID:	LCSW02	Batch ID:	19514		Analysis Date: 1/26/2018				SeqNo: 797977		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Methylphenol (o-cresol)	1.60	1.00	3.998	0	40.0	25	101	2.012	22.8	30	
Hexachloroethane	2.72	1.00	3.998	0	68.1	25	109	3.169	15.1	30	
N-Nitrosodi-n-propylamine	3.09	1.00	3.998	0	77.3	25	122	3.731	18.8	30	
Nitrobenzene	3.04	2.00	3.998	0	76.0	25	110	3.707	19.9	30	
Isophorone	3.31	1.00	3.998	0	82.7	25	126	3.950	17.7	30	
3&4-Methylphenol (m, p-cresol)	0.884	1.00	1.999	0	44.2	5	100	0		30	
2-Nitrophenol	3.09	2.00	3.998	0	77.2	25	126	3.855	22.1	30	
2,4-Dimethylphenol	1.35	1.00	3.998	0	33.7	25	124	1.700	23.2	30	
Bis(2-chloroethoxy)methane	3.15	1.00	3.998	0	78.9	25	121	3.673	15.2	30	
2,4-Dichlorophenol	2.36	2.00	3.998	0	59.2	29.1	110	3.014	24.1	30	
1,2,4-Trichlorobenzene	2.78	1.00	3.998	0	69.4	25	113	3.253	15.8	30	
Naphthalene	2.60	0.500	3.998	0	65.0	25	115	2.996	14.2	30	
4-Chloroaniline	1.83	5.00	3.998	0	45.7	25	136	0		30	
Hexachlorobutadiene	2.48	1.00	3.998	0	62.1	25	111	2.757	10.5	30	
4-Chloro-3-methylphenol	2.83	5.00	3.998	0	70.9	32.3	122	0		30	
2-Methylnaphthalene	2.94	0.500	3.998	0	73.5	25	119	3.403	14.6	30	
1-Methylnaphthalene	2.98	0.500	3.998	0	74.4	25	117	3.379	12.7	30	
Hexachlorocyclopentadiene	2.34	1.00	3.998	0	58.5	25	125	2.521	7.57	30	
2,4,6-Trichlorophenol	3.46	2.00	3.998	0	86.5	25	133	3.784	9.00	30	
2,4,5-Trichlorophenol	2.49	2.00	3.998	0	62.2	25	125	2.545	2.36	30	
2-Chloronaphthalene	3.12	1.00	3.998	0	78.1	25	121	3.414	8.85	30	
2-Nitroaniline	3.59	5.00	3.998	0	89.7	25	121	0		30	
Acenaphthene	3.17	0.500	3.998	0	79.2	25	120	3.451	8.60	30	
Dimethylphthalate	3.41	1.00	3.998	0	85.3	25	133	3.673	7.42	30	
2,6-Dinitrotoluene	3.70	1.00	3.998	0	92.6	25	131	3.941	6.24	30	
Acenaphthylene	3.22	0.500	3.998	0	80.7	25	128	3.478	7.56	30	
2,4-Dinitrophenol	2.08	2.00	7.996	0	26.0	10	121	2.634	23.5	30	
Dibenzofuran	3.25	1.00	3.998	0	81.3	25	121	3.366	3.45	30	
2,4-Dinitrotoluene	3.59	1.00	3.998	0	89.7	25	132	3.707	3.27	30	
4-Nitrophenol	0.654	5.00	3.998	0	16.4	5	141	0		30	
Fluorene	3.31	0.500	3.998	0	82.7	25	127	3.486	5.32	30	

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	LCSD-19514	SampType: LCSD	Units: µg/L			Prep Date: 1/16/2018			RunNo: 41398		
Client ID:	LCSW02	Batch ID:	19514		Analysis Date: 1/26/2018				SeqNo: 797977		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorophenyl phenyl ether	3.14	1.00	3.998	0	78.5	25	124	3.310	5.34	30	
Diethylphthalate	3.67	1.00	3.998	0	91.9	31.3	142	3.888	5.69	30	
4,6-Dinitro-2-methylphenol	2.67	5.00	3.998	0	66.7	10	118	0		30	
4-Bromophenyl phenyl ether	3.18	1.00	3.998	0	79.5	25	130	3.284	3.30	30	
Hexachlorobenzene	3.08	1.00	3.998	0	77.0	21.1	128	3.074	0.0943	30	
Pentachlorophenol	1.46	2.00	3.998	0	36.5	10	117	0		30	
Phenanthrene	3.60	0.500	3.998	0	89.9	32.6	104	3.705	2.99	30	
Anthracene	3.20	0.500	3.998	0	80.1	27.7	134	3.274	2.26	30	
Carbazole	3.59	5.00	3.998	0	89.8	27.9	150	0		30	
Di-n-butyl phthalate	3.94	1.00	3.998	0	98.6	28.6	121	4.066	3.09	30	
Fluoranthene	3.46	0.500	3.998	0	86.4	34.8	143	3.503	1.38	30	
Pyrene	3.51	0.500	3.998	0	87.7	31.9	109	3.589	2.34	30	
Benzyl Butylphthalate	4.01	1.00	3.998	0	100	31	149	4.174	4.03	30	
bis(2-Ethylhexyl)adipate	3.39	1.00	3.998	0	84.8	51.3	144	3.550	4.61	30	
Benz(a)anthracene	3.30	0.500	3.998	0	82.4	27.2	132	3.337	1.25	30	
Chrysene	3.29	0.500	3.998	0	82.2	31.3	107	3.316	0.911	30	
Bis(2-ethylhexyl) phthalate	3.57	1.00	3.998	0	89.3	36.2	123	3.787	5.93	30	
Di-n-octyl phthalate	3.69	1.00	3.998	0	92.4	40.1	149	3.897	5.33	30	
Benzo(b)fluoranthene	3.51	0.500	3.998	0	87.8	32.5	119	3.801	7.96	30	
Benzo(k)fluoranthene	3.15	0.500	3.998	0	78.8	25	144	2.761	13.2	30	
Benzo(a)pyrene	2.89	0.500	3.998	0	72.2	24.9	125	3.008	4.09	30	
Indeno(1,2,3-cd)pyrene	3.27	0.500	3.998	0	81.9	25	127	3.351	2.32	30	
Dibenz(a,h)anthracene	3.08	0.500	3.998	0	76.9	25	132	3.168	2.95	30	
Benzo(g,h,i)perylene	3.36	0.500	3.998	0	84.1	25	133	3.451	2.65	30	
Surr: 2,4,6-Tribromophenol	3.32		3.998		83.0	5	159		0		
Surr: 2-Fluorobiphenyl	1.69		1.999		84.4	26.8	131		0		
Surr: Nitrobenzene-d5	1.71		1.999		85.3	19.7	124		0		
Surr: Phenol-d6	0.471		3.998		11.8	10.3	128		0		
Surr: p-Terphenyl	1.91		1.999		95.6	23.5	156		0		

NOTES:

S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	1801204-006ADUP	SampType: DUP	Units: µg/L			Prep Date: 1/16/2018			RunNo: 41398		
Client ID:	BATCH	Batch ID: 19514				Analysis Date: 1/26/2018			SeqNo: 797966		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	ND	2.00						0		50	
2-Chlorophenol	ND	0.999						0		50	
1,3-Dichlorobenzene	ND	0.999						0		50	
1,4-Dichlorobenzene	ND	0.999						0		50	
1,2-Dichlorobenzene	ND	0.999						0		50	
Benzyl alcohol	ND	0.999						0		50	
Bis(2-chloroethyl) ether	ND	2.00						0		50	
2-Methylphenol (o-cresol)	ND	0.999						0		50	Q
Hexachloroethane	ND	0.999						0		50	
N-Nitrosodi-n-propylamine	ND	0.999						0		50	
Nitrobenzene	ND	2.00						0		50	
Isophorone	ND	0.999						0		50	
3&4-Methylphenol (m, p-cresol)	ND	0.999						0		50	
2-Nitrophenol	ND	2.00						0		50	
2,4-Dimethylphenol	ND	0.999						0		50	Q
Bis(2-chloroethoxy)methane	ND	0.999						0		50	
2,4-Dichlorophenol	ND	2.00						0		50	
1,2,4-Trichlorobenzene	ND	0.999						0		50	
Naphthalene	ND	0.499						0		50	
4-Chloroaniline	ND	4.99						0		50	
Hexachlorobutadiene	ND	0.999						0		50	
4-Chloro-3-methylphenol	ND	4.99						0		50	
2-Methylnaphthalene	ND	0.499						0		50	
1-Methylnaphthalene	ND	0.499						0		50	
Hexachlorocyclopentadiene	ND	0.999						0		50	
2,4,6-Trichlorophenol	ND	2.00						0		50	
2,4,5-Trichlorophenol	ND	2.00						0		50	
2-Chloronaphthalene	ND	0.999						0		50	
2-Nitroaniline	ND	4.99						0		50	
Acenaphthene	ND	0.499						0		50	
Dimethylphthalate	ND	0.999						0		50	

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	1801204-006ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/16/2018	RunNo:	41398		
Client ID:	BATCH	Batch ID:	19514			Analysis Date:	1/26/2018	SeqNo:	797966		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,6-Dinitrotoluene	ND	0.999						0		50	
Acenaphthylene	ND	0.499						0		50	
2,4-Dinitrophenol	ND	2.00						0		50	Q
Dibenzofuran	ND	0.999						0		50	
2,4-Dinitrotoluene	ND	0.999						0		50	
4-Nitrophenol	ND	4.99						0		50	Q
Fluorene	ND	0.499						0		50	
4-Chlorophenyl phenyl ether	ND	0.999						0		50	
Diethylphthalate	ND	0.999						0		50	
4,6-Dinitro-2-methylphenol	ND	4.99						0		50	
4-Bromophenyl phenyl ether	ND	0.999						0		50	
Hexachlorobenzene	ND	0.999						0		50	
Pentachlorophenol	ND	2.00						0		50	Q
Phenanthrene	ND	0.499						0		50	
Anthracene	ND	0.499						0		50	
Carbazole	ND	4.99						0		50	
Di-n-butyl phthalate	ND	0.999						0		50	
Fluoranthene	ND	0.499						0		50	
Pyrene	ND	0.499						0		50	
Benzyl Butylphthalate	ND	0.999						0		50	
bis(2-Ethylhexyl)adipate	ND	0.999						0		50	
Benz(a)anthracene	ND	0.499						0		50	
Chrysene	ND	0.499						0		50	
Bis(2-ethylhexyl) phthalate	1.08	0.999						1.143	5.77	50	
Di-n-octyl phthalate	ND	0.999						0		50	
Benzo(b)fluoranthene	ND	0.499						0		50	
Benzo(k)fluoranthene	ND	0.499						0		50	
Benzo(a)pyrene	ND	0.499						0		50	
Indeno(1,2,3-cd)pyrene	ND	0.499						0		50	
Dibenz(a,h)anthracene	ND	0.499						0		50	
Benzo(g,h,i)perylene	ND	0.499						0		50	

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	1801204-006ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/16/2018	RunNo:	41398		
Client ID:	BATCH	Batch ID:	19514			Analysis Date:	1/26/2018	SeqNo:	797966		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol	1.79		3.996		44.7	5	159		0		
Surr: 2-Fluorobiphenyl	1.78		1.998		88.9	26.8	131		0		
Surr: Nitrobenzene-d5	1.95		1.998		97.7	19.7	124		0		
Surr: Phenol-d6	0.974		3.996		24.4	10.3	128		0		
Surr: p-Terphenyl	1.83		1.998		91.7	23.5	156		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Work Order: 1801177

CLIENT: PBS Engineering & Environmental

Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	MB-19533	SampType:	MBLK		Units:	µg/Kg		Prep Date:	1/17/2018		RunNo:	41399	
Client ID:	MBLKS	Batch ID:	19533					Analysis Date:	1/26/2018		SeqNo:	797979	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Phenol		ND	100										
Bis(2-chloroethyl) ether		ND	100										
2-Chlorophenol		ND	100										
1,3-Dichlorobenzene		ND	75.0										
1,4-Dichlorobenzene		ND	75.0										
1,2-Dichlorobenzene		ND	75.0										
Benzyl alcohol		ND	100										
2-Methylphenol (o-cresol)		ND	100										Q
Hexachloroethane		ND	100										
N-Nitrosodi-n-propylamine		ND	100										
Nitrobenzene		ND	100										
Isophorone		ND	100										
3&4-Methylphenol (m, p-cresol)		ND	100										
2-Nitrophenol		ND	100										
2,4-Dimethylphenol		ND	100										Q
Bis(2-chloroethoxy)methane		ND	75.0										
2,4-Dichlorophenol		ND	100										
1,2,4-Trichlorobenzene		ND	75.0										
Naphthalene		ND	50.0										
4-Chloroaniline		ND	75.0										
Hexachlorobutadiene		ND	75.0										
4-Chloro-3-methylphenol		ND	200										
2-Methylnaphthalene		ND	50.0										
1-Methylnaphthalene		ND	50.0										
Hexachlorocyclopentadiene		ND	100										Q
2,4,6-Trichlorophenol		ND	100										
2,4,5-Trichlorophenol		ND	100										
2-Chloronaphthalene		ND	75.0										
2-Nitroaniline		ND	100										
Acenaphthene		ND	50.0										
Dimethylphtalate		ND	100										

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
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QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	MB-19533	SampType: MBLK	Units: µg/Kg			Prep Date: 1/17/2018			RunNo: 41399		
Client ID:	MBLKS	Batch ID: 19533				Analysis Date: 1/26/2018			SeqNo: 797979		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,6-Dinitrotoluene	ND	100									
Acenaphthylene	ND	50.0									
2,4-Dinitrophenol	ND	525									Q
Dibenzofuran	ND	75.0									
2,4-Dinitrotoluene	ND	100									
4-Nitrophenol	ND	500									Q
Fluorene	ND	50.0									
4-Chlorophenyl phenyl ether	ND	75.0									
Diethylphthalate	ND	100									
4,6-Dinitro-2-methylphenol	ND	200									
4-Bromophenyl phenyl ether	ND	75.0									
Hexachlorobenzene	ND	75.0									
Pentachlorophenol	ND	100									Q
Phenanthrene	ND	50.0									
Anthracene	ND	50.0									
Carbazole	ND	75.0									
Di-n-butylphthalate	ND	100									
Fluoranthene	ND	50.0									
Pyrene	ND	50.0									
Butyl Benzylphthalate	ND	100									
bis(2-Ethylhexyl)adipate	ND	100									
Benz(a)anthracene	ND	50.0									
Chrysene	ND	50.0									
bis (2-Ethylhexyl) phthalate	ND	100									
Di-n-octyl phthalate	ND	100									
Benzo(b)fluoranthene	ND	50.0									
Benzo(k)fluoranthene	ND	50.0									
Benzo(a)pyrene	ND	50.0									
Indeno(1,2,3-cd)pyrene	ND	50.0									
Dibenz(a,h)anthracene	ND	50.0									
Benzo(g,h,i)perylene	ND	50.0									

Work Order: 1801177

CLIENT: PBS Engineering & Environmental

Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	MB-19533	SampType:	MBLK		Units:	µg/Kg		Prep Date:	1/17/2018		RunNo:	41399
Client ID:	MBLKS	Batch ID:	19533					Analysis Date:	1/26/2018		SeqNo:	797979
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol		572		1,000		57.2	14.8	165				
Surr: 2-Fluorobiphenyl		442		500.0		88.4	17.8	151				
Surr: Nitrobenzene-d5		344		500.0		68.8	12.5	163				
Surr: Phenol-d6		590		1,000		59.0	11.6	133				
Surr: p-Terphenyl		517		500.0		103	22	176				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample ID	LCS-19533	SampType:	LCS	Units:	µg/Kg	Prep Date:	1/17/2018	RunNo:	41399		
Client ID:	LCSS	Batch ID:	19533			Analysis Date:	1/26/2018	SeqNo:	797980		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	788	100	1,000	0	78.8	41.8	138				
Bis(2-chloroethyl) ether	912	100	1,000	0	91.2	20.1	145				
2-Chlorophenol	856	100	1,000	0	85.6	42.1	132				
1,3-Dichlorobenzene	879	75.0	1,000	0	87.9	35.9	128				
1,4-Dichlorobenzene	866	75.0	1,000	0	86.6	36.8	131				
1,2-Dichlorobenzene	862	75.0	1,000	0	86.2	41.8	128				
Benzyl alcohol	985	100	1,000	0	98.5	5	148				
2-Methylphenol (o-cresol)	633	100	1,000	0	63.3	47.2	134				
Hexachloroethane	963	100	1,000	0	96.3	25.4	144				
N-Nitrosodi-n-propylamine	920	100	1,000	0	92.0	39.8	135				
Nitrobenzene	926	100	1,000	0	92.6	46	131				
Isophorone	987	100	1,000	0	98.7	62.7	131				
3&4-Methylphenol (m, p-cresol)	286	100	500.0	0	57.2	48.6	128				
2-Nitrophenol	941	100	1,000	0	94.1	44.2	129				
2,4-Dimethylphenol	354	100	1,000	0	35.4	34	131				
Bis(2-chloroethoxy)methane	918	75.0	1,000	0	91.8	30.9	140				
2,4-Dichlorophenol	706	100	1,000	0	70.6	57.1	128				
1,2,4-Trichlorobenzene	896	75.0	1,000	0	89.6	36.2	140				
Naphthalene	815	50.0	1,000	0	81.5	52.9	131				

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	LCS-19533	SampType:	LCS	Units:	µg/Kg	Prep Date:	1/17/2018	RunNo:	41399		
Client ID:	LCSS	Batch ID:	19533			Analysis Date:	1/26/2018	SeqNo:	797980		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chloroaniline	853	75.0	1,000	0	85.3	10.4	130				
Hexachlorobutadiene	840	75.0	1,000	0	84.0	38.5	138				
4-Chloro-3-methylphenol	718	200	1,000	0	71.8	31.4	148				
2-Methylnaphthalene	888	50.0	1,000	0	88.8	47	132				
1-Methylnaphthalene	901	50.0	1,000	0	90.1	56.4	132				
Hexachlorocyclopentadiene	694	100	1,000	0	69.4	21	130				
2,4,6-Trichlorophenol	890	100	1,000	0	89.0	36.4	132				
2,4,5-Trichlorophenol	649	100	1,000	0	64.9	34.6	133				
2-Chloronaphthalene	910	75.0	1,000	0	91.0	33	120				
2-Nitroaniline	964	100	1,000	0	96.4	32.7	162				
Acenaphthene	875	50.0	1,000	0	87.5	49.2	127				
Dimethylphthalate	914	100	1,000	0	91.4	47.7	147				
2,6-Dinitrotoluene	978	100	1,000	0	97.8	54.6	127				
Acenaphthylene	893	50.0	1,000	0	89.3	53.7	137				
2,4-Dinitrophenol	1,060	525	2,000	0	52.8	7.9	119				
Dibenzofuran	901	75.0	1,000	0	90.1	38.2	125				
2,4-Dinitrotoluene	951	100	1,000	0	95.1	21.9	136				
4-Nitrophenol	311.48	500	1,000	0	31.1	25.4	138				
Fluorene	925	50.0	1,000	0	92.5	48.5	133				
4-Chlorophenyl phenyl ether	852	75.0	1,000	0	85.2	33.9	145				
Diethylphthalate	941	100	1,000	0	94.1	42.9	132				
4,6-Dinitro-2-methylphenol	752	200	1,000	0	75.2	12.9	110				
4-Bromophenyl phenyl ether	803	75.0	1,000	0	80.3	52.4	135				
Hexachlorobenzene	818	75.0	1,000	0	81.8	39.3	147				
Pentachlorophenol	310	100	1,000	0	31.0	10	123				
Phenanthrene	952	50.0	1,000	0	95.2	47.1	130				
Anthracene	938	50.0	1,000	0	93.8	59.2	135				
Carbazole	944	75.0	1,000	0	94.4	37	148				
Di-n-butylphthalate	1,020	100	1,000	0	102	46.6	145				
Fluoranthene	911	50.0	1,000	0	91.1	43	124				
Pyrene	947	50.0	1,000	0	94.7	45.4	140				

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QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	LCS-19533	SampType:	LCS	Units:	µg/Kg	Prep Date:	1/17/2018	RunNo:	41399		
Client ID:	LCSS	Batch ID:	19533	Analysis Date:				1/26/2018	SeqNo:	797980	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Butyl Benzylphthalate	1,160	100	1,000	0	116	31.1	157				
bis(2-Ethylhexyl)adipate	1,090	100	1,000	0	109	28.7	160				
Benz(a)anthracene	901	50.0	1,000	0	90.1	44	150				
Chrysene	847	50.0	1,000	0	84.7	58.9	129				
bis (2-Ethylhexyl) phthalate	1,140	100	1,000	0	114	36.3	149				
Di-n-octyl phthalate	1,190	100	1,000	0	119	31.5	152				
Benzo(b)fluoranthene	971	50.0	1,000	0	97.1	45.6	146				
Benzo(k)fluoranthene	744	50.0	1,000	0	74.4	45.5	138				
Benzo(a)pyrene	870	50.0	1,000	0	87.0	35.6	148				
Indeno(1,2,3-cd)pyrene	951	50.0	1,000	0	95.1	44.2	146				
Dibenz(a,h)anthracene	914	50.0	1,000	0	91.4	37.5	152				
Benzo(g,h,i)perylene	981	50.0	1,000	0	98.1	24.1	156				
Surr: 2,4,6-Tribromophenol	749		1,000		74.9	14.8	165				
Surr: 2-Fluorobiphenyl	459		500.0		91.8	17.8	151				
Surr: Nitrobenzene-d5	458		500.0		91.6	12.5	163				
Surr: Phenol-d6	468		1,000		46.8	11.6	133				
Surr: p-Terphenyl	533		500.0		107	22	176				

Sample ID	1801216-001ADUP	SampType:	DUP	Units:	µg/Kg-dry	Prep Date:	1/17/2018	RunNo:	41399		
Client ID:	BATCH	Batch ID:	19533			Analysis Date:	1/26/2018	SeqNo:	797986		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	ND	110						0		50	
Bis(2-chloroethyl) ether	ND	110						0		50	
2-Chlorophenol	ND	110						0		50	
1,3-Dichlorobenzene	ND	82.2						0		50	
1,4-Dichlorobenzene	ND	82.2						0		50	
1,2-Dichlorobenzene	ND	82.2						0		50	
Benzyl alcohol	ND	110						0		50	
2-Methylphenol (o-cresol)	ND	110						0		50	Q

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
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QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	1801216-001ADUP	SampType:	DUP		Units:	µg/Kg-dry		Prep Date:	1/17/2018		RunNo:	41399	
Client ID:	BATCH	Batch ID:	19533		Analysis Date:				1/26/2018		SeqNo:	797986	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Hexachloroethane	ND	110						0		50			
N-Nitrosodi-n-propylamine	ND	110						0		50			
Nitrobenzene	ND	110						0		50			
Isophorone	ND	110						0		50			
3&4-Methylphenol (m, p-cresol)	ND	110						0		50			
2-Nitrophenol	ND	110						0		50			
2,4-Dimethylphenol	ND	110						0		50	Q		
Bis(2-chloroethoxy)methane	ND	82.2						0		50			
2,4-Dichlorophenol	ND	110						0		50			
1,2,4-Trichlorobenzene	ND	82.2						0		50			
Naphthalene	ND	54.8						0		50			
4-Chloroaniline	ND	82.2						0		50			
Hexachlorobutadiene	ND	82.2						0		50			
4-Chloro-3-methylphenol	ND	219						0		50			
2-Methylnaphthalene	ND	54.8						0		50			
1-Methylnaphthalene	ND	54.8						0		50			
Hexachlorocyclopentadiene	ND	110						0		50	Q		
2,4,6-Trichlorophenol	ND	110						0		50			
2,4,5-Trichlorophenol	ND	110						0		50			
2-Chloronaphthalene	ND	82.2						0		50			
2-Nitroaniline	ND	110						0		50			
Acenaphthene	ND	54.8						0		50			
Dimethylphthalate	ND	110						0		50			
2,6-Dinitrotoluene	ND	110						0		50			
Acenaphthylene	ND	54.8						0		50			
2,4-Dinitrophenol	ND	575						0		50	Q		
Dibenzofuran	ND	82.2						0		50			
2,4-Dinitrotoluene	ND	110						0		50			
4-Nitrophenol	ND	548						0		50	Q		
Fluorene	ND	54.8						0		50			
4-Chlorophenyl phenyl ether	ND	82.2						0		50			

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CLIENT: PBS Engineering & Environmental
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QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	1801216-001ADUP	SampType: DUP	Units: µg/Kg-dry			Prep Date: 1/17/2018			RunNo: 41399		
Client ID:	BATCH	Batch ID: 19533				Analysis Date: 1/26/2018			SeqNo: 797986		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diethylphthalate	ND	110						0		50	
4,6-Dinitro-2-methylphenol	ND	219						0		50	
4-Bromophenyl phenyl ether	ND	82.2						0		50	
Hexachlorobenzene	ND	82.2						0		50	
Pentachlorophenol	ND	110						0		50	Q
Phenanthrene	ND	54.8						0		50	
Anthracene	ND	54.8						0		50	
Carbazole	ND	82.2						0		50	
Di-n-butylphthalate	ND	110						0		50	
Fluoranthene	ND	54.8						0		50	
Pyrene	ND	54.8						0		50	
Butyl Benzylphthalate	ND	110						0		50	
bis(2-Ethylhexyl)adipate	ND	110						0		50	
Benz(a)anthracene	ND	54.8						0		50	
Chrysene	ND	54.8						0		50	
bis (2-Ethylhexyl) phthalate	ND	110						0		50	
Di-n-octyl phthalate	ND	110						0		50	
Benzo(b)fluoranthene	ND	54.8						0		50	
Benzo(k)fluoranthene	ND	54.8						0		50	
Benzo(a)pyrene	ND	54.8						0		50	
Indeno(1,2,3-cd)pyrene	ND	54.8						0		50	
Dibenz(a,h)anthracene	ND	54.8						0		50	
Benzo(g,h,i)perylene	ND	54.8						0		50	
Surr: 2,4,6-Tribromophenol	513		1,095		46.8	14.8	165		0		
Surr: 2-Fluorobiphenyl	318		547.7		58.0	17.8	151		0		
Surr: Nitrobenzene-d5	303		547.7		55.3	12.5	163		0		
Surr: Phenol-d6	345		1,095		31.5	11.6	133		0		
Surr: p-Terphenyl	406		547.7		74.2	22	176		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	1801216-001AMS	SampType: MS	Units: µg/Kg-dry			Prep Date: 1/17/2018			RunNo: 41399		
Client ID:	BATCH	Batch ID: 19533	Analysis Date: 1/26/2018						SeqNo: 797987		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Phenol	688	118	1,177	0	58.4	29.2	146				
Bis(2-chloroethyl) ether	850	118	1,177	0	72.2	34.4	135				
2-Chlorophenol	807	118	1,177	0	68.5	44	134				
1,3-Dichlorobenzene	792	88.3	1,177	0	67.3	21.1	133				
1,4-Dichlorobenzene	781	88.3	1,177	0	66.4	20.9	131				
1,2-Dichlorobenzene	779	88.3	1,177	0	66.2	35	131				
Benzyl alcohol	1,650	118	1,177	0	140	10	144				
2-Methylphenol (o-cresol)	539	118	1,177	0	45.8	22	128				
Hexachloroethane	854	118	1,177	0	72.5	15.4	139				
N-Nitrosodi-n-propylamine	891	118	1,177	0	75.7	26.4	151				
Nitrobenzene	865	118	1,177	0	73.5	32.2	125				
Isophorone	901	118	1,177	0	76.6	44	127				
3&4-Methylphenol (m, p-cresol)	241	118	588.6	0	41.0	37.6	125				
2-Nitrophenol	920	118	1,177	0	78.2	33.5	132				
2,4-Dimethylphenol	264	118	1,177	0	22.4	46	158				S
Bis(2-chloroethoxy)methane	849	88.3	1,177	0	72.1	46.8	121				
2,4-Dichlorophenol	689	118	1,177	0	58.5	33.9	133				
1,2,4-Trichlorobenzene	885	88.3	1,177	0	75.2	29.2	140				
Naphthalene	787	58.9	1,177	0	66.9	32.4	137				
4-Chloroaniline	748	88.3	1,177	0	63.6	27	126				
Hexachlorobutadiene	792	88.3	1,177	0	67.3	38.2	138				
4-Chloro-3-methylphenol	454	235	1,177	0	38.6	36.8	159				
2-Methylnaphthalene	843	58.9	1,177	0	71.6	39.3	126				
1-Methylnaphthalene	855	58.9	1,177	0	72.6	32.6	136				
Hexachlorocyclopentadiene	659	118	1,177	0	56.0	10	133				
2,4,6-Trichlorophenol	856	118	1,177	0	72.7	30.6	140				
2,4,5-Trichlorophenol	690	118	1,177	0	58.6	34.1	141				
2-Chloronaphthalene	889	88.3	1,177	0	75.6	42.1	124				
2-Nitroaniline	886	118	1,177	0	75.3	39.3	145				
Acenaphthene	839	58.9	1,177	0	71.3	49.6	129				
Dimethylphthalate	868	118	1,177	0	73.7	32.9	137				

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	1801216-001AMS	SampType: MS	Units: µg/Kg-dry			Prep Date: 1/17/2018			RunNo: 41399		
Client ID:	BATCH	Batch ID: 19533				Analysis Date: 1/26/2018			SeqNo: 797987		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,6-Dinitrotoluene	863	118	1,177	0	73.3	30.3	136				
Acenaphthylene	889	58.9	1,177	0	75.5	39.9	129				
2,4-Dinitrophenol	840	618	2,354	0	35.7	10	149				
Dibenzofuran	854	88.3	1,177	0	72.5	41.2	128				
2,4-Dinitrotoluene	877	118	1,177	0	74.5	30.9	139				
4-Nitrophenol	378	589	1,177	0	32.1	15.6	160				
Fluorene	859	58.9	1,177	0	72.9	37.7	133				
4-Chlorophenyl phenyl ether	827	88.3	1,177	0	70.2	34.5	129				
Diethylphthalate	911	118	1,177	0	77.4	36.7	130				
4,6-Dinitro-2-methylphenol	683	235	1,177	0	58.0	21.9	143				
4-Bromophenyl phenyl ether	842	88.3	1,177	0	71.5	29.7	148				
Hexachlorobenzene	820	88.3	1,177	0	69.7	34.3	131				
Pentachlorophenol	450	118	1,177	0	38.2	28.2	156				
Phenanthrene	933	58.9	1,177	0	79.2	32.2	139				
Anthracene	886	58.9	1,177	0	75.3	43.9	128				
Carbazole	893	88.3	1,177	0	75.9	32	147				
Di-n-butylphthalate	936	118	1,177	0	79.5	35.1	142				
Fluoranthene	867	58.9	1,177	0	73.6	33.8	141				
Pyrene	916	58.9	1,177	0	77.8	31.4	151				
Butyl Benzylphthalate	1,050	118	1,177	0	88.8	30.4	138				
bis(2-Ethylhexyl)adipate	1,000	118	1,177	0	85.3	32	136				
Benz(a)anthracene	831	58.9	1,177	0	70.6	36	138				
Chrysene	854	58.9	1,177	0	72.5	41.6	125				
bis (2-Ethylhexyl) phthalate	1,020	118	1,177	0	86.6	40.8	170				
Di-n-octyl phthalate	1,030	118	1,177	0	87.5	34.6	142				
Benzo(b)fluoranthene	847	58.9	1,177	0	72.0	31.8	166				
Benzo(k)fluoranthene	730	58.9	1,177	0	62.0	30.8	152				
Benzo(a)pyrene	835	58.9	1,177	0	70.9	31.1	153				
Indeno(1,2,3-cd)pyrene	902	58.9	1,177	0	76.6	38.1	155				
Dibenz(a,h)anthracene	860	58.9	1,177	0	73.1	40.7	152				
Benzo(g,h,i)perylene	922	58.9	1,177	0	78.3	34	157				

Work Order: 1801177

CLIENT: PBS Engineering & Environmental

Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	1801216-001AMS	SampType:	MS	Units:	µg/Kg-dry	Prep Date:	1/17/2018	RunNo:	41399		
Client ID:	BATCH	Batch ID:	19533			Analysis Date:	1/26/2018	SeqNo:	797987		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 2,4,6-Tribromophenol	665		1,177		56.5	14.8	165				
Surr: 2-Fluorobiphenyl	408		588.6		69.3	17.8	151				
Surr: Nitrobenzene-d5	406		588.6		68.9	12.5	163				
Surr: Phenol-d6	378		1,177		32.1	11.6	133				
Surr: p-Terphenyl	522		588.6		88.6	22	176				

NOTES:

S - Outlying spike recovery(ies) observed.

Sample ID	1801216-001AMSD	SampType:	MSD	Units:	µg/Kg-dry	Prep Date:	1/17/2018	RunNo:	41399			
Client ID:	BATCH	Batch ID:	19533	Analysis Date:				1/26/2018	SeqNo:	797988		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Phenol	730	125	1,252	0	58.3	29.2	146	687.5	5.93	50		
Bis(2-chloroethyl) ether	925	125	1,252	0	73.9	34.4	135	850.4	8.40	50		
2-Chlorophenol	808	125	1,252	0	64.5	44	134	806.7	0.119	50		
1,3-Dichlorobenzene	848	93.9	1,252	0	67.8	21.1	133	792.4	6.80	50		
1,4-Dichlorobenzene	871	93.9	1,252	0	69.6	20.9	131	781.4	10.9	50		
1,2-Dichlorobenzene	874	93.9	1,252	0	69.8	35	131	779.5	11.5	50		
Benzyl alcohol	2,070	125	1,252	0	165	10	144	1,652	22.4	50	S	
2-Methylphenol (o-cresol)	622	125	1,252	0	49.7	22	128	539.1	14.3	50		
Hexachloroethane	953	125	1,252	0	76.1	15.4	139	854.0	11.0	50		
N-Nitrosodi-n-propylamine	977	125	1,252	0	78.1	26.4	151	891.1	9.24	50		
Nitrobenzene	943	125	1,252	0	75.3	32.2	125	864.7	8.64	50		
Isophorone	996	125	1,252	0	79.6	44	127	901.3	10.0	50		
3&4-Methylphenol (m, p-cresol)	250	125	626.0	0	40.0	37.6	125	241.3	3.72	50		
2-Nitrophenol	1,020	125	1,252	0	81.7	33.5	132	920.3	10.5	50		
2,4-Dimethylphenol	274	125	1,252	0	21.9	46	158	263.9	3.81	50	S	
Bis(2-chloroethoxy)methane	924	93.9	1,252	0	73.8	46.8	121	849.2	8.47	50		
2,4-Dichlorophenol	738	125	1,252	0	59.0	33.9	133	688.5	7.00	50		
1,2,4-Trichlorobenzene	945	93.9	1,252	0	75.5	29.2	140	884.8	6.58	50		
Naphthalene	853	62.6	1,252	0	68.2	32.4	137	787.0	8.10	50		

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	1801216-001AMSD	SampType: MSD	Units: µg/Kg-dry			Prep Date: 1/17/2018			RunNo: 41399		
Client ID:	BATCH	Batch ID:	19533	Analysis Date: 1/26/2018					SeqNo: 797988		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chloroaniline	811	93.9	1,252	0	64.8	27	126	748.3	8.05	50	
Hexachlorobutadiene	868	93.9	1,252	0	69.3	38.2	138	792.4	9.06	50	
4-Chloro-3-methylphenol	468	250	1,252	0	37.4	36.8	159	453.9	3.03	50	
2-Methylnaphthalene	921	62.6	1,252	0	73.5	39.3	126	843.2	8.78	50	
1-Methylnaphthalene	918	62.6	1,252	0	73.3	32.6	136	854.9	7.12	50	
Hexachlorocyclopentadiene	664	125	1,252	0	53.1	10	133	659.1	0.776	50	
2,4,6-Trichlorophenol	882	125	1,252	0	70.5	30.6	140	856.2	2.99	50	
2,4,5-Trichlorophenol	736	125	1,252	0	58.8	34.1	141	690.3	6.42	50	
2-Chloronaphthalene	947	93.9	1,252	0	75.6	42.1	124	889.5	6.25	50	
2-Nitroaniline	960	125	1,252	0	76.7	39.3	145	886.4	8.00	50	
Acenaphthene	899	62.6	1,252	0	71.8	49.6	129	839.3	6.90	50	
Dimethylphthalate	908	125	1,252	0	72.5	32.9	137	868.1	4.52	50	
2,6-Dinitrotoluene	958	125	1,252	0	76.5	30.3	136	863.2	10.4	50	
Acenaphthylene	914	62.6	1,252	0	73.0	39.9	129	888.8	2.85	50	
2,4-Dinitrophenol	948	657	2,504	0	37.9	10	149	840.3	12.0	50	
Dibenzofuran	910	93.9	1,252	0	72.7	41.2	128	853.9	6.41	50	
2,4-Dinitrotoluene	897	125	1,252	0	71.6	30.9	139	876.9	2.23	50	
4-Nitrophenol	411	626	1,252	0	32.8	15.6	160	0		50	
Fluorene	910	62.6	1,252	0	72.7	37.7	133	858.6	5.87	50	
4-Chlorophenyl phenyl ether	913	93.9	1,252	0	72.9	34.5	129	826.6	9.89	50	
Diethylphthalate	983	125	1,252	0	78.5	36.7	130	911.4	7.60	50	
4,6-Dinitro-2-methylphenol	818	250	1,252	0	65.3	21.9	143	683.0	17.9	50	
4-Bromophenyl phenyl ether	910	93.9	1,252	0	72.7	29.7	148	841.5	7.78	50	
Hexachlorobenzene	874	93.9	1,252	0	69.8	34.3	131	820.2	6.40	50	
Pentachlorophenol	441	125	1,252	0	35.2	28.2	156	450.1	2.05	50	
Phenanthrene	966	62.6	1,252	0	77.2	32.2	139	932.7	3.50	50	
Anthracene	922	62.6	1,252	0	73.7	43.9	128	886.1	4.02	50	
Carbazole	933	93.9	1,252	0	74.5	32	147	893.0	4.36	50	
Di-n-butylphthalate	961	125	1,252	0	76.8	35.1	142	936.3	2.66	50	
Fluoranthene	912	62.6	1,252	0	72.9	33.8	141	866.9	5.11	50	
Pyrene	926	62.6	1,252	0	74.0	31.4	151	915.9	1.09	50	

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Semi-Volatile Organic Compounds by EPA Method 8270

Sample ID	1801216-001AMSD	SampType: MSD	Units: µg/Kg-dry			Prep Date: 1/17/2018			RunNo: 41399		
Client ID:	BATCH	Batch ID:	19533	Analysis Date: 1/26/2018					SeqNo: 797988		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Butyl Benzylphthalate	1,080	125	1,252	0	86.6	30.4	138	1,045	3.63	50	
bis(2-Ethylhexyl)adipate	1,050	125	1,252	0	83.9	32	136	1,005	4.46	50	
Benz(a)anthracene	873	62.6	1,252	0	69.7	36	138	831.0	4.94	50	
Chrysene	929	62.6	1,252	0	74.2	41.6	125	853.6	8.41	50	
bis (2-Ethylhexyl) phthalate	1,080	125	1,252	0	86.5	40.8	170	1,019	6.12	50	
Di-n-octyl phthalate	1,120	125	1,252	0	89.2	34.6	142	1,030	8.05	50	
Benzo(b)fluoranthene	977	62.6	1,252	0	78.0	31.8	166	847.4	14.2	50	
Benzo(k)fluoranthene	742	62.6	1,252	0	59.3	30.8	152	730.0	1.67	50	
Benzo(a)pyrene	877	62.6	1,252	0	70.0	31.1	153	834.7	4.91	50	
Indeno(1,2,3-cd)pyrene	936	62.6	1,252	0	74.7	38.1	155	902.1	3.65	50	
Dibenz(a,h)anthracene	919	62.6	1,252	0	73.4	40.7	152	860.3	6.57	50	
Benzo(g,h,i)perylene	975	62.6	1,252	0	77.8	34	157	921.7	5.58	50	
Surr: 2,4,6-Tribromophenol	718		1,252		57.3	14.8	165		0		
Surr: 2-Fluorobiphenyl	405		626.0		64.7	17.8	151		0		
Surr: Nitrobenzene-d5	420		626.0		67.1	12.5	163		0		
Surr: Phenol-d6	385		1,252		30.7	11.6	133		0		
Surr: p-Terphenyl	507		626.0		81.0	22	176		0		

NOTES:

S - Outlying spike recovery(ies) observed.

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID	MB-19520	SampType:	MBLK		Units:	mg/Kg		Prep Date:	1/16/2018		RunNo:	41152	
Client ID:	MBLKS	Batch ID:	19520					Analysis Date:	1/17/2018		SeqNo:	792928	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Antimony		ND	0.156										
Arsenic		ND	0.0781										
Beryllium		ND	0.156										
Cadmium		ND	0.156										
Chromium		ND	0.0781										
Copper		ND	0.156										
Lead		ND	0.156										
Nickel		0.129	0.0781										
Selenium		ND	0.391										
Silver		ND	0.0781										
Thallium		ND	0.156										
Zinc		ND	0.312										

Sample ID	LCS-19520	SampType:	LCS	Units:	mg/Kg	Prep Date:	1/16/2018			RunNo:	41152	
Client ID:	LCSS	Batch ID:	19520				Analysis Date:	1/17/2018			SeqNo:	792931
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Antimony	1.99	0.155	1.938	0	103	80	120					
Arsenic	38.8	0.0775	38.76	0	100	80	120					
Beryllium	1.86	0.155	1.938	0	96.0	80	120					
Cadmium	1.88	0.155	1.938	0	96.8	80	120					
Chromium	40.5	0.0775	38.76	0	105	80	120					
Copper	39.7	0.155	38.76	0	102	80	120					
Lead	18.9	0.155	19.38	0	97.6	80	120					
Nickel	40.4	0.0775	38.76	0	104	80	120				B	
Selenium	3.50	0.388	3.876	0	90.2	80	120					
Silver	8.48	0.0775	9.690	0	87.5	80	120					
Thallium	0.965	0.155	0.9690	0	99.5	80	120					
Zinc	39.0	0.310	38.76	0	101	80	120					



Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID	1801177-002ADUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 1/16/2018		RunNo: 41152		
Client ID:	B2-2		Batch ID: 19520		Analysis Date: 1/17/2018				SeqNo: 792933		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.197						0		20	
Arsenic	2.91	0.0984						4.150	35.0	20	R
Beryllium	ND	0.197						0.2021	34.8	20	
Cadmium	ND	0.197						0		20	
Chromium	13.9	0.0984						17.78	24.6	20	R
Copper	10.6	0.197						16.11	41.7	20	R
Lead	1.46	0.197						1.924	27.3	20	R
Nickel	7.31	0.0984						9.022	21.0	20	BR
Selenium	1.58	0.492						1.811	13.7	20	
Silver	ND	0.0984						0.1159	105	20	
Thallium	ND	0.197						0		20	
Zinc	19.6	0.394						25.48	26.1	20	R

NOTES:

R - High RPD observed. The method is in control as indicated by the LCS.

Sample ID	1801177-002AMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 1/16/2018		RunNo: 41152		
Client ID:	B2-2		Batch ID: 19520				Analysis Date: 1/17/2018		SeqNo: 792935		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.354	0.190	2.374	0.01695	14.2	75	125				S
Arsenic	51.7	0.0950	47.49	4.150	100	75	125				
Beryllium	2.78	0.190	2.374	0.2021	108	75	125				
Cadmium	2.52	0.190	2.374	0.01864	105	75	125				
Chromium	66.5	0.0950	47.49	17.78	103	75	125				
Copper	58.6	0.190	47.49	16.11	89.4	75	125				
Lead	22.0	0.190	23.74	1.924	84.4	75	125				
Nickel	56.6	0.0950	47.49	9.022	100	75	125				
Selenium	6.09	0.475	4.749	1.811	90.2	75	125				B
Silver	10.7	0.0950	11.87	0.1159	89.0	75	125				
Thallium	1.07	0.190	1.187	0.03381	87.2	75	125				
Zinc	68.6	0.380	47.49	25.48	90.7	75	125				

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID	1801177-002AMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	1/16/2018	RunNo:	41152		
Client ID:	B2-2	Batch ID:	19520			Analysis Date:	1/17/2018	SeqNo:	792935		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID	1801177-002AMSD	SampType:	MSD		Units:	mg/Kg-dry		Prep Date:	1/16/2018		RunNo:	41152	
Client ID:	B2-2	Batch ID:	19520		Analysis Date:				1/17/2018		SeqNo:	792936	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Antimony	0.317	0.193	2.408	0.01695	12.4	75	125	0.3540	11.1	20	S		
Arsenic	52.1	0.0963	48.16	4.150	99.5	75	125	51.72	0.665	20			
Beryllium	2.68	0.193	2.408	0.2021	103	75	125	2.777	3.60	20			
Cadmium	2.54	0.193	2.408	0.01864	105	75	125	2.515	0.825	20			
Chromium	67.9	0.0963	48.16	17.78	104	75	125	66.53	2.04	20			
Copper	61.9	0.193	48.16	16.11	95.1	75	125	58.56	5.54	20			
Lead	22.2	0.193	24.08	1.924	84.0	75	125	21.97	0.881	20			
Nickel	57.5	0.0963	48.16	9.022	101	75	125	56.61	1.54	20	B		
Selenium	6.63	0.482	4.816	1.811	100	75	125	6.093	8.45	20			
Silver	10.4	0.0963	12.04	0.1159	85.6	75	125	10.68	2.46	20			
Thallium	1.10	0.193	1.204	0.03381	88.3	75	125	1.069	2.57	20			
Zinc	71.8	0.385	48.16	25.48	96.1	75	125	68.57	4.56	20			

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID	1801177-002APDS	SampType:	PDS	Units:	mg/Kg-dry	Prep Date:	1/16/2018	RunNo:	41152		
Client ID:	B2-2	Batch ID:	19520	Analysis Date:				1/17/2018	SeqNo:	792937	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	5.10	0.193	2.50	0.0352	101	75	125				



Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID	CRM	SampType: LCS		Units: mg/Kg		Prep Date: 1/16/2018		RunNo: 41152			
Client ID:	LCSS	Batch ID: 19520				Analysis Date: 1/17/2018		SeqNo: 792951			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	64.0	2.00	97.90	0	65.4	58	114				D

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QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-19498	SampType:	LCS	Units:	mg/Kg	Prep Date:	1/15/2018	RunNo:	41119		
Client ID:	LCSS	Batch ID:	19498			Analysis Date:	1/15/2018	SeqNo:	792074		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.601	0.0200	1.000	0	60.1	14.3	167				
Chloromethane	0.713	0.0500	1.000	0	71.3	32	156				
Vinyl chloride	0.881	0.0250	1.000	0	88.1	43.4	151				
Bromomethane	0.908	0.0500	1.000	0	90.8	35	155				
Trichlorofluoromethane (CFC-11)	0.725	0.0200	1.000	0	72.5	33.8	156				
Chloroethane	0.810	0.0500	1.000	0	81.0	33.1	147				
1,1-Dichloroethene	0.905	0.0200	1.000	0	90.5	39	144				
Methylene chloride	1.04	0.0200	1.000	0	104	46.3	140				
trans-1,2-Dichloroethene	0.999	0.0200	1.000	0	99.9	68	130				
Methyl tert-butyl ether (MTBE)	1.10	0.0500	1.000	0	110	66.3	145				
1,1-Dichloroethane	1.04	0.0200	1.000	0	104	61.9	137				
2,2-Dichloropropane	1.05	0.100	1.000	0	105	35.5	186				
cis-1,2-Dichloroethene	1.06	0.0200	1.000	0	106	71.3	135				
Chloroform	1.07	0.0200	1.000	0	107	69	145				
1,1,1-Trichloroethane (TCA)	1.01	0.0250	1.000	0	101	69	132				
1,1-Dichloropropene	1.01	0.0200	1.000	0	101	72.7	131				
Carbon tetrachloride	1.00	0.0250	1.000	0	100	63.4	137				
1,2-Dichloroethane (EDC)	1.09	0.0200	1.000	0	109	50.9	162				
Benzene	1.06	0.0200	1.000	0	106	64.3	133				
Trichloroethene (TCE)	1.06	0.0200	1.000	0	106	65.5	137				
1,2-Dichloropropane	1.10	0.0200	1.000	0	110	63.2	142				
Bromodichloromethane	1.14	0.0200	1.000	0	114	53.4	131				
Dibromomethane	1.12	0.0200	1.000	0	112	60.1	146				
cis-1,3-Dichloropropene	1.05	0.0200	1.000	0	105	59.1	143				
Toluene	1.08	0.0200	1.000	0	108	67.3	138				
trans-1,3-Dichloropropylene	1.17	0.0200	1.000	0	117	49.2	149				
1,1,2-Trichloroethane	1.12	0.0200	1.000	0	112	56.9	147				
1,3-Dichloropropane	1.11	0.0250	1.000	0	111	56.1	153				
Tetrachloroethene (PCE)	1.05	0.0250	1.000	0	105	52.7	150				
Dibromochloromethane	1.17	0.0250	1.000	0	117	70.6	144				
1,2-Dibromoethane (EDB)	1.12	0.00500	1.000	0	112	50.5	154				

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Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-19498	SampType:	LCS	Units:	mg/Kg	Prep Date:	1/15/2018	RunNo:	41119		
Client ID:	LCSS	Batch ID:	19498			Analysis Date:	1/15/2018	SeqNo:	792074		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	1.09	0.0250	1.000	0	109	84.9	125				
1,1,1,2-Tetrachloroethane	1.10	0.0250	1.000	0	110	65.9	141				
Ethylbenzene	1.09	0.0250	1.000	0	109	74	129				
m,p-Xylene	2.17	0.0500	2.000	0	109	70	124				
o-Xylene	1.10	0.0250	1.000	0	110	68.1	139				
Styrene	1.12	0.0250	1.000	0	112	73.3	146				
Isopropylbenzene	1.09	0.0250	1.000	0	109	70	130				
Bromoform	1.18	0.0500	1.000	0	118	44.3	130				
1,1,2,2-Tetrachloroethane	1.13	0.0200	1.000	0	113	44.8	165				
n-Propylbenzene	1.10	0.0250	1.000	0	110	75.8	139				
Bromobenzene	1.11	0.0200	1.000	0	111	49.2	144				
1,3,5-Trimethylbenzene	1.10	0.0250	1.000	0	110	76.5	135				
2-Chlorotoluene	1.02	0.0250	1.000	0	102	76.7	129				
4-Chlorotoluene	1.11	0.0250	1.000	0	111	77.5	125				
tert-Butylbenzene	1.10	0.0250	1.000	0	110	66.2	130				
1,2,3-Trichloropropane	1.11	0.0250	1.000	0	111	67.9	136				
1,2,4-Trichlorobenzene	1.16	0.0250	1.000	0	116	65.5	150				
sec-Butylbenzene	1.08	0.0500	1.000	0	108	75.6	133				
4-Isopropyltoluene	1.08	0.0500	1.000	0	108	76.8	131				
1,3-Dichlorobenzene	1.13	0.0200	1.000	0	113	72.8	128				
1,4-Dichlorobenzene	1.14	0.0200	1.000	0	114	72.6	126				
n-Butylbenzene	1.11	0.0250	1.000	0	111	78.4	140				
1,2-Dichlorobenzene	1.15	0.0200	1.000	0	115	72.8	126				
1,2-Dibromo-3-chloropropane	1.19	0.500	1.000	0	119	40.2	155				
1,2,4-Trimethylbenzene	1.11	0.0200	1.000	0	111	77.5	129				
Hexachlorobutadiene	1.14	0.0500	1.000	0	114	42	151				
Naphthalene	1.19	0.0500	1.000	0	119	46.5	167				
1,2,3-Trichlorobenzene	1.17	0.0200	1.000	0	117	64.5	149				
Surr: Dibromofluoromethane	1.26		1.250		101	56.5	129				
Surr: Toluene-d8	1.25		1.250		100	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.28		1.250		103	43.2	143				

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Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-19498	SampType:	LCS	Units:	mg/Kg	Prep Date:	1/15/2018	RunNo:	41119		
Client ID:	LCSS	Batch ID:	19498			Analysis Date:	1/15/2018	SeqNo:	792074		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	MB-19498	SampType:	MBLK	Units:	mg/Kg	Prep Date:	1/15/2018	RunNo:	41119		
Client ID:	MBLKS	Batch ID:	19498			Analysis Date:	1/15/2018	SeqNo:	792075		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	0.0200
Chloromethane	ND	0.0500
Vinyl chloride	ND	0.0250
Bromomethane	ND	0.0500
Trichlorofluoromethane (CFC-11)	ND	0.0200
Chloroethane	ND	0.0500
1,1-Dichloroethene	ND	0.0200
Methylene chloride	ND	0.0200
trans-1,2-Dichloroethene	ND	0.0200
Methyl tert-butyl ether (MTBE)	ND	0.0500
1,1-Dichloroethane	ND	0.0200
2,2-Dichloropropane	ND	0.100
cis-1,2-Dichloroethene	ND	0.0200
Chloroform	ND	0.0200
1,1,1-Trichloroethane (TCA)	ND	0.0250
1,1-Dichloropropene	ND	0.0200
Carbon tetrachloride	ND	0.0250
1,2-Dichloroethane (EDC)	ND	0.0200
Benzene	ND	0.0200
Trichloroethene (TCE)	ND	0.0200
1,2-Dichloropropane	ND	0.0200
Bromodichloromethane	ND	0.0200
Dibromomethane	ND	0.0200
cis-1,3-Dichloropropene	ND	0.0200
Toluene	ND	0.0200

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Sample ID	MB-19498	SampType: MBLK		Units: mg/Kg		Prep Date: 1/15/2018			RunNo: 41119		
Client ID:	MBLKS	Batch ID: 19498		Analysis Date: 1/15/2018					SeqNo: 792075		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	0.0200									
1,1,2-Trichloroethane	ND	0.0200									
1,3-Dichloropropane	ND	0.0250									
Tetrachloroethene (PCE)	ND	0.0250									
Dibromochloromethane	ND	0.0250									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0250									
1,1,1,2-Tetrachloroethane	ND	0.0250									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Styrene	ND	0.0250									
Isopropylbenzene	ND	0.0250									
Bromoform	ND	0.0500									
1,1,2,2-Tetrachloroethane	ND	0.0200									
n-Propylbenzene	ND	0.0250									
Bromobenzene	ND	0.0200									
1,3,5-Trimethylbenzene	ND	0.0250									
2-Chlorotoluene	ND	0.0250									
4-Chlorotoluene	ND	0.0250									
tert-Butylbenzene	ND	0.0250									
1,2,3-Trichloropropane	ND	0.0250									
1,2,4-Trichlorobenzene	ND	0.0250									
sec-Butylbenzene	ND	0.0500									
4-Isopropyltoluene	ND	0.0500									
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0250									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									
1,2,4-Trimethylbenzene	ND	0.0200									

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Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-19498	SampType:	MBLK		Units:	mg/Kg		Prep Date:	1/15/2018		RunNo:	41119	
Client ID:	MBLKS	Batch ID:	19498					Analysis Date:	1/15/2018		SeqNo:	792075	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Hexachlorobutadiene		ND	0.0500										
Naphthalene		ND	0.0500										
1,2,3-Trichlorobenzene		ND	0.0200										
Surr: Dibromofluoromethane		1.26		1.250		101	56.5	129					
Surr: Toluene-d8		1.20		1.250		95.9	64.5	151					
Surr: 1-Bromo-4-fluorobenzene		1.17		1.250		93.9	43.2	143					

Sample ID	1801177-006BDUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	1/15/2018	RunNo:	41119		
Client ID:	B5-2	Batch ID:	19498			Analysis Date:	1/15/2018	SeqNo:	792063		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0374						0		30	
Chloromethane	ND	0.0936						0		30	
Vinyl chloride	ND	0.0468						0		30	
Bromomethane	ND	0.0936						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0374						0		30	
Chloroethane	ND	0.0936						0		30	
1,1-Dichloroethene	ND	0.0374						0		30	
Methylene chloride	ND	0.0374						0		30	
trans-1,2-Dichloroethene	ND	0.0374						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0936						0		30	
1,1-Dichloroethane	ND	0.0374						0		30	
2,2-Dichloropropane	ND	0.187						0		30	
cis-1,2-Dichloroethene	ND	0.0374						0		30	
Chloroform	ND	0.0374						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0468						0		30	
1,1-Dichloropropene	ND	0.0374						0		30	
Carbon tetrachloride	ND	0.0468						0		30	
1,2-Dichloroethane (EDC)	ND	0.0374						0		30	
Benzene	ND	0.0374						0		30	



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Sample ID	1801177-006BDUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	1/15/2018	RunNo:	41119		
Client ID:	B5-2	Batch ID:	19498			Analysis Date:	1/15/2018	SeqNo:	792063		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	ND	0.0374						0		30	
1,2-Dichloropropane	ND	0.0374						0		30	
Bromodichloromethane	ND	0.0374						0		30	
Dibromomethane	ND	0.0374						0		30	
cis-1,3-Dichloropropene	ND	0.0374						0		30	
Toluene	ND	0.0374						0		30	
trans-1,3-Dichloropropylene	ND	0.0374						0		30	
1,1,2-Trichloroethane	ND	0.0374						0		30	
1,3-Dichloropropane	ND	0.0468						0		30	
Tetrachloroethene (PCE)	ND	0.0468						0		30	
Dibromochloromethane	ND	0.0468						0		30	
1,2-Dibromoethane (EDB)	ND	0.00936						0		30	
Chlorobenzene	ND	0.0468						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0468						0		30	
Ethylbenzene	ND	0.0468						0		30	
m,p-Xylene	ND	0.0936						0		30	
o-Xylene	ND	0.0468						0		30	
Styrene	ND	0.0468						0		30	
Isopropylbenzene	ND	0.0468						0		30	
Bromoform	ND	0.0936						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0374						0		30	
n-Propylbenzene	ND	0.0468						0		30	
Bromobenzene	ND	0.0374						0		30	
1,3,5-Trimethylbenzene	ND	0.0468						0		30	
2-Chlorotoluene	ND	0.0468						0		30	
4-Chlorotoluene	ND	0.0468						0		30	
tert-Butylbenzene	ND	0.0468						0		30	
1,2,3-Trichloropropane	ND	0.0468						0		30	
1,2,4-Trichlorobenzene	ND	0.0468						0		30	
sec-Butylbenzene	ND	0.0936						0		30	
4-Isopropyltoluene	ND	0.0936						0		30	

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Volatile Organic Compounds by EPA Method 8260C

Sample ID	1801177-006BDUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	1/15/2018	RunNo:	41119		
Client ID:	B5-2	Batch ID:	19498			Analysis Date:	1/15/2018	SeqNo:	792063		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	0.0374						0		30	
1,4-Dichlorobenzene	ND	0.0374						0		30	
n-Butylbenzene	ND	0.0468						0		30	
1,2-Dichlorobenzene	ND	0.0374						0		30	
1,2-Dibromo-3-chloropropane	ND	0.936						0		30	
1,2,4-Trimethylbenzene	ND	0.0374						0		30	
Hexachlorobutadiene	ND	0.0936						0		30	
Naphthalene	ND	0.0936						0		30	
1,2,3-Trichlorobenzene	ND	0.0374						0		30	
Surr: Dibromofluoromethane	2.28		2.340		97.3	56.5	129		0		
Surr: Toluene-d8	2.29		2.340		97.9	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	2.16		2.340		92.4	43.2	143		0		

Sample ID	1801181-007BMS	SampType:	MS		Units:	mg/Kg-dry		Prep Date:	1/15/2018		RunNo:	41119	
Client ID:	BATCH	Batch ID:	19498					Analysis Date:	1/16/2018		SeqNo:	792067	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)		0.803	0.0198	0.9891	0	81.1	43.5	121					
Chloromethane		0.796	0.0495	0.9891	0	80.5	45	130					
Vinyl chloride		0.839	0.0247	0.9891	0	84.8	43.6	150					
Bromomethane		0.902	0.0495	0.9891	0	91.2	21.3	120					
Trichlorofluoromethane (CFC-11)		0.647	0.0198	0.9891	0	65.4	35	131					
Chloroethane		0.897	0.0495	0.9891	0	90.7	31.9	123					
1,1-Dichloroethene		0.882	0.0198	0.9891	0	89.1	47.3	147					
Methylene chloride		0.923	0.0198	0.9891	0	93.3	54.7	142					
trans-1,2-Dichloroethene		0.900	0.0198	0.9891	0	91.0	52	136					
Methyl tert-butyl ether (MTBE)		0.944	0.0495	0.9891	0	95.4	58.5	167					
1,1-Dichloroethane		0.913	0.0198	0.9891	0	92.3	51.8	141					
2,2-Dichloropropane		0.715	0.0989	0.9891	0	72.3	36	123					
cis-1,2-Dichloroethene		0.920	0.0198	0.9891	0	93.0	58.6	136					

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Volatile Organic Compounds by EPA Method 8260C

Sample ID	1801181-007BMS	SampType: MS	Units: mg/Kg-dry			Prep Date: 1/15/2018			RunNo: 41119		
Client ID:	BATCH	Batch ID:	19498	Analysis Date: 1/16/2018					SeqNo: 792067		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	0.914	0.0198	0.9891	0	92.4	53.2	129				
1,1,1-Trichloroethane (TCA)	0.888	0.0247	0.9891	0	89.8	58.3	145				
1,1-Dichloropropene	0.892	0.0198	0.9891	0	90.2	55.1	138				
Carbon tetrachloride	0.859	0.0247	0.9891	0	86.8	53.3	144				
1,2-Dichloroethane (EDC)	0.936	0.0198	0.9891	0	94.7	51.3	139				
Benzene	0.934	0.0198	0.9891	0	94.5	63.5	133				
Trichloroethene (TCE)	0.924	0.0198	0.9891	0	93.4	61.6	147				
1,2-Dichloropropane	0.926	0.0198	0.9891	0	93.6	59	136				
Bromodichloromethane	0.969	0.0198	0.9891	0	98.0	50.7	141				
Dibromomethane	0.934	0.0198	0.9891	0	94.5	50.6	137				
cis-1,3-Dichloropropene	0.868	0.0198	0.9891	0	87.7	50.4	138				
Toluene	0.925	0.0198	0.9891	0	93.6	63.4	132				
trans-1,3-Dichloropropylene	0.936	0.0198	0.9891	0	94.6	44.1	147				
1,1,2-Trichloroethane	0.938	0.0198	0.9891	0	94.8	51.6	137				
1,3-Dichloropropane	0.948	0.0247	0.9891	0	95.8	53.1	134				
Tetrachloroethene (PCE)	0.894	0.0247	0.9891	0	90.4	35.6	158				
Dibromochloromethane	0.967	0.0247	0.9891	0	97.7	55.3	140				
1,2-Dibromoethane (EDB)	0.931	0.00495	0.9891	0	94.1	50.4	136				
Chlorobenzene	0.939	0.0247	0.9891	0	95.0	60	133				
1,1,1,2-Tetrachloroethane	0.937	0.0247	0.9891	0	94.7	53.1	142				
Ethylbenzene	0.931	0.0247	0.9891	0	94.1	54.5	134				
m,p-Xylene	1.86	0.0495	1.978	0	93.8	53.1	132				
o-Xylene	0.933	0.0247	0.9891	0	94.3	53.3	139				
Styrene	0.943	0.0247	0.9891	0	95.3	51.1	132				
Isopropylbenzene	0.922	0.0247	0.9891	0	93.2	58.9	138				
Bromoform	0.968	0.0495	0.9891	0	97.9	57.9	130				
1,1,2,2-Tetrachloroethane	0.928	0.0198	0.9891	0	93.8	51.9	131				
n-Propylbenzene	0.923	0.0247	0.9891	0	93.3	53.6	140				
Bromobenzene	0.933	0.0198	0.9891	0	94.3	54.2	140				
1,3,5-Trimethylbenzene	0.935	0.0247	0.9891	0	94.6	51.8	136				
2-Chlorotoluene	0.858	0.0247	0.9891	0	86.8	51.6	136				

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	1801181-007BMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	1/15/2018	RunNo:	41119		
Client ID:	BATCH	Batch ID:	19498			Analysis Date:	1/16/2018	SeqNo:	792067		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorotoluene	0.941	0.0247	0.9891	0	95.1	50.1	139				
tert-Butylbenzene	0.927	0.0247	0.9891	0	93.7	50.5	135				
1,2,3-Trichloropropane	0.898	0.0247	0.9891	0	90.8	50.5	131				
1,2,4-Trichlorobenzene	1.01	0.0247	0.9891	0	102	50.8	130				
sec-Butylbenzene	0.922	0.0495	0.9891	0	93.2	52.6	141				
4-Isopropyltoluene	0.918	0.0495	0.9891	0	92.9	52.9	134				
1,3-Dichlorobenzene	0.961	0.0198	0.9891	0	97.1	52.6	131				
1,4-Dichlorobenzene	0.964	0.0198	0.9891	0	97.4	52.9	129				
n-Butylbenzene	0.937	0.0247	0.9891	0	94.7	52.6	130				
1,2-Dichlorobenzene	0.977	0.0198	0.9891	0	98.7	55.8	129				
1,2-Dibromo-3-chloropropane	0.934	0.495	0.9891	0	94.4	40.5	131				
1,2,4-Trimethylbenzene	0.939	0.0198	0.9891	0	95.0	50.6	137				
Hexachlorobutadiene	0.955	0.0495	0.9891	0	96.5	40.6	158				
Naphthalene	1.01	0.0495	0.9891	0	102	52.3	124				
1,2,3-Trichlorobenzene	1.01	0.0198	0.9891	0	102	54.4	124				
Surr: Dibromofluoromethane	1.19		1.236		96.3	56.5	129				
Surr: Toluene-d8	1.23		1.236		99.7	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.26		1.236		102	43.2	143				

Sample ID 1801181-007BMSD	SampType: MSD		Units: mg/Kg-dry		Prep Date: 1/15/2018		RunNo: 41119				
Client ID: BATCH	Batch ID: 19498				Analysis Date: 1/16/2018		SeqNo: 792068				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.841	0.0198	0.9891	0	85.0	43.5	121	0.8026	4.68	30	
Chloromethane	0.888	0.0495	0.9891	0	89.8	45	130	0.7960	10.9	30	
Vinyl chloride	0.864	0.0247	0.9891	0	87.3	43.6	150	0.8385	2.94	30	
Bromomethane	0.948	0.0495	0.9891	0	95.9	21.3	120	0.9018	5.04	30	
Trichlorofluoromethane (CFC-11)	0.671	0.0198	0.9891	0	67.8	35	131	0.6467	3.68	30	
Chloroethane	0.910	0.0495	0.9891	0	92.0	31.9	123	0.8973	1.45	30	
1,1-Dichloroethene	0.932	0.0198	0.9891	0	94.2	47.3	147	0.8816	5.54	30	

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
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QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	1801181-007BMSD	SampType: MSD	Units: mg/Kg-dry			Prep Date: 1/15/2018			RunNo: 41119		
Client ID:	BATCH	Batch ID:	19498	Analysis Date: 1/16/2018					SeqNo: 792068		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methylene chloride	0.923	0.0198	0.9891	0	93.3	54.7	142	0.9231	0.00664	30	
trans-1,2-Dichloroethene	0.922	0.0198	0.9891	0	93.2	52	136	0.8999	2.46	30	
Methyl tert-butyl ether (MTBE)	0.970	0.0495	0.9891	0	98.1	58.5	167	0.9438	2.74	30	
1,1-Dichloroethane	0.931	0.0198	0.9891	0	94.1	51.8	141	0.9132	1.90	30	
2,2-Dichloropropane	0.727	0.0989	0.9891	0	73.5	36	123	0.7149	1.66	30	
cis-1,2-Dichloroethene	0.917	0.0198	0.9891	0	92.7	58.6	136	0.9201	0.305	30	
Chloroform	0.926	0.0198	0.9891	0	93.6	53.2	129	0.9141	1.32	30	
1,1,1-Trichloroethane (TCA)	0.905	0.0247	0.9891	0	91.5	58.3	145	0.8881	1.91	30	
1,1-Dichloropropene	0.909	0.0198	0.9891	0	91.9	55.1	138	0.8917	1.91	30	
Carbon tetrachloride	0.899	0.0247	0.9891	0	90.9	53.3	144	0.8587	4.58	30	
1,2-Dichloroethane (EDC)	0.944	0.0198	0.9891	0	95.5	51.3	139	0.9362	0.845	30	
Benzene	0.935	0.0198	0.9891	0	94.5	63.5	133	0.9343	0.0564	30	
Trichloroethene (TCE)	0.927	0.0198	0.9891	0	93.7	61.6	147	0.9235	0.401	30	
1,2-Dichloropropane	0.932	0.0198	0.9891	0	94.2	59	136	0.9261	0.583	30	
Bromodichloromethane	0.976	0.0198	0.9891	0	98.7	50.7	141	0.9694	0.707	30	
Dibromomethane	0.950	0.0198	0.9891	0	96.0	50.6	137	0.9343	1.64	30	
cis-1,3-Dichloropropene	0.889	0.0198	0.9891	0	89.9	50.4	138	0.8676	2.48	30	
Toluene	0.940	0.0198	0.9891	0	95.1	63.4	132	0.9254	1.62	30	
trans-1,3-Dichloropropylene	0.964	0.0198	0.9891	0	97.5	44.1	147	0.9362	2.94	30	
1,1,2-Trichloroethane	0.958	0.0198	0.9891	0	96.9	51.6	137	0.9380	2.15	30	
1,3-Dichloropropane	0.946	0.0247	0.9891	0	95.6	53.1	134	0.9480	0.228	30	
Tetrachloroethene (PCE)	0.918	0.0247	0.9891	0	92.8	35.6	158	0.8937	2.65	30	
Dibromochloromethane	0.985	0.0247	0.9891	0	99.6	55.3	140	0.9666	1.94	30	
1,2-Dibromoethane (EDB)	0.954	0.00495	0.9891	0	96.5	50.4	136	0.9305	2.53	30	
Chlorobenzene	0.964	0.0247	0.9891	0	97.4	60	133	0.9394	2.56	30	
1,1,1,2-Tetrachloroethane	0.972	0.0247	0.9891	0	98.3	53.1	142	0.9370	3.71	30	
Ethylbenzene	0.959	0.0247	0.9891	0	96.9	54.5	134	0.9306	2.97	30	
m,p-Xylene	1.90	0.0495	1.978	0	95.9	53.1	132	1.856	2.20	30	
o-Xylene	0.947	0.0247	0.9891	0	95.8	53.3	139	0.9328	1.56	30	
Styrene	0.952	0.0247	0.9891	0	96.3	51.1	132	0.9427	0.993	30	
Isopropylbenzene	0.948	0.0247	0.9891	0	95.9	58.9	138	0.9223	2.80	30	

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	1801181-007BMSD	SampType: MSD	Units: mg/Kg-dry			Prep Date: 1/15/2018			RunNo: 41119		
Client ID:	BATCH	Batch ID: 19498	Analysis Date: 1/16/2018						SeqNo: 792068		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	0.999	0.0495	0.9891	0	101	57.9	130	0.9680	3.16	30	
1,1,2,2-Tetrachloroethane	0.976	0.0198	0.9891	0	98.6	51.9	131	0.9280	5.01	30	
n-Propylbenzene	0.937	0.0247	0.9891	0	94.7	53.6	140	0.9229	1.47	30	
Bromobenzene	0.953	0.0198	0.9891	0	96.4	54.2	140	0.9328	2.19	30	
1,3,5-Trimethylbenzene	0.937	0.0247	0.9891	0	94.8	51.8	136	0.9353	0.234	30	
2-Chlorotoluene	0.950	0.0247	0.9891	0	96.0	51.6	136	0.8581	10.1	30	
4-Chlorotoluene	0.946	0.0247	0.9891	0	95.6	50.1	139	0.9406	0.530	30	
tert-Butylbenzene	0.936	0.0247	0.9891	0	94.6	50.5	135	0.9273	0.941	30	
1,2,3-Trichloropropane	0.935	0.0247	0.9891	0	94.5	50.5	131	0.8977	4.02	30	
1,2,4-Trichlorobenzene	1.06	0.0247	0.9891	0	107	50.8	130	1.008	5.29	30	
sec-Butylbenzene	0.937	0.0495	0.9891	0	94.8	52.6	141	0.9217	1.68	30	
4-Isopropyltoluene	0.937	0.0495	0.9891	0	94.7	52.9	134	0.9185	1.98	30	
1,3-Dichlorobenzene	0.997	0.0198	0.9891	0	101	52.6	131	0.9605	3.68	30	
1,4-Dichlorobenzene	1.00	0.0198	0.9891	0	101	52.9	129	0.9638	3.70	30	
n-Butylbenzene	0.982	0.0247	0.9891	0	99.2	52.6	130	0.9368	4.68	30	
1,2-Dichlorobenzene	1.01	0.0198	0.9891	0	102	55.8	129	0.9765	3.63	30	
1,2-Dibromo-3-chloropropane	0.973	0.495	0.9891	0	98.4	40.5	131	0.9335	4.12	30	
1,2,4-Trimethylbenzene	0.947	0.0198	0.9891	0	95.8	50.6	137	0.9395	0.837	30	
Hexachlorobutadiene	0.999	0.0495	0.9891	0	101	40.6	158	0.9547	4.56	30	
Naphthalene	1.09	0.0495	0.9891	0	111	52.3	124	1.011	7.93	30	
1,2,3-Trichlorobenzene	1.07	0.0198	0.9891	0	108	54.4	124	1.013	5.29	30	
Surr: Dibromofluoromethane	1.22		1.236		99.0	56.5	129		0		
Surr: Toluene-d8	1.24		1.236		100	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.24		1.236		101	43.2	143		0		

Sample ID	1801181-017BDUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	1/15/2018	RunNo:	41119		
Client ID:	BATCH	Batch ID:	19498	Analysis Date:				1/16/2018	SeqNo:	792070	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0171						0		30	



Date: 1/31/2018

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1801181-017BDUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	1/15/2018	RunNo:	41119		
Client ID:	BATCH	Batch ID:	19498			Analysis Date:	1/16/2018	SeqNo:	792070		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	ND	0.0427						0		30	
Vinyl chloride	ND	0.0214						0		30	
Bromomethane	ND	0.0427						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0171						0		30	
Chloroethane	ND	0.0427						0		30	
1,1-Dichloroethene	ND	0.0171						0		30	
Methylene chloride	ND	0.0171						0		30	
trans-1,2-Dichloroethene	ND	0.0171						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0427						0		30	
1,1-Dichloroethane	ND	0.0171						0		30	
2,2-Dichloropropane	ND	0.0855						0		30	
cis-1,2-Dichloroethene	ND	0.0171						0		30	
Chloroform	ND	0.0171						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0214						0		30	
1,1-Dichloropropene	ND	0.0171						0		30	
Carbon tetrachloride	ND	0.0214						0		30	
1,2-Dichloroethane (EDC)	ND	0.0171						0		30	
Benzene	ND	0.0171						0		30	
Trichloroethene (TCE)	ND	0.0171						0		30	
1,2-Dichloropropane	ND	0.0171						0		30	
Bromodichloromethane	ND	0.0171						0		30	
Dibromomethane	ND	0.0171						0		30	
cis-1,3-Dichloropropene	ND	0.0171						0		30	
Toluene	ND	0.0171						0		30	
trans-1,3-Dichloropropylene	ND	0.0171						0		30	
1,1,2-Trichloroethane	ND	0.0171						0		30	
1,3-Dichloropropane	ND	0.0214						0		30	
Tetrachloroethene (PCE)	ND	0.0214						0		30	
Dibromochloromethane	ND	0.0214						0		30	
1,2-Dibromoethane (EDB)	ND	0.00427						0		30	
Chlorobenzene	ND	0.0214						0		30	



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Volatile Organic Compounds by EPA Method 8260C

Sample ID	1801181-017BDUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	1/15/2018	RunNo:	41119		
Client ID:	BATCH	Batch ID:	19498			Analysis Date:	1/16/2018	SeqNo:	792070		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.0214						0		30	
Ethylbenzene	ND	0.0214						0		30	
m,p-Xylene	ND	0.0427						0		30	
o-Xylene	ND	0.0214						0		30	
Styrene	ND	0.0214						0		30	
Isopropylbenzene	ND	0.0214						0		30	
Bromoform	ND	0.0427						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0171						0		30	
n-Propylbenzene	ND	0.0214						0		30	
Bromobenzene	ND	0.0171						0		30	
1,3,5-Trimethylbenzene	ND	0.0214						0		30	
2-Chlorotoluene	ND	0.0214						0		30	
4-Chlorotoluene	ND	0.0214						0		30	
tert-Butylbenzene	ND	0.0214						0		30	
1,2,3-Trichloropropane	ND	0.0214						0		30	
1,2,4-Trichlorobenzene	ND	0.0214						0		30	
sec-Butylbenzene	ND	0.0427						0		30	
4-Isopropyltoluene	ND	0.0427						0		30	
1,3-Dichlorobenzene	ND	0.0171						0		30	
1,4-Dichlorobenzene	ND	0.0171						0		30	
n-Butylbenzene	ND	0.0214						0		30	
1,2-Dichlorobenzene	ND	0.0171						0		30	
1,2-Dibromo-3-chloropropane	ND	0.427						0		30	
1,2,4-Trimethylbenzene	ND	0.0171						0		30	
Hexachlorobutadiene	ND	0.0427						0		30	
Naphthalene	ND	0.0427						0		30	
1,2,3-Trichlorobenzene	ND	0.0171						0		30	
Surr: Dibromofluoromethane	1.01		1.068		94.5	56.5	129		0		
Surr: Toluene-d8	1.12		1.068		104	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.02		1.068		95.5	43.2	143		0		

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-19488	SampType: LCS		Units: µg/L		Prep Date: 1/12/2018			RunNo: 41072		
Client ID:	LCSW	Batch ID: 19488					Analysis Date: 1/13/2018			SeqNo: 791354	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	22.0	1.00	20.00	0	110	18.7	171				
Chloromethane	20.3	2.00	20.00	0	102	38.5	171				
Vinyl chloride	19.9	0.200	20.00	0	99.7	48	145				
Bromomethane	18.7	1.00	20.00	0	93.7	32.5	184				
Trichlorofluoromethane (CFC-11)	19.7	1.00	20.00	0	98.7	43.5	149				
Chloroethane	19.3	1.00	20.00	0	96.4	43.8	168				
1,1-Dichloroethene	19.3	1.00	20.00	0	96.7	57.5	150				
Methylene chloride	19.3	1.00	20.00	0	96.5	67.1	131				
trans-1,2-Dichloroethene	19.4	1.00	20.00	0	97.0	71.7	129				
Methyl tert-butyl ether (MTBE)	17.4	1.00	20.00	0	87.1	58	138				
1,1-Dichloroethane	19.2	1.00	20.00	0	95.8	67.9	134				
2,2-Dichloropropane	16.2	2.00	20.00	0	80.8	26.5	185				
cis-1,2-Dichloroethene	19.3	1.00	20.00	0	96.4	70.2	139				
Chloroform	19.4	1.00	20.00	0	97.1	66.3	131				
1,1,1-Trichloroethane (TCA)	19.0	1.00	20.00	0	95.1	63	140				
1,1-Dichloropropene	19.5	1.00	20.00	0	97.4	69.9	124				
Carbon tetrachloride	19.6	1.00	20.00	0	97.8	66.2	134				
1,2-Dichloroethane (EDC)	18.9	1.00	20.00	0	94.5	67	126				
Benzene	19.5	1.00	20.00	0	97.6	69.3	132				
Trichloroethene (TCE)	19.6	0.500	20.00	0	98.1	65.2	136				
1,2-Dichloropropane	19.2	1.00	20.00	0	96.1	70.5	130				
Bromodichloromethane	20.1	1.00	20.00	0	101	67.2	137				
Dibromomethane	19.3	1.00	20.00	0	96.7	69.3	143				
cis-1,3-Dichloropropene	18.9	1.00	20.00	0	94.7	62.6	137				
Toluene	19.0	1.00	20.00	0	95.2	61.3	145				
trans-1,3-Dichloropropylene	19.4	1.00	20.00	0	96.9	56.5	163				
1,1,2-Trichloroethane	19.2	1.00	20.00	0	95.9	71.7	131				
1,3-Dichloropropane	18.7	1.00	20.00	0	93.6	73.5	127				
Tetrachloroethene (PCE)	18.9	1.00	20.00	0	94.7	47.5	147				
Dibromochloromethane	21.6	1.00	20.00	0	108	67.2	134				
1,2-Dibromoethane (EDB)	19.1	0.250	20.00	0	95.3	73.6	125				



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Work Order: 1801177
CLIENT: PBS Engineering & Environmental
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QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-19488	SampType:	LCS	Units:	µg/L	Prep Date:	1/12/2018	RunNo:	41072		
Client ID:	LCSW	Batch ID:	19488			Analysis Date:	1/13/2018	SeqNo:	791354		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	18.5	1.00	20.00	0	92.6	73.9	126				
1,1,1,2-Tetrachloroethane	19.5	1.00	20.00	0	97.5	76.8	124				
Ethylbenzene	18.6	1.00	20.00	0	93.0	72	130				
m,p-Xylene	36.4	1.00	40.00	0	90.9	70.3	134				
o-Xylene	18.0	1.00	20.00	0	90.1	72.1	131				
Styrene	18.6	1.00	20.00	0	92.8	64.3	140				
Isopropylbenzene	18.6	1.00	20.00	0	93.0	73.9	128				
Bromoform	18.3	2.00	20.00	0	91.6	55.3	141				
1,1,2,2-Tetrachloroethane	18.2	1.00	20.00	0	91.0	62.9	132				
n-Propylbenzene	18.6	1.00	20.00	0	93.0	74.5	127				
Bromobenzene	18.3	1.00	20.00	0	91.6	71	131				
1,3,5-Trimethylbenzene	19.3	1.00	20.00	0	96.7	73.1	128				
2-Chlorotoluene	18.8	1.00	20.00	0	93.8	70.8	130				
4-Chlorotoluene	18.5	1.00	20.00	0	92.6	70.1	131				
tert-Butylbenzene	20.1	1.00	20.00	0	101	68.2	131				
1,2,3-Trichloropropane	17.1	1.00	20.00	0	85.5	67.7	131				
1,2,4-Trichlorobenzene	12.5	2.00	20.00	0	62.6	41	139				
sec-Butylbenzene	18.0	1.00	20.00	0	90.1	72	129				
4-Isopropyltoluene	19.2	1.00	20.00	0	95.8	69.2	130				
1,3-Dichlorobenzene	18.5	1.00	20.00	0	92.6	80.4	124				
1,4-Dichlorobenzene	19.3	1.00	20.00	0	96.6	66.8	119				
n-Butylbenzene	19.8	1.00	20.00	0	99.2	73.8	127				
1,2-Dichlorobenzene	19.0	1.00	20.00	0	95.0	69.7	119				
1,2-Dibromo-3-chloropropane	18.5	1.00	20.00	0	92.4	63.1	136				
1,2,4-Trimethylbenzene	18.7	1.00	20.00	0	93.7	73.4	127				
Hexachloro-1,3-butadiene	18.1	4.00	20.00	0	90.3	58.6	138				
Naphthalene	16.1	1.00	20.00	0	80.7	41.8	165				
1,2,3-Trichlorobenzene	13.1	4.00	20.00	0	65.4	48.7	156				
Surr: Dibromofluoromethane	26.8		25.00		107	45.4	152				
Surr: Toluene-d8	25.5		25.00		102	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	26.5		25.00		106	64.2	128				

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
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QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-19488	SampType:	LCS	Units:	µg/L	Prep Date:	1/12/2018	RunNo:	41072		
Client ID:	LCSW	Batch ID:	19488			Analysis Date:	1/13/2018	SeqNo:	791354		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	LCSD-19488	SampType:	LCSD	Units:	µg/L	Prep Date:	1/12/2018	RunNo:	41072		
Client ID:	LCSW02	Batch ID:	19488			Analysis Date:	1/13/2018	SeqNo:	791353		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	24.4	1.00	20.00	0	122	18.7	171	21.98	10.5	20	
Chloromethane	23.3	2.00	20.00	0	117	38.5	171	20.33	13.7	20	
Vinyl chloride	22.4	0.200	20.00	0	112	48	145	19.93	11.8	20	
Bromomethane	22.1	1.00	20.00	0	110	32.5	184	18.74	16.4	20	
Trichlorofluoromethane (CFC-11)	22.6	1.00	20.00	0	113	43.5	149	19.74	13.7	20	
Chloroethane	22.3	1.00	20.00	0	112	43.8	168	19.28	14.7	20	
1,1-Dichloroethene	22.5	1.00	20.00	0	112	57.5	150	19.34	14.9	20	
Methylene chloride	21.7	1.00	20.00	0	108	67.1	131	19.31	11.5	20	
trans-1,2-Dichloroethene	22.2	1.00	20.00	0	111	71.7	129	19.40	13.6	20	
Methyl tert-butyl ether (MTBE)	19.5	1.00	20.00	0	97.7	58	138	17.43	11.5	20	
1,1-Dichloroethane	22.1	1.00	20.00	0	110	67.9	134	19.16	14.2	20	
2,2-Dichloropropane	17.5	2.00	20.00	0	87.4	26.5	185	16.16	7.82	20	
cis-1,2-Dichloroethene	21.9	1.00	20.00	0	109	70.2	139	19.29	12.5	20	
Chloroform	22.1	1.00	20.00	0	110	66.3	131	19.42	12.8	20	
1,1,1-Trichloroethane (TCA)	21.7	1.00	20.00	0	108	63	140	19.02	13.2	20	
1,1-Dichloropropene	22.2	1.00	20.00	0	111	69.9	124	19.47	12.9	20	
Carbon tetrachloride	22.5	1.00	20.00	0	113	66.2	134	19.56	14.2	20	
1,2-Dichloroethane (EDC)	20.9	1.00	20.00	0	104	68.8	123	18.90	9.98	20	
Benzene	22.1	1.00	20.00	0	111	69.3	132	19.51	12.4	20	
Trichloroethene (TCE)	22.4	0.500	20.00	0	112	65.2	136	19.61	13.4	20	
1,2-Dichloropropane	21.9	1.00	20.00	0	109	70.5	130	19.22	13.0	20	
Bromodichloromethane	22.7	1.00	20.00	0	113	74.6	127	20.13	11.8	20	
Dibromomethane	21.6	1.00	20.00	0	108	69.3	143	19.35	11.2	20	
cis-1,3-Dichloropropene	21.1	1.00	20.00	0	106	62.6	137	18.93	11.0	20	
Toluene	21.6	1.00	20.00	0	108	61.3	145	19.05	12.6	20	

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
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QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCSD-19488	SampType: LCSD		Units: µg/L		Prep Date: 1/12/2018			RunNo: 41072		
Client ID:	LCSW02	Batch ID: 19488		Analysis Date: 1/13/2018					SeqNo: 791353		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	21.6	1.00	20.00	0	108	56.5	163	19.38	10.6	20	
1,1,2-Trichloroethane	21.7	1.00	20.00	0	108	71.7	131	19.18	12.2	20	
1,3-Dichloropropane	20.9	1.00	20.00	0	105	73.5	127	18.71	11.1	20	
Tetrachloroethene (PCE)	21.7	1.00	20.00	0	109	47.5	147	18.94	13.7	20	
Dibromochloromethane	23.6	1.00	20.00	0	118	67.2	134	21.56	9.23	20	
1,2-Dibromoethane (EDB)	21.4	0.250	20.00	0	107	73.6	125	19.06	11.4	20	
Chlorobenzene	20.7	1.00	20.00	0	104	73.9	126	18.52	11.1	20	
1,1,1,2-Tetrachloroethane	21.8	1.00	20.00	0	109	76.8	124	19.51	11.0	20	
Ethylbenzene	21.0	1.00	20.00	0	105	72	130	18.61	11.9	20	
m,p-Xylene	40.8	1.00	40.00	0	102	70.3	134	36.38	11.5	20	
o-Xylene	20.4	1.00	20.00	0	102	72.1	131	18.02	12.3	20	
Styrene	20.5	1.00	20.00	0	102	64.3	140	18.55	9.96	20	
Isopropylbenzene	20.6	1.00	20.00	0	103	73.9	128	18.59	10.0	20	
Bromoform	20.1	2.00	20.00	0	100	55.3	141	18.33	9.13	20	
1,1,1,2-Tetrachloroethane	19.9	1.00	20.00	0	99.4	62.9	132	18.19	8.82	20	
n-Propylbenzene	20.5	1.00	20.00	0	103	74.5	127	18.60	9.87	20	
Bromobenzene	20.1	1.00	20.00	0	100	71	131	18.32	9.11	20	
1,3,5-Trimethylbenzene	20.9	1.00	20.00	0	105	73.1	128	19.34	7.78	20	
2-Chlorotoluene	20.5	1.00	20.00	0	103	70.8	130	18.76	9.05	20	
4-Chlorotoluene	20.2	1.00	20.00	0	101	70.1	131	18.51	8.72	20	
tert-Butylbenzene	22.2	1.00	20.00	0	111	68.2	131	20.12	9.94	20	
1,2,3-Trichloropropane	16.7	1.00	20.00	0	83.6	67.7	131	17.09	2.22	20	
1,2,4-Trichlorobenzene	14.0	2.00	20.00	0	70.1	41	139	12.51	11.4	20	
sec-Butylbenzene	20.2	1.00	20.00	0	101	72	129	18.02	11.7	20	
4-Isopropyltoluene	21.0	1.00	20.00	0	105	69.2	130	19.16	9.38	20	
1,3-Dichlorobenzene	20.9	1.00	20.00	0	104	80.4	124	18.53	12.0	20	
1,4-Dichlorobenzene	21.3	1.00	20.00	0	107	66.8	119	19.32	9.81	20	
n-Butylbenzene	21.9	1.00	20.00	0	109	73.8	127	19.83	9.79	20	
1,2-Dichlorobenzene	21.0	1.00	20.00	0	105	69.7	119	19.00	10.3	20	
1,2-Dibromo-3-chloropropane	20.8	1.00	20.00	0	104	63.1	136	18.48	12.0	20	
1,2,4-Trimethylbenzene	20.4	1.00	20.00	0	102	73.4	127	18.75	8.58	20	

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
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QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCSD-19488	SampType:	LCSD	Units:		µg/L	Prep Date:			1/12/2018	RunNo:		41072
Client ID:	LCSW02	Batch ID:	19488				Analysis Date:			1/13/2018	SeqNo:		791353
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Hexachloro-1,3-butadiene	20.5	4.00	20.00	0	102	58.6	138	18.07	12.4	20			
Naphthalene	17.9	1.00	20.00	0	89.3	41.8	165	16.14	10.2	20			
1,2,3-Trichlorobenzene	14.9	4.00	20.00	0	74.5	48.7	156	13.08	13.0	20			
Surr: Dibromofluoromethane	27.2		25.00		109	45.4	152		0				
Surr: Toluene-d8	25.9		25.00		104	40.1	139		0				
Surr: 1-Bromo-4-fluorobenzene	25.8		25.00		103	64.2	128		0				

Sample ID	MB-19488	SampType:	MBLK		Units:	µg/L		Prep Date:	1/12/2018		RunNo:	41072	
Client ID:	MBLKW	Batch ID:	19488					Analysis Date:	1/13/2018		SeqNo:	791355	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)		ND	1.00										
Chloromethane		ND	2.00										
Vinyl chloride		ND	0.200										
Bromomethane		ND	1.00										
Trichlorofluoromethane (CFC-11)		ND	1.00										
Chloroethane		ND	1.00										
1,1-Dichloroethene		ND	1.00										
Methylene chloride		ND	1.00										
trans-1,2-Dichloroethene		ND	1.00										
Methyl tert-butyl ether (MTBE)		ND	1.00										
1,1-Dichloroethane		ND	1.00										
2,2-Dichloropropane		ND	2.00										Q
cis-1,2-Dichloroethene		ND	1.00										
Chloroform		ND	1.00										
1,1,1-Trichloroethane (TCA)		ND	1.00										
1,1-Dichloropropene		ND	1.00										
Carbon tetrachloride		ND	1.00										
1,2-Dichloroethane (EDC)		ND	1.00										
Benzene		ND	1.00										



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Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-19488	SampType:	MBLK		Units:	µg/L			Prep Date:	1/12/2018		RunNo:	41072		
Client ID:	MBLKW	Batch ID:	19488			Analysis Date:					1/13/2018		SeqNo:	791355	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual		
Trichloroethene (TCE)		ND	0.500												
1,2-Dichloropropane		ND	1.00												
Bromodichloromethane		ND	1.00												
Dibromomethane		ND	1.00												
cis-1,3-Dichloropropene		ND	1.00												
Toluene		ND	1.00												
trans-1,3-Dichloropropylene		ND	1.00												
1,1,2-Trichloroethane		ND	1.00												
1,3-Dichloropropane		ND	1.00												
Tetrachloroethene (PCE)		ND	1.00												
Dibromochloromethane		ND	1.00												
1,2-Dibromoethane (EDB)		ND	0.250												
Chlorobenzene		ND	1.00												
1,1,1,2-Tetrachloroethane		ND	1.00												
Ethylbenzene		ND	1.00												
m,p-Xylene		ND	1.00												
o-Xylene		ND	1.00												
Styrene		ND	1.00												
Isopropylbenzene		ND	1.00												
Bromoform		ND	2.00												
1,1,2,2-Tetrachloroethane		ND	1.00												
n-Propylbenzene		ND	1.00												
Bromobenzene		ND	1.00												
1,3,5-Trimethylbenzene		ND	1.00												
2-Chlorotoluene		ND	1.00												
4-Chlorotoluene		ND	1.00												
tert-Butylbenzene		ND	1.00												
1,2,3-Trichloropropane		ND	1.00											Q	
1,2,4-Trichlorobenzene		ND	2.00											Q	
sec-Butylbenzene		ND	1.00												
4-Isopropyltoluene		ND	1.00												

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Volatile Organic Compounds by EPA Method 8260C

Sample ID	MB-19488	SampType:	MBLK		Units:	µg/L			Prep Date:	1/12/2018		RunNo:	41072	
Client ID:	MBLKW	Batch ID:	19488						Analysis Date:	1/13/2018		SeqNo:	791355	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual	
1,3-Dichlorobenzene		ND	1.00											
1,4-Dichlorobenzene		ND	1.00											
n-Butylbenzene		ND	1.00											
1,2-Dichlorobenzene		ND	1.00											
1,2-Dibromo-3-chloropropane		ND	1.00											
1,2,4-Trimethylbenzene		ND	1.00											
Hexachloro-1,3-butadiene		ND	4.00											
Naphthalene		ND	1.00											
1,2,3-Trichlorobenzene		ND	4.00										Q	
Surr: Dibromofluoromethane		27.0		25.00		108	45.4	152						
Surr: Toluene-d8		25.9		25.00		104	40.1	139						
Surr: 1-Bromo-4-fluorobenzene		24.1		25.00		96.5	64.2	128						

Sample ID	1801177-017ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/12/2018	RunNo:	41072		
Client ID:	B5	Batch ID:	19488			Analysis Date:	1/13/2018	SeqNo:	791344		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	9.67	2.00						1.072	160	30	R
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	Q
cis-1,2-Dichloroethene	ND	1.00						0		30	

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Volatile Organic Compounds by EPA Method 8260C

Sample ID	1801177-017ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/12/2018	RunNo:	41072		
Client ID:	B5	Batch ID:	19488			Analysis Date:	1/13/2018	SeqNo:	791344		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	



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Volatile Organic Compounds by EPA Method 8260C

Sample ID	1801177-017ADUP	SampType:	DUP		Units:	µg/L			Prep Date:	1/12/2018		RunNo:	41072		
Client ID:	B5	Batch ID:	19488		Analysis Date:						1/13/2018		SeqNo:	791344	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual				
4-Chlorotoluene	ND	1.00						0		30					
tert-Butylbenzene	ND	1.00						0		30					
1,2,3-Trichloropropane	ND	1.00						0		30	Q				
1,2,4-Trichlorobenzene	ND	2.00						0		30	Q				
sec-Butylbenzene	ND	1.00						0		30					
4-Isopropyltoluene	ND	1.00						0		30					
1,3-Dichlorobenzene	ND	1.00						0		30					
1,4-Dichlorobenzene	ND	1.00						0		30					
n-Butylbenzene	ND	1.00						0		30					
1,2-Dichlorobenzene	ND	1.00						0		30					
1,2-Dibromo-3-chloropropane	ND	1.00						0		30					
1,2,4-Trimethylbenzene	ND	1.00						0		30					
Hexachloro-1,3-butadiene	ND	4.00						0		30					
Naphthalene	ND	1.00						0		30					
1,2,3-Trichlorobenzene	ND	4.00						0		30	Q				
Surr: Dibromofluoromethane	27.3		25.00		109	45.4	152		0						
Surr: Toluene-d8	25.8		25.00		103	40.1	139		0						
Surr: 1-Bromo-4-fluorobenzene	25.0		25.00		100	64.2	128		0						

Sample ID	1801177-019ADUP	SampType:	DUP			Units:	µg/L			Prep Date:	1/12/2018			RunNo:	41072			
Client ID:	B6	Batch ID:	19488			Analysis Date:						1/13/2018			SeqNo:	791347		
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual					
Dichlorodifluoromethane (CFC-12)		ND	1.00						0			30						
Chloromethane		6.84	2.00						10.96		46.4	30	R					
Vinyl chloride		ND	0.200						0			30						
Bromomethane		ND	1.00						0			30						
Trichlorofluoromethane (CFC-11)		ND	1.00						0			30						
Chloroethane		ND	1.00						0			30						
1,1-Dichloroethene		ND	1.00						0			30						



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Volatile Organic Compounds by EPA Method 8260C

Sample ID	1801177-019ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/12/2018	RunNo:	41072		
Client ID:	B6	Batch ID:	19488			Analysis Date:	1/13/2018	SeqNo:	791347		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	Q
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	

Work Order: 1801177
CLIENT: PBS Engineering & Environmental
Project: 2301 & 2325 Lincoln Ave

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	1801177-019ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	1/12/2018	RunNo:	41072		
Client ID:	B6	Batch ID:	19488			Analysis Date:	1/13/2018	SeqNo:	791347		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	Q
1,2,4-Trichlorobenzene	ND	2.00						0		30	Q
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	Q
Surr: Dibromofluoromethane	27.2		25.00		109	45.4	152		0		
Surr: Toluene-d8	25.9		25.00		104	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.8		25.00		99.1	64.2	128		0		

Client Name: **PBS**
 Logged by: **Brianna Barnes**

Work Order Number: **1801177**
 Date Received: **1/11/2018 5:24:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
 4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes ☐ No ☐ Not Required ☒
 6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
 7. Were all items received at a temperature of >0°C to 10.0°C* Yes ☐ No ☒ NA ☐
Please refer to item information
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is there headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☒ No ☐ NA ☐

Person Notified:	<u>Mike Bagley</u>	Date	<u>1/12/2018</u>
By Whom:	<u>Brianna Barnes</u>	Via:	☒ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	<u>Sample times for B4-2 and B4-1 were switched on iars. Confirming field filtration of dissol</u>		
Client Instructions:	<u>Sample times are correct on COC, disregard times on iars. Not field filtered.</u>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler 1	7.8
Cooler 2	12.1
Cooler 3	5.3
Sample 1	4.8
Sample 2	11.3

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Client Name: **PBS**Work Order Number: **1801177**Logged by: **Brianna Barnes**Date Received: **1/11/2018 5:24:00 PM**

Item #	Temp °C
Sample 3	8.4
Temp Blank 1	2.7
Temp Blank 2	10.5
Temp Blank 3	2.7



PB5

scaffle

City, State, Zip:

Telephone: 560.830.8357

Fax:

PM Email:

Report To (PM):

M. Bagley

Data:

11/11/18

Page:

3

Project Name:

2301 + 2325 Lincoln Ave

Project No:

No: 41237, 605

Collected by:

1. Bagley

Location:

Report To (PM):

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Laboratory Project No (internal): 1601177

1801177

Page 132 of 134

Turn-around Time:

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

***Metals (Circle):

MTCA-5	TAL
RCRA-8	<i>Individual:</i> Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn
Priority Pollutants	

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time
--------------	-----------

Date/Time

111112 12.7.11

1

Relinquished	Date/Time

Date/Time

☒ Standard

Same Day



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7118

Chain of Custody Record & Laboratory Services Agreement

Date: 1/11/18 Page: 2 of 3

Project Name: 2301+2325 Lish Ave

Project No: 41237005

Collected by: M. Bayley

Location:

Report To (PM):

PM Email:

Laboratory Project No (Internal): 1801177

Special Remarks:

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Client: PAS
Address: Seattle
City, State, Zip:

Telephone:

Fax:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCS (EPA 8260 / 624)	GY/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (ID)	Diesel/Heavy Oil Range Organics (DX)	SVOCS (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
-------------	-------------	-------------	-----------------------	-----------------------	---------	------	------------------------------	---------------------------------	--------------------------------------	------------------------	-----------------------	-----------------------	-----------------------------	---------------------------	----------------	------------	----------

1	B4-2	1/11	2:45	S													
2	B4-1		2:50		X		X										
3	B3-1		3:30														
4	B3-2		3:35														

5																	
6																	
7																	
8																	
9																	
10																	

*Matrix: A = Air, AO = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide Iodide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x	1/11/18 17:24	x	1/11/18 17:24
Relinquished	Date/Time	Received	Date/Time
x		x	

Turn-around Time:

☒ Standard

☐ 3 Day

☐ 2 Day

☐ Next Day

Same Day (specify)



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 1/11/18 Page: 3 of 3

Laboratory Project No (internal): 1801177

Special Remarks:

Client: FB

Address:

City, State, Zip:

Telephone:

Fax:

PM Email:

Report To (PM):

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

[illegible]

***Matrix:** A = Air, AQ = Aqueous, Bulk, O = Other, P = Product, S = Soil, SD = sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

****Metals (Circle):** MTCA-5 RCRA-8 Priority Pollutant TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti U V Zn

*****Anions (Circle):** Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Date/Time	Received	Date/Time

11/19/24
Cassidy - 1/11/18 1724

[illegible]

Turn-around Time:

☒ Standard☐ 3 Day☐ 2 Day☐ Next Day

Same Day

(specify)

Mike Bagley

From: Nicholas Peelo <nicholas.peelo@usor.com>
Sent: Tuesday, February 6, 2018 7:53 AM
To: sweeks@portoftacoma.com
Cc: Brady M. Winder; Jon D. Shields; Douglass M. Barkley; Ty J. Gaub; John P. Williamson; Eric Nyhusmoen; Mike Bagley
Subject: FW: 2301 Lincoln Pipelines?

Sarah,

Below are the responses to your questions regarding our transfer lines. Thanks,

Nick Peelo
USOR
253-405-4839

- Pipeline age and/or remaining life expectancy.
All transfer lines were installed in the 2007 timeframe and have decades of remaining life.
- Maintenance program/frequency?
Transfer line preventative maintenance is in accordance with API STD 570.
- Any past violations, spills or other concerns related to this pipeline?
The pipelines have been in existence since the mid-1950s and we have not undertaken an extensive review of our records, but any spills within the pipeline easement area would have been remediated in accordance with MTCA or other applicable standards. Any information regarding such incidents would be of public record as required by law.
- Number of pipelines and diameter?
There are four active pipelines: one 24", one 10", and two 8". There is one inactive 10" pipeline. It was decommissioned in the 2007 timeframe using approved PHMSA methodology for pipeline abandonment. We plan to install four additional pipelines this year, including three 12" pipelines and one 3" pipeline.
- Products moving through pipelines?
Crude Oil, Fuel Oil, Cutter, Vacuum Gas Oil, Gasoline, Ultra Low Sulfur Diesel, Jet Fuel

From: Weeks, Sarah [<mailto:sweeks@portoftacoma.com>]
Sent: Wednesday, January 31, 2018 12:09 PM
To: John P. Williamson <john.williamson@usor.com>; Eric Nyhusmoen <eric.nyhusmoen@usor.com>
Cc: Mike Bagley <Mike.Bagley@pbsusa.com>
Subject: RE: 2301 Lincoln Pipelines?

Hi John –

Will you be able to provide this information this week?

Happy to discuss over the phone if that is easier for you.

APPENDIX C

Asbestos and Lead Paint Laboratory Reports
Chain of Custody

January 29, 2018

Mike Bagley
PBS Environmental - Seattle
2517 Eastlake Ave E, Suite 100
Seattle, WA 98102



Laboratory | Management | Training

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1801628.00

Client Project: N-A
Location: 2301 Lincoln Ave

Dear Mr. Bagley,

Enclosed please find test results for the 7 sample(s) submitted to our laboratory for analysis on 1/24/2018.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, Interim Method for the Determination of Asbestos in Bulk Insulation Samples and **EPA 600/R-93/116** Method for the Determination of Asbestos in Bulk Building Materials.

For samples containing more than one separable layer of materials, the report will include findings for each layer (labeled Layer 1 and Layer 2, etc. for each individual layer). The asbestos concentration in the sample is determined by calibrated visual estimation.

For those samples with asbestos concentrations between 1 and 10 percent based on visual estimation, the EPA recommends a procedure known as point counting (NESHAPS, 40 CFR Part 61). Point counting is a statistically more accurate means of quantification for samples with low concentrations of asbestos.

The detection limit for the calibrated visual estimation is <1%, 400 point counts is 0.25% and 1000 point counts is 0.1%

Samples are archived for two weeks following analysis. Samples that are not retrieved by the client are discarded after two weeks.

Thank you for using our laboratory services. Please do not hesitate to call if there is anything further we can assist you with.

Sincerely,

A handwritten signature in black ink, appearing to read "Nick Ly".

Nick Ly, Technical Director



Lab Code: 102063-0

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: PBS Environmental - Seattle

Address: 2517 Eastlake Ave E, Suite 100
Seattle, WA 98102

Attention: Mr. Mike Bagley

Project Location: 2301 Lincoln Ave

Batch #: 1801628.00

Client Project #: N-A

Date Received: 1/24/2018

Samples Received: 7

Samples Analyzed: 7

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 18007660 Client Sample #: A-1

Location: 2301 Lincoln Ave

Layer 1 of 2 Description: White compacted powdery material with paint

Non-Fibrous Materials: Other Fibrous Materials: %

Calcareous particles, Paint, Binder/Filler Cellulose 3%

Asbestos Type: %

None Detected ND

Layer 2 of 2 Description: White chalky material with paper

Non-Fibrous Materials: Other Fibrous Materials: %

Binder/Filler, Gypsum/Binder Cellulose 24%

Glass fibers 4%

Asbestos Type: %

None Detected ND

Lab ID: 18007661 Client Sample #: A-2

Location: 2301 Lincoln Ave

Layer 1 of 2 Description: White lumpy foamy material with paint

Non-Fibrous Materials: Other Fibrous Materials: %

Calcareous particles, Synthetic foam, Paint Cellulose 3%

Asbestos Type: %

None Detected ND

Layer 2 of 2 Description: White compacted powdery material with paint

Non-Fibrous Materials: Other Fibrous Materials: %

Calcareous particles, Paint Cellulose 2%

Asbestos Type: %

None Detected ND

Lab ID: 18007662 Client Sample #: A-3

Location: 2301 Lincoln Ave

Layer 1 of 2 Description: Black rubbery material

Non-Fibrous Materials: Other Fibrous Materials: %

Rubber/Binder None Detected ND

Asbestos Type: %

None Detected ND

Layer 2 of 2 Description: White soft mastic with trace paper

Non-Fibrous Materials: Other Fibrous Materials: %

Mastic/Binder, Binder/Filler Cellulose 7%

Asbestos Type: %

None Detected ND

Sampled by: Client

Analyzed by: Lori Tseng

Reviewed by: Nick Ly

Date: 01/29/2018

Date: 01/29/2018



Nick Ly, Technical Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: PBS Environmental - Seattle

Address: 2517 Eastlake Ave E, Suite 100
Seattle, WA 98102

Attention: Mr. Mike Bagley

Project Location: 2301 Lincoln Ave

Batch #: 1801628.00

Client Project #: N-A

Date Received: 1/24/2018

Samples Received: 7

Samples Analyzed: 7

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 18007663 Client Sample #: A-4

Location: 2301 Lincoln Ave

Layer 1 of 6	Description: White powdery material	Non-Fibrous Materials: Calcareous particles, Binder/Filler	Other Fibrous Materials: Cellulose 3%	Asbestos Type: % None Detected ND
Layer 2 of 6	Description: Gray vinyl tile	Non-Fibrous Materials: Vinyl/Binder, Mineral grains	Other Fibrous Materials: Cellulose 2%	Asbestos Type: % None Detected ND
Layer 3 of 6	Description: Black asphaltic mastic	Non-Fibrous Materials: Asphalt/Binder	Other Fibrous Materials: Cellulose 4%	Asbestos Type: % Chrysotile 3%
Layer 4 of 6	Description: Green soft mastic	Non-Fibrous Materials: Mastic/Binder	Other Fibrous Materials: Cellulose 2%	Asbestos Type: % None Detected ND
Layer 5 of 6	Description: Orange sheet vinyl	Non-Fibrous Materials: Vinyl/Binder, Binder/Filler	Other Fibrous Materials: None Detected ND	Asbestos Type: % None Detected ND
Layer 6 of 6	Description: Gray fibrous backing with mastic	Non-Fibrous Materials: Binder/Filler, Mastic/Binder	Other Fibrous Materials: Cellulose 14%	Asbestos Type: % Chrysotile 55%

Lab ID: 18007664 Client Sample #: A-5

Location: 2301 Lincoln Ave

Layer 1 of 2	Description: Black vinyl tile	Non-Fibrous Materials: Vinyl/Binder, Mineral grains	Other Fibrous Materials: Cellulose 2%	Asbestos Type: % None Detected ND
---------------------	--------------------------------------	--	--	--

Sampled by: Client

Analyzed by: Lori Tseng

Reviewed by: Nick Ly

Date: 01/29/2018

Date: 01/29/2018

Nick Ly, Technical Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government

Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: PBS Environmental - Seattle

Address: 2517 Eastlake Ave E, Suite 100
Seattle, WA 98102

Attention: Mr. Mike Bagley

Project Location: 2301 Lincoln Ave

Batch #: 1801628.00

Client Project #: N-A

Date Received: 1/24/2018

Samples Received: 7

Samples Analyzed: 7

Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Layer 2 of 2	Description: Yellow soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder	Cellulose 4%		None Detected ND

Lab ID: 18007665 **Client Sample #: A-6**

Location: 2301 Lincoln Ave

Layer 1 of 1	Description: White lumpy foamy material with paint and trace paper			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Calcareous particles, Synthetic foam, Paint	Cellulose 9%		None Detected ND

Lab ID: 18007666 **Client Sample #: A-7**

Location: 2301 Lincoln Ave

Layer 1 of 2	Description: Off-white vinyl tile			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Vinyl/Binder, Mineral grains	Cellulose 2%		None Detected ND
Layer 2 of 2	Description: Yellow soft mastic			
	Non-Fibrous Materials:	Other Fibrous Materials:%		Asbestos Type: %
	Mastic/Binder	Cellulose 3%		None Detected ND
		Synthetic fibers 2%		

Sampled by: Client

Analyzed by: Lori Tseng

Reviewed by: Nick Ly

Date: 01/29/2018

Date: 01/29/2018



Nick Ly, Technical Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government

Company PBS Environmental - Seattle
Address 2517 Eastlake Ave E, Suite 100
 Seattle, WA 98102
Project Manager Mr. Mike Bagley
Phone (206) 233-9639
NVL Batch Number 1801628.00
TAT 4 Days **AH** No
Rush TAT
Due Date 1/30/2018 **Time** 4:30 PM
Email mike.bagley@pbsusa.com
Fax (866) 727-0140

Project Name/Number: N-A **Project Location:** 2301 Lincoln Ave

Subcategory PLM Bulk

Item Code ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>

Total Number of Samples 7

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	18007660	A-1		A
2	18007661	A-2		A
3	18007662	A-3		A
4	18007663	A-4		A
5	18007664	A-5		A
6	18007665	A-6		A
7	18007666	A-7		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Nicholas Dossegger		NVL	1/24/18	1630
Analyzed by	Lori Tseng		NVL	1/29/18	
Results Called by					
☐ Faxed ☐ Emailed					

Special Instructions: Project location was written on sample bags

Date: 1/24/2018

Time: 4:38 PM

Entered By: Nicholas Dossegger

1801628



ASBESTOS CHAIN OF CUSTODY

Turn Around Time

- ☐ 1 Hour ☐ 24 Hours ☒ 4 Days
☐ 2 Hours ☐ 2 Days ☐ 5 Days
☐ 4 Hours ☐ 3 Days ☐ 10 Days

Please call for TAT less than 24 Hours

Company PBS
 Address Seattle
 Phone _____

Project Manager Mike Bagley
 Cell (360) 830-8359
 Email mike.bagley@pbsusa.com
 Fax () _____

Project Name/Number	Project Location
---------------------	------------------

- ☐ PCM Air (NIOSH 7400) ☐ TEM (NIOSH 7402) ☐ TEM (AHERA) ☐ TEM (EPA Level II Modified)
☒ PLM (EPA 600/R-93-116) ☐ EPA 400 Points (600/R-93-116) ☐ EPA 1000 Points (600/R-93-116)
☐ PLM Gravimetry (600/R-93-116) ☐ Asbestos in Vermiculite (EPA 600/R-04/004) ☐ Asbestos in Sediment (EPA 1900 Points)
☐ Asbestos Friable/Non-Friable (EPA 600/R-93/116) ☐ Other _____

Reporting Instructions email to PM

☐ Call () _____ ☐ Fax () _____ ☐ Email _____

Total Number of Samples 7

	Sample ID	Description	A/R
1	A-1	2301 Dry wall	
2	A-2	2301 popcorn ceiling	
3	A-3	2301 Cove base	
4	A-4	2301 floor tile layers	
5	A-5	2301 black 12" tile	
6	A-6	2301 popcorn ceiling 2nd Floor	
7	A-7	west office floor tile	
8			
9			
10			
11			
12			
13			
14			
15			

Print Name	Signature	Company	Date	Time
Sampled by <u>Mike Bagley</u>	<u>[Signature]</u>	<u>PBS</u>	<u>1/24/18</u>	<u>2:00pm</u>
Relinquish by <u>Mike Bagley</u>	<u>[Signature]</u>	<u>PBS</u>	<u>1/24/18</u>	<u>16:30</u>

Office Use Only

Print Name	Signature	Company	Date	Time
Received by <u>Shan S. S. S.</u>	<u>[Signature]</u>	<u>NVL</u>	<u>1/24/18</u>	<u>16:30</u>
Analyzed by				
Called by				
Faxed/Email by				

January 29, 2018

Mike Bagley

PBS Environmental - Seattle

2517 Eastlake Ave E, Suite 100
Seattle, WA 98102



Laboratory | Management | Training

RE: Metals Analysis; NVL Batch # 1801629.00

Dear Mr. Bagley,

Enclosed please find the test results for samples submitted to our laboratory for analysis. Preparation of these samples was conducted following protocol outlined in EPA Method SW 846 -3051 unless stated otherwise. Analysis of these samples was performed using analytical instruments in accordance with U.S. EPA, NIOSH, OSHA and other ASTM methods.

For matrix materials submitted as paint, dust wipe, soil or TCLP samples, analysis for the presence of total metals is conducted using published U.S. EPA Methods. Paint and soil results are usually expressed in mg/Kg which is equivalent to parts per million (ppm). Lead (Pb) in paint is usually expressed in mg/Kg (ppm), Percent (%) or mg/cm² by area. Dust wipe sample results are usually expressed in ug/wipe and ug/ft². TCLP samples are reported in mg/L (ppm). For air filter samples, analyses are conducted using NIOSH and OSHA Methods. Results are expressed in ug/filter and ug/m³. Other matrix materials are analyzed accordingly using published methods or specified by client. The reported test results pertain only to items tested and are not blank corrected.

For recent regulation updates pertaining to current regulatory levels or permissible exposure levels, please call your local regulatory agencies for more details.

This report is considered highly confidential and will not be released without your approval. Samples are archived for two weeks following analysis. Samples that are not retrieved by the client are discarded after two weeks.

Thank you for using our laboratory services. If you need further assistance please feel free to call us at 206-547-0100 or 1-888-NVLLABS.

Sincerely,

A handwritten signature in black ink, appearing to read "Nick Ly".

Nick Ly, Technical Director

1.888.NVL.LABS
1.888.(685.5227)
www.nvllabs.com



NVL Laboratories, Inc.
4708 Aurora Ave N, Seattle, WA 98103
p 206.547.0100 | f 206.634.1936

Analysis Report

Total Lead (Pb)

Client: PBS Environmental - Seattle
Address: 2517 Eastlake Ave E, Suite 100
Seattle, WA 98102

Batch #: 1801629.00

Matrix: Paint
Method: EPA 3051/7000B
Client Project #: N-A
Date Received: 1/24/2018
Samples Received: 4
Samples Analyzed: 4

Attention: Mr. Mike Bagley

Project Location: N-A

Lab ID	Client Sample #	Sample Weight (g)	RL in mg/Kg	Results in mg/Kg	Results in percent
18007667	L-1	0.2117	47	370000	37
18007668	L-2	0.1505	66	290	0.029
18007669	L-3	0.1905	52	120	0.012
18007670	L-4	0.1912	52	880	0.088

Sampled by: Client

Analyzed by: Aaron Brown

Reviewed by: Nick Ly

Date Analyzed: 01/26/2018

Date Issued: 01/29/2018



Nick Ly, Technical Director

mg/ Kg =Milligrams per kilogram

Percent = Milligrams per kilogram / 10000

Note : Method QC results are acceptable unless stated otherwise.

Unless otherwise indicated, the condition of all samples was acceptable at time of receipt.

RL = Reporting Limit

'<' = Below the reporting Limit

Company PBS Environmental - Seattle
Address 2517 Eastlake Ave E, Suite 100
 Seattle, WA 98102
Project Manager Mr. Mike Bagley
Phone (206) 233-9639
NVL Batch Number 1801629.00
TAT 4 Days **AH** No
Rush TAT
Due Date 1/30/2018 **Time** 4:30 PM
Email mike.bagley@pbsusa.com
Fax (866) 727-0140

Project Name/Number: N-A **Project Location:** N-A

Subcategory Flame AA (FAA)

Item Code FAA-02 EPA 7000B Lead by FAA <paint>

Total Number of Samples 4

Rush Samples

	Lab ID	Sample ID	Description	A/R
1	18007667	L-1		A
2	18007668	L-2		A
3	18007669	L-3		A
4	18007670	L-4		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Shan Siddiqui		NVL	1/24/18	1630
Analyzed by	Aaron Brown		NVL	1/26/18	
Results Called by					
☐ Faxed ☐ Emailed					

Special Instructions:

Date: 1/24/2018

Time: 4:46 PM

Entered By: Nicholas Dossegger

1801629



METALS CHAIN OF CUSTODY

Turn Around Time

- ☐ 2 Hour ☐ 4 Hours ☐ 24 Hours
☐ 2 Days ☐ 3 Days ☒ 4 Days
☐ 5 Days ☐ 6-10 Days

Please call for TAT less than 24 Hours

Company PBS
 Address Seattle
 Phone _____

Project Manager Mike Bagley
 Cell () - -
 Email mike.bagley@pbsusa.com
 Fax () - -

Project Name/Number		Project Location	
☒ Total Metals ☐ TCLP	☒ FAA (ppm) ☒ ICP (PPM) ☐ GFAA (ppb) ☐ CVAA (ppb)	☐ Air Filter ☐ Paint Chips (cm) ☐ Drinking Water ☐ Other _____	☒ Paint Chips (%) ☐ Dust Wipes ☐ Waste Water ☐ Other _____
☐ Soil ☐ Barium ☐ Arsenic ☐ Selenium		☐ RCRA 8 ☐ Chromium ☐ Mercury ☐ Cadmium	
☐ Silver ☒ Lead		☐ RCRA 11 ☐ Copper ☐ Zinc ☐ Other _____	

Reporting Instructions email to PM

☐ Call () - -
 ☐ Fax () - -
 ☐ Email _____

Total Number of Samples 4

Sample ID	Description	A/R
1	L-1 North building column	
2	L-2 2301 White Columns	
3	L-3 South building post near AST	
4	L-4 West building exterior	
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Print Name	Signature	Company	Date	Time
Sampled by <u>Mike Bagley</u>	<u>[Signature]</u>	<u>PBS</u>	<u>1/24/18</u>	<u>2:00</u>
Relinquish by <u>Mike Bagley</u>	<u>[Signature]</u>	<u>PBS</u>	<u>1/24/18</u>	<u>16:30</u>

Office Use Only

Print Name	Signature	Company	Date	Time
Received by <u>Shen S. S. S. S.</u>	<u>[Signature]</u>	<u>NVL</u>	<u>1/24/18</u>	<u>16:30</u>
Analyzed by				
Called by				
Faxed/Email by				