PEMCO Eastlake

Cleanup Action Report—1992 Fuel Line Release

Prepared for

PEMCO Mutual Insurance Company
1300 Dexter Avenue North
Seattle, Washington 98109

June 3, 2016

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List of Acronyms and Abbreviations

Acronym/ Abbreviation	Definition
bgs	Below ground surface
BTEX	Benzene, toluene, ethylbenzene, and xylene
CSID	Cleanup Site ID
DRO	Diesel-range organics
Ecology	Washington State Department of Ecology
Farallon	Farallon Consulting
GRO	Gasoline-range organics
HVOC	Halogenated volatile organic compound
MTCA	Model Toxics Control Act
NFA	No Further Action
ORO	Oil-range organics
PEMCO	PEMCO Mutual Insurance Company
UST	Underground storage tanks
WAC	Washington Administrative Code

1.0 Purpose of Report

Floyd|Snider has prepared this Cleanup Action Report at the request of PEMCO Mutual Insurance Company (PEMCO) in support of a No Further Action (NFA) determination. The work described in this report was completed at 325 Eastlake Avenue East in Seattle, Washington (Figure 1). The report first summarizes investigation activities that were conducted to delineate the lateral and vertical extent of residual petroleum hydrocarbon contamination beneath the property from the 1992 release, and then details the cleanup actions that were conducted. The 1992 release is listed as Cleanup Site ID (CSID) 11077 and Facility Site ID 92673819 under the Washington State Department of Ecology's (Ecology's) cleanup site database.

2.0 Background

PEMCO was the owner/occupant of the building at 325 Eastlake Avenue East from its construction until 2015. As part of building construction, PEMCO installed two 10,000-gallon underground storage tanks (USTs), one diesel and one gasoline, in the current parking lot just to the south of Harrison Street. Fuel lines from these USTs ran west adjacent to Harrison Street and then south along Yale Avenue North to fuel dispenser pumps located within the parking garage (Figure 2).

In 1992, a concrete cutter conducting work for a telecommunications company inadvertently cut two fuels lines between the former USTs and the former fuel dispensers (Northwest Industrial Hygiene, Inc. 1993). The cut occurred approximately 4 feet north of the northwest corner of the parking garage along Yale Avenue North, as shown on Figure 2. Ecology's spill response unit was notified upon discovery of the release. In an effort to remediate the affected soil from the fuel line release, approximately 30 cubic yards of impacted soil were removed during the excavation and transported off-site for disposal. The excavation was limited by underground utilities beneath the sidewalk and Yale Avenue North to the west and the parking garage footing to the south and east. During excavation activities, free product was observed pooling around the garage foundation footing, and approximately 50 gallons of free product was recovered by vacuum truck and absorbent pads. The excavation was lined with polyethylene sheeting and backfilled with clean sand.

A soil gas investigation was conducted in early 1993 to delineate the extent of impacted soil beneath Yale Avenue North as a result of the fuel line release. Six borings (PH-01 through PH-04, PH-06, and PH-09) were advanced southwest, west, northwest, and north of the fuel line release, and soil gas samples were analyzed with a gas chromatograph (Figure 2). The results of the soil gas survey showed that benzene was present in soil gas vapors northwest of the release in locations PH-02 and PH-04 (Northwest Industrial Hygiene 1993). The utilities present beneath the sidewalk and the street limited the amount of soil borings that were able to be advanced off-property to the west and northwest of the former 1992 fuel release.

In 2012, the USTs and fuel dispensers were removed and a total of 196 tons of contaminated soil was excavated and transported for off-site disposal. Confirmation samples were collected to document removal of all residual hydrocarbon contamination in soil in both the tanks and dispenser area. Based on soil analytical results, all petroleum-impacted soil was removed to meet Model Toxics Control Act (MTCA) Method A cleanup levels (The Riley Group, Inc. 2012).

In April 2015, Farallon Consulting (Farallon) conducted a subsurface investigation as part of a property due diligence related to the sale of the 325 Eastlake Avenue East property from PEMCO to UPI Eastlake & Thomas LLC (Unico) (Farallon 2015). Farallon advanced a total of nine borings; seven soil borings (FB-2 through FB-6, FB-8, and FB-9) were located adjacent to the former USTs and along the fuel lines, and two locations (FB-1 and FB-7) were located between the former UST locations and the current building (Figure 2). Farallon reported that shallow discontinuous wet intervals were observed at depths ranging from 5 to 16 feet below ground surface (bgs) in the

majority of the borings. A wet interval also was encountered in boring FB-7 in a silty sand interbed at approximately 39.5 feet bgs. However, only boring FB-4 had sufficient yield to collect a reconnaissance groundwater sample from a poorly graded sand interval encountered from 15 to 16 feet bgs. Only ethylbenzene and xylenes were detected in the reconnaissance groundwater sample collected from boring FB-4. The other analytes (diesel-range organics [DRO], oil-range organics [ORO], gasoline-range organics [GRO], benzene, toluene, and halogenated volatile organic compounds [HVOCs]) were reported non-detect at the laboratory practical quantitation limit.

On August 21, 1993, approximately 70 to 80 gallons of ethylene glycol was released from a broken generator hose to the basement of the building at 325 Eastlake Avenue East. Approximately half of the spill was recovered using vacuums and stored in a drum for removal, while the other half entered the sewer system through drains in the basement (AEI Consultants 2014).

The property is listed as one facility by Ecology, Facility Site ID 92673819, but has been given three separate Contaminated Site IDs for each source area described above:

- CSID 10168, which is associated with the Ethylene Glycol Spill and has a cleanup unit name of "PEMCO Financial Center – Ethylene Glycol Spill"
- CSID 12086, which is associated with the leaking UST and has a cleanup unit name of "PEMCO Insurance"
- CSID 11077, which is associated with the 1992 cutting of the fuel lines and has a cleanup unit name of "Yale Ave N Parking Garage – Concrete Cutter"

The PEMCO Financial Center – Ethylene Glycol Spill site (CSID 10168) was given a NFA determination on January 11, 2012. The remediation activities for the USTs and dispenser removal at the PEMCO Insurance site (CSID 12086) resulted in a NFA determination on March 20, 2013; and Ecology confirmed, in an email reproduced in Appendix A, that the site is still in compliance with cleanup standards and the current site status of NFA remains in place following Ecology's review of the additional subsurface data generated by Farallon in 2015.

The remainder of this letter summarizes the field investigations and cleanup action activities conducted at CSID 11077, the Yale Ave N Parking Garage – Concrete Cutter site.

3.0 Recent Investigations and Remediation

In August and again in December 2015, Floyd|Snider investigated the extent of contaminated soil in the vicinity of the 1992 fuel line release, which had never been properly characterized. Fourteen soil borings, SB-1 through SB-14, were advanced during both investigations using a direct-push drill rig, and soil samples were collected (Figure 3). Borings were advanced from the ground surface to depths of approximately between 5 and 10 feet bgs and were continuously logged according to the Unified Soil Classification System.

Soil borings logs from the Floyd|Snider borings, as well as prior work, document that the subsurface typically consists of glacially compacted stiff to hard silty soils with low plasticity and up to 25 percent fine sand to a depth of at least 45 feet bgs. Thin, non-continuous, silty sand lenses interbedded within the silt were commonly observed.

Soil analytical data from these investigations indicated that impacts were only present in soil boring SB-8 located next to the garage structure, but did not extend under the structure. Petroleum impacts greater than cleanup levels were only found in one boring (SB-8) and were confined to a thin soil horizon located between 4 and 6 feet bgs. Boring locations and soil analytical data are presented in Figure 3, and analytical data for GRO, DRO, benzene, toluene, ethylbenzene, and xylene (BTEX), and lead are shown on Table 1. Table 2 contains results for additional parameters that were analyzed in selected samples including petroleum additives and carcinogenic polycyclic aromatic hydrocarbons. Laboratory reports are included in Appendix B.

4.0 Scope of Remedial Work

Remedial work involved the removal of remaining contaminated soil adjacent to the garage structure. The follow activities occurs as part of the remedial work:

- Reviewing building plans
- Conducting a public and private locate
- Excavating petroleum-contaminated soil and disposing contaminated soil off-site
- Collecting confirmational sidewall and base samples
- Geotechnical evaluation
- Soil disposal
- Backfilling and repaving

4.1 REVIEW BUILDING PLANS

A review of the building plans were conducted to understand the width and depth of the garage footing and of any other subsurface conditions that may be encountered during excavation activities.

4.2 UTILITY LOCATE

A public utility locate notification was completed in accordance with state law within 3 business days prior to the start of the investigation. Public utility locate information was provided to the contractor prior to the start of work. In addition, a private locate was performed within the property to locate conductible utilities prior to excavation activities.

4.3 SOIL EXCAVATION AND OFF-SITE DISPOSAL

Between April 13 and 14, 2016, ClearCreek Contractors of Everett, Washington, performed the excavation activities within the vicinity of soil boring SB-8 (Figure 3). Prior to cleanup activities, the area was flagged off to prevent public entry. After cutting and removal of surface pavement, all soil was removed by backhoe down to 8 feet bgs and placed directly into a truck. Stockpiles were not needed during excavation activities. All soil was direct-loaded, and 16.49 tons of petroleum-contaminated soil was removed and transported off-site for disposal.

4.4 CONFIRMATION SAMPLING

Confirmation samples were collected along the sidewalls and at the base of the excavation to ensure that MTCA Method A cleanup levels have been met laterally and vertically in all directions. The excavation size was approximately 8.5 feet long by 10.5 feet wide by 8 feet deep. The western edge of the excavation encountered the previous 1992 excavation backfill material and building footing. One soil sample was collected from each sidewall and at depths where previous adjacent

analytical data or field observations encountered contamination, and one base sample was collected between 7.5 and 8 feet bgs (Figure 3).

All soil samples were field screened for the presence of volatile hydrocarbons using a photoionization detector and sheen pan, and samples were analyzed for the following:

- GRO by NWTPH-Gx
- DRO and ORO by NWTPH-Dx
- BTEX by USEPA Method 8021

In addition, one soil sample was analyzed for volatile organic compounds and ethylene dibromide (EDB) using USEPA Method 8260 SIM and semivolatile organic compounds using USEPA 8270D. Soil samples were delivered to Freidman & Bruya, Inc. on a daily basis and were submitted with a 24-hour turn-around-time. Sample labels consisted of the excavation sample number (EX-2) and corresponding depth (e.g., EX-2-4.5'-5.0').

4.5 GEOTECHNICAL EVALUATION

Given that the excavation occurred close to the garage building foundation, certain precautions were necessary to prevent damage to the concrete footing itself or loss of soil under the footing, which could lead to settlement. Due to these factors, Floyd|Snider hired a geotechnical engineering firm (PanGeo, Inc.) to provide oversight during excavation activities to observe soil conditions and provide real-time recommendations in order to be fully protective of the adjacent building. The western edge of the excavation exposed an area of extra concrete left over from the building footing construction, which appears to have prevented the 1992 excavation from over-excavating the contaminated soil to the east. The geotechnical engineer reviewed the building plans and confirmed that the extra concrete could be removed safely in order to excavate contaminated soil beneath the footing. ClearCreek Contractors removed the extra concrete and the contaminated soil beneath the footing.

4.6 SOIL DISPOSAL

Petroleum-contaminated soil was transported and offloaded at Cemex in Everett, Washington for disposal and was managed as "contaminated soils" consistent with the Solid Waste Handling Standards (Washington Administrative Code [WAC] 173-350). The trucking weight ticket is included as Appendix C.

4.7 EXCAVATION SAMPLING RESULTS

Analytical results for all sidewall confirmation samples confirmed that analytes in soil containing petroleum hydrocarbons exceeding respective MTCA Method A cleanup levels had been removed (refer to Table 1). Selected soil samples that were analyzed for additional analytes resulted in concentrations less than their respective MTCA Method A cleanup levels, as required in Ecology's Table 830-1 under MTCA (refer to Table 2). Previous soil samples collected during the remedial investigations and confirmation sampling results are summarized in Table 1,

confirmation sample locations and results are shown on Figure 3, and additional soil analytical data are presented on Table 2. Laboratory analytical reports are included in Appendix B.

4.8 BACKFILL AND COMPACTION

Following review of the analytical data and confirmation that all contaminated soil exceeding cleanup levels had been removed, backfill and compaction activities were performed. Although, there were no compaction requirements, imported Type 17 Seattle specifications were used as backfill and were vibratory compacted every 2 feet up to 2 feet below the original grade. ⅝-minus was used in the upper 2 feet, and the surface was repaved with asphalt up to 3 inches in thickness.

5.0 Conclusions

In all, 16.49 tons of contaminated soil were excavated and transported off-site for disposal between April 13 and 14, 2016. The final maximum lateral dimensions of the excavation were approximately 8.5 feet by 10.5 feet, and the excavation extended down to 8 feet bgs. Soil analytical results from samples collected from the excavation sidewalls and bottom, along with soil analytical data from the 2015 investigation, confirm that the remedial excavation actions performed meet the MTCA criteria under WAC 173-340-360(2)(a). Confirmation soil samples indicate that all soil containing petroleum hydrocarbon concentrations exceeding their respective MTCA Method A cleanup levels has been removed.

This Cleanup Action Report is submitted in conjunction with a Voluntary Cleanup Program application in support of a NFA determination for the site and removal from the Confirmed and Suspected Contaminated Sites List.

6.0 References

AEI Consultants. 2014. *Phase I Environmental Site Assessment Phase*. Prepared for PEMCO. 1 October.

Farallon Consulting (Farallon). 2015. *Summary of Subsurface Investigation*. PEMCO Property. 25 June.

Floyd|Snider. 2015. *Additional Soil Investigation Data for LUST CSID 12086*. 30 October.

Northwest Industrial Hygiene, Inc. 1993. *Soil Remediation Report for PEMCO Insurance Company Yale Street Parking Garage*. Prepared by David A. Newman, M.Sc. 22 February.

The Riley Group, Inc. 2012. *UST Site Assessment and Independent Cleanup Action Report – Gasoline and Diesel UST Site: ERTS Number 637141*. Letter from Richard Simpson and Paul D. Riley, The Riley Group, Inc. to Mike Mitchell and Ray Wiley, Pemco Mutual Insurance Company. 27 December.

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Tables

Table 1
Soil Analytical Data – GRO, DRO, ORO, BTEX, and Lead

			Analysis Method	NWTPH-Gx	NWTPH-Dx		USEPA 8021B[1]				USEPA 6020
			Analyte	GRO	DRO	ORO	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead
			MTCA Method A Cleanup Level	30/100[2]	2,000	2,000	0.030	7	6	9	250
	Sample ID	Date	Depth	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Soil Boring Samples	SB1-4.5-5	8/20/2015	4.5–5.0	2.7	50 U	690 JM	0.02 U	0.021	0.02 U	0.079	--
	SB2-4-4.5	8/20/2015	4.0–4.5	2 U	50 U	380 JM	0.02 U	0.02 U	0.02 U	0.06 U	--
	SB3-4-4.5	8/20/2015	4.0–4.5	17	370	250 U	0.03 U	0.05 U	0.05 U	0.1 U	4.92
	SB3-5.5-6	8/20/2015	5.5–6.0	2 U	50 U	250 U	0.02 U	0.02 U	0.02 U	0.06 U	--
	SB4-4.5-5.0	8/20/2015	4.5–5.0	2 U	78	250 U	0.02 U	0.02 U	0.02 U	0.06 U	--
	SB4-6-6.5	8/20/2015	6.0–6.5	2 U	50 U	250 U	0.02 U	0.02 U	0.02 U	0.06 U	--
	SB5-4-4.5	8/20/2015	4.0–4.5	2 U	50 U	250 U	0.02 U	0.02 U	0.02 U	0.06 U	--
	SB6-4-4.5	8/20/2015	4.0–4.5	2 U	50 U	250 U	0.02 U	0.02 U	0.02 U	0.06 U	--
	SB7-4-4.5	8/20/2015	4.0–4.5	28	85	250 U	0.02 U	0.02 U	0.031	0.089	--
	SB8-4.5-5[4]	8/20/2015	4.5–5.0	**140** J	**3,100**	250 U	0.03 U	0.05 U	0.05 U	0.1 U	2.2
	SB8-6-6.5[4]	8/20/2015	6.0–6.5	2 U	50 U	250 U	0.02 U	0.02 U	0.02 U	0.06 U	--
	SB9-4.5-5	8/20/2015	4.5–5.0	2 U	50 U	250 U	0.02 U	0.02 U	0.02 U	0.06 U	--
	SB10-4.5-5.0[3]	12/17/2015	4.5–5.0	20 U	50 U	250 U	--	--	--	--	--
	SB11-4.5-5.0[3]	12/17/2015	4.5–5.0	20 U	50 U	250 U	--	--	--	--	--
	SB12-4.5-5.0[3]	12/17/2015	4.5–5.0	20 U	50 U	250 U	--	--	--	--	--
	SB13-4.5-5.0[3]	12/17/2015	4.5–5.0	20 U	50 U	250 U	--	--	--	--	--
Confirmation Samp	EX-1-4.5'-5.0'	4/13/2016	4.5–5.0	11	88	250 U	0.02 U	0.02 U	0.02 U	0.06 U	--
	EX-1-4.5'-5.0' Dup	4/13/2016	4.5–5.0	18	120	250 U	0.02 U	0.02 U	0.02 U	0.06 U	--
	EX-2-4.5'-5.0'	4/13/2016	4.5–5.0	2 U	50 U	250 U	0.02 U	0.02 U	0.02 U	0.06 U	--
	EX-3-7.5'-8.0'	4/13/2016	7.5–8.0	2 U	50 U	250 U	0.02 U	0.02 U	0.02 U	0.06 U	--
	EX-4-4.5'-5.0'	4/13/2016	4.5–5.0	23	120	250 U	0.02 U	0.028	0.02 U	0.06 U	2.6
	EX-5-5.0'-5.5'	4/14/2016	5.0–5.5	3	50 U	250 U	0.02 U	0.02 U	0.02 U	0.06 U	--

Notes:

-- Not analyzed.

BOLD Detected at a concentration that exceeds the MTCA Method A cleanup level.

1 Samples SB3-4-4.5 and SB8-4.5-5 were analyzed by USEPA 8260C.

2 Criterion is 30 mg/kg if benzene is present and 100 mg/kg if no detectable benzene is present.

3 Analyzed by NWTPH-HCID.

4 Sample SB8 was removed during 2016 excavation activities.

Abbreviations:

BTEX Benzene, toluene, ethylbenzene, and xylenes
DRO Diesel-range organics
GRO Gasoline-range organics
mg/kg Milligrams per kilogram
MTCA Model Toxics Control Act
ORO Oil-range organics

Qualifiers:

J Analyte was detected, concentration is considered an estimate.
JM Analyte was detected, concentration is considered an estimate due to a poor match to the chromatographic standard.
U Analye was not detected, concentration given is the reporting limit.

Table 2
Additional Soil Analytical Data - VOCs and cPAHs

	Location	EX-4	SB3	SB8	
	Sample ID	EX-4-4.5'-5.0'	SB3-4'-4.5'	SB8-4.5'-5'	
	Sample Date	4/13/2016	8/20/2015	8/20/2015	MTCA Method
	Depth (ft bgs)	4.5–5.0	4.0–4.5	4.5–5.0	A Cleanup
Analyte	Units				Level
Volatile Organic Compounds by USEPA 8260C					
Benzene	mg/kg	--	0.03 U	0.03 U	0.03
Toluene	mg/kg	--	0.05 U	0.05 U	7
Ethylbenze	mg/kg	--	0.05 U	0.05 U	6
Xylene (meta & para)	mg/kg	--	0.1 U	0.1 U	9[1]
Xylene (ortho)	mg/kg	--	0.05 U	0.05 U	9[1]
1,2-Dichloroethane	mg/kg	0.05 U	0.005 U	0.005 U	0.005
1,2-Dibromoethane[2]	mg/kg	0.0005 U	0.0005 U	0.0005 U	0.005
Methyl-Tert-Butyl Ether	mg/kg	0.05 U	0.05 U	0.05 U	11[3]
Naphthalene	mg/kg	0.05 U	0.05 U	0.05 U	0.1
n-Hexane	mg/kg	0.25 U	0.25 U	0.25 U	4,800[3]
Semivolatile Organic Compounds by USEPA 8270D					
1-Methylnaphthalene	mg/kg	--	0.026	2.9	5,600[3]
2-Methylnaphthalene	mg/kg	--	0.01 U	2.8	320[3]
Benzo(a)anthracene	mg/kg	0.01 U	0.01 U	0.01 U	1.37[3]
Benzo(a)pyrene	mg/kg	0.01 U	0.01 U	0.01 U	0.1
Benzo(b)fluoranthene	mg/kg	0.01 U	0.01 U	0.01 U	1.37[3]
Benzo(k)fluoranthene	mg/kg	0.01 U	0.01 U	0.01 U	13.7[3]
Chrysene	mg/kg	0.01 U	0.01 U	0.013	137[3]
Dibenzo(a,h)anthracene	mg/kg	0.01 U	0.01 U	0.01 U	0.137[3]
Indeno(1,2,3-cd)pyrene	mg/kg	0.01 U	0.01 U	0.01 U	1.37[3]
Naphthalene	mg/kg	--	0.01 U	0.01 U	5
cPAH TEQ (ND Zero)	mg/kg	--	0.01 U	0.00013	0.1
cPAH TEQ (ND Half)	mg/kg	--	0.0076 U	0.0076	0.1

Notes:

-- Not analyzed.

1 Total xylenes cleanup level.

2 Analyzed using USEPA 8260C Direct Sparge.

3 MTCA Method B unrestricted land use cleanup level.

Abbreviations:

bgs Below ground surface

cPAH Carcinogenic polycyclic aromatic hydrocarbon

ft Feet

mg/kg Milligrams per kilogram

MTCA Model Toxics Control Act

ND Non-detect

TEQ Toxicity equivalent

VOC Volatile organic compound

Qualifier:

U Analye was not detected, concentration given is the reporting limit.

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Figures

Note:
- Topographic map provided by ESRI, 2016.

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Figure 1
Vicinity Map

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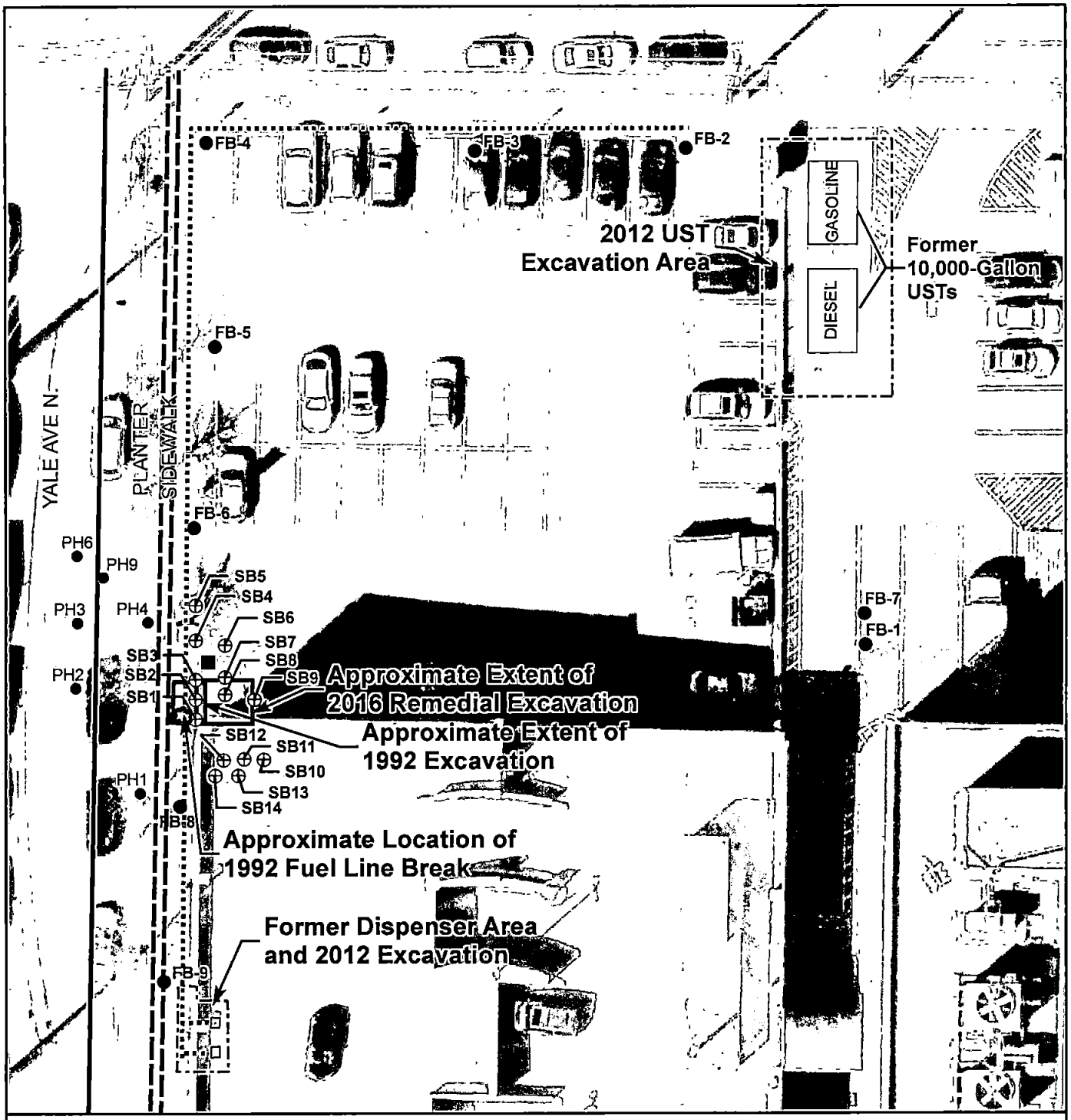
5/31/2016



Legend

- Soil Gas Probe (Newman 1993)
- New Boring (Floyd|Snider 2015)
- Storm Drain
- Existing Boring (Farallon 2015)
- Former Fuel Line
- Fiber Optics
- Electrical
- Approximate Extent of 2016 Remedial Excavation
- 1992 Excavation Extent
- Approximate Extent of Remedial Excavation

Note:
- Orthoimage provided by USGS, 2012.

Abbreviation:
UST = Underground storage tank

0 7.5 15 30
Scale in Feet

N

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Figure 2
Extended Site Map and
Soil Boring Locations

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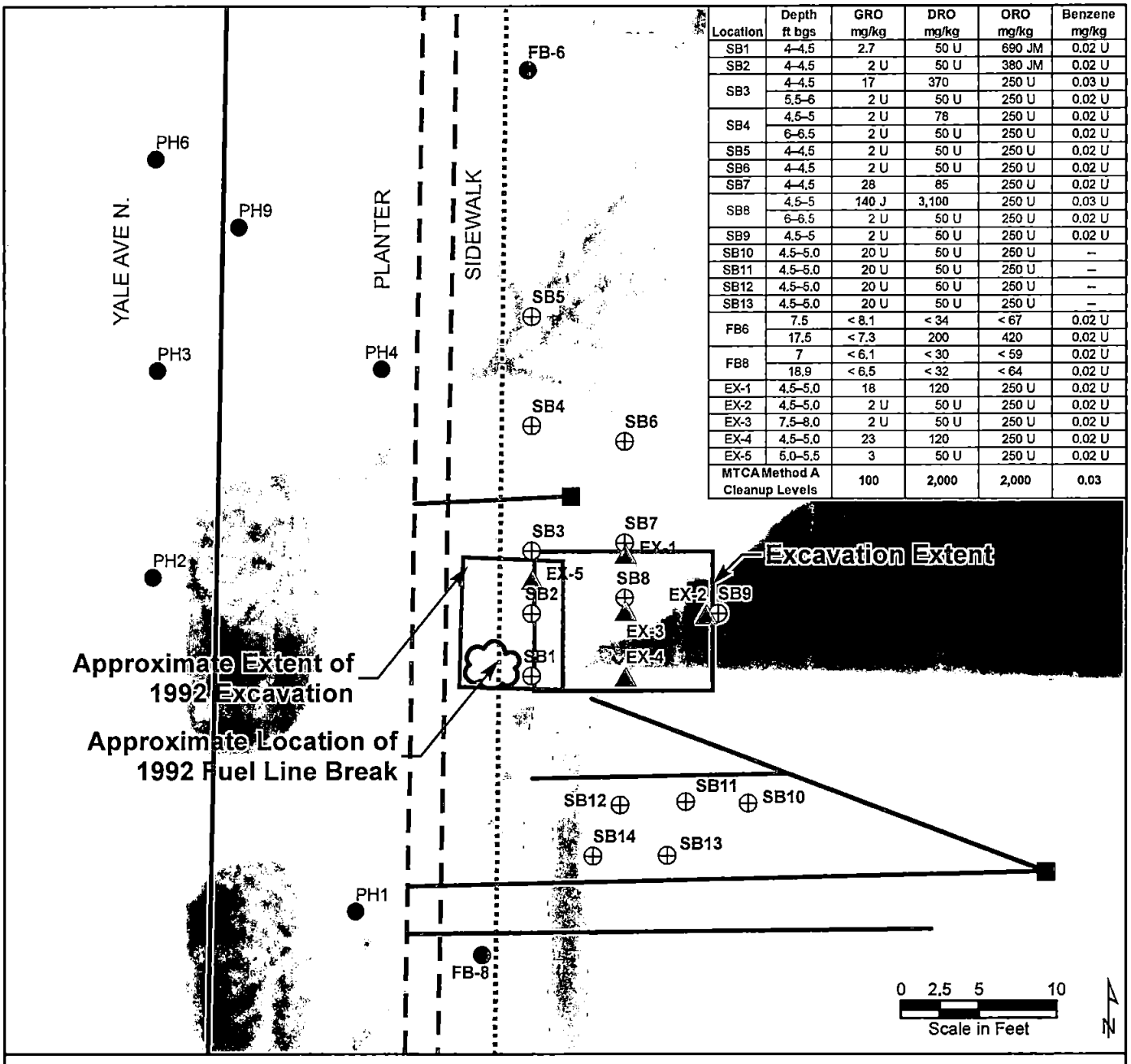
5/31/2016



Location	Depth ft bgs	GRO mg/kg	DRO mg/kg	ORO mg/kg	Benzene mg/kg
SB1	4–4.5	2.7	50 U	690 JM	0.02 U
SB2	4–4.5	2 U	50 U	380 JM	0.02 U
SB3	4–4.5	17	370	250 U	0.03 U
	5.5–6	2 U	50 U	250 U	0.02 U
SB4	4.5–5	2 U	78	250 U	0.02 U
	6–6.5	2 U	50 U	250 U	0.02 U
SB5	4–4.5	2 U	50 U	250 U	0.02 U
SB6	4–4.5	2 U	50 U	250 U	0.02 U
SB7	4–4.5	28	85	250 U	0.02 U
SB8	4.5–5	140 J	3,100	250 U	0.03 U
	6–6.5	2 U	50 U	250 U	0.02 U
SB9	4.5–5	2 U	50 U	250 U	0.02 U
SB10	4.5–5.0	20 U	50 U	250 U	--
SB11	4.5–5.0	20 U	50 U	250 U	--
SB12	4.5–5.0	20 U	50 U	250 U	--
SB13	4.5–5.0	20 U	50 U	250 U	--
FB6	7.5	< 8.1	< 34	< 67	0.02 U
	17.5	< 7.3	200	420	0.02 U
FB8	7	< 6.1	< 30	< 59	0.02 U
	18.9	< 6.5	< 32	< 64	0.02 U
EX-1	4.5–5.0	18	120	250 U	0.02 U
EX-2	4.5–5.0	2 U	50 U	250 U	0.02 U
EX-3	7.5–8.0	2 U	50 U	250 U	0.02 U
EX-4	4.5–5.0	23	120	250 U	0.02 U
EX-5	5.0–5.5	3	50 U	250 U	0.02 U
MTCA Method A Cleanup Levels		100	2,000	2,000	0.03

Legend

- Excavation Confirmation Sample (Floyd|Snider 2016)
- Soil Gas Probe (Newman 1993)
- New Boring (Floyd|Snider 2015)
- SB8: Soil Removed During 2016 Excavation
- Existing Boring (Farallon 2015)
- Storm Drain
- 2016 Excavation Extent
- 1992 Excavation Extent
- Former Fuel Line
- Fiber Optics
- Electrical
- Stormwater
- Sewer

Notes:
- Bold sample concentrations indicate a concentration greater than the MTCA Method A cleanup level for soil.
- Faded-gray font indicates that soil sample was removed during excavation activities.
- "--" indicates "not applicable"

Abbreviations:
bgs = Below ground surface
DRO = Diesel-range organics
ft = Feet
GRO = Gasoline-range organics
mg/kg = Milligrams per kilogram
MTCA = Model Toxics Control Act
ORO = Oil-range organics

Qualifiers:
J = Concentration is estimated but acceptable for most uses.
JM = Concentration is estimated due to poor match to standard, acceptable for use with qualification.
U = Analyte is not detected at the associated reporting limit.

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Figure 3
2016 Excavation Extent and Soil Analytical Data

I:\GIS\Projects\PEMCO\MXD\Cleanup Action Report\Figure 3 2016 Excavation Extent and Soil Analytical Data.mxd
5/31/2016

PEMCO Eastlake

Cleanup Action Report—
1992 Fuel Line Release

Appendix A
Submittal of Additional Soil Investigation Data, CSID 12086

Gabe Cisneros

From: Musa, Donna K. (ECY) <DMUS461@ECY.WA.GOV>
Sent: Friday, December 04, 2015 12:50 PM
To: Gabe Cisneros
Subject: Submittal of Additional Soil Investigation Data, CSID 12086

Hi Gabe,

Ecology has reviewed the October 30, 2015 Floyd Snider "Additional Soil Investigation Data for LUST CSID 12086" and it's supporting documentation. We agree that the cleanup site (CSID 12086) is still in compliance with cleanup standards and the current site status of NFA will remain in place. Ecology agrees that the statistical approach outlined on page 2 of your letter can be applied in this situation.

I will update our records to include receipt of the above report and this email, and upload them to our online document repository.

Please let me know if you have any questions.

Respectfully,

Donna Musa
Initial Investigation / Site Hazard Assessment Coordinator
Regional Facility Site / ISIS Database Coordinator
NWRO Toxics Cleanup Program, WA Dept of Ecology
3190 160th Ave SE, Bellevue WA 98008
Phone: 425-649-7136
Fax: 425-649-7098
donna.musa@ecy.wa.gov

FLOYD | SNIDER
strategy • science • engineering

Two Union Square
601 Union Street, Suite 600
Seattle, WA 98101
tel: 206.292.2078 fax: 206.682.7867

October 30, 2015

Ms. Donna Musa
Washington State Department of Ecology
Northwest Regional Office
3190 160th Ave Southeast
Bellevue, Washington 98008

SUBJECT: ADDITIONAL SOIL INVESTIGATION DATA FOR LUST CSID 12086
325 Eastlake Avenue East, Seattle, Washington (325 Eastlake Property)

Dear Donna:

Floyd|Snider has prepared this letter at the request of PEMCO Mutual Insurance Company (PEMCO) to inform the Washington State Department of Ecology (Ecology) of additional subsurface data collection conducted on the behalf of Unico Properties LLC (Unico) at 325 Eastlake Avenue East (325 Eastlake Property) formerly owned by PEMCO and now owned by Unico. The work was conducted on the 325 Eastlake Property, which is located on the southeast corner of the intersection of Yale Avenue North and Harrison Street. The 325 Eastlake Property is listed by Ecology as one facility, Facility Site ID 92673819, but was given three separate Cleanup Site IDs (CSIDs) due to the presence of three separate source areas:

- CSID 10168, which is associated with an ethylene glycol spill and has a cleanup unit name of "PEMCO Financial Center – Ethylene Glycol Spill"
- CSID 12086, which is associated with an underground storage tank (UST) removal in 2012 and has a cleanup unit name of "PEMCO Insurance"
- CSID 11077, which is associated with the 1992 cutting of the UST fuel lines and has a cleanup unit name of "Yale Ave N Parking Garage – Concrete Cutter"

The PEMCO Financial Center – Ethylene Glycol Spill site (CSID 10168) was given a "No Further Action" (NFA) determination on January 11, 2012. The remediation activities for the PEMCO Insurance site (CSID 12086) resulted in a NFA determination on March 20, 2013. The cleanup of the Yale Ave N Parking Garage – Concrete Cutter site is underway by PEMCO. The remainder of this letter concerns additional data collected at CSID 12086, the 2012 UST removal site.

In April 2015, Farallon Consulting (Farallon) conducted a subsurface investigation as part of a property due diligence related to the sale of the 325 Eastlake Property to Unico. A copy of the Farallon investigation is provided as Attachment 1. A primary purpose of that investigation was to determine if petroleum hydrocarbons are present in soil and groundwater beneath the fuel lines that ran between the former USTs and dispensers. Seven soil borings (FB-2 through FB-6, FB-8, and FB-9) were advanced adjacent to the former USTs and along the fuel lines, and two locations (FB-1 and FB-7) were advanced between the former UST locations and the current

building (refer to Figure 3 of the Farallon report [Attachment 1]). Sixteen soil samples and one groundwater sample were submitted for analysis. Results for the groundwater sample and all soil samples, except one, show concentrations of gasoline-, diesel-, and oil-range organics, and benzene, toluene, ethylbenzene, and xylenes (BTEX) compounds less than their Model Toxics Control Act (MTCA) Method A cleanup levels or laboratory detection limits. The one exception was in soil sample FB3-7.5, in which benzene was detected at a concentration of 0.032 milligrams per kilograms (mg/kg), which slightly exceeds the cleanup level of 0.030 mg/kg. This sample was collected at a depth of 7.5 feet below ground surface. A second sample collected at 16 feet below ground surface from this boring was analyzed and results were either non-detect or less than MTCA Method A cleanup levels for all constituents.

It is our opinion that because this single detection of benzene is, for all practical purposes, essentially at the cleanup level, the PEMCO Insurance site (CSID 12086) is still in compliance with cleanup standards and the current site status should not be changed. Even if this concentration were considered by Ecology to exceed the cleanup level, the MTCA statistical approach (Washington Administrative Code [WAC] 173-340-740(7)(e)(i-ii)) allows for no single concentration to be greater than two times the cleanup level (i.e., 0.060 mg/kg for benzene, twice the MTCA Method A cleanup level of 0.030 mg/kg for benzene) and less than 10 percent of sample concentrations can exceed the soil cleanup level. From this perspective, the single isolated benzene detection of only 0.002 mg/kg greater than the MTCA Method A cleanup level is not significant. Therefore, it is our opinion that CSID 12086 remains in compliance. To confirm that Ecology agrees that the 2013 NFA determination is not affected by this additional information, could you kindly provide written confirmation that the 2013 NFA for CSID 12086 remains valid?

Please feel free to call with any questions you may have.

Sincerely yours,
FLOYD | SNIDER

Thomas H. Colligan, LHG
Associate Principal

Encl: Attachment 1 Summary of Subsurface Investigation, PEMCO Property, Farallon Consulting, June 25, 2015

Cc: Gayle Garbush, Ecology
Sonía Fernández, Ecology
Mike Mitchell, PEMCO
Camille Ralston, Montgomery Purdue Blankinship & Austin PLLC
Riley Conkin, Farallon Consulting
Andrew Smith, UNICO Properties
Matthew Wells, Tupper Mack Wells PLLC

Attachment 1
Summary of Subsurface Investigation, PEMCO Property,
Farallon Consulting, June 25, 2015

FARALLON CONSULTING

Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Bend

California
Oakland | Sacramento | Irvine

June 25, 2015

Mr. Andrew Smith
Unico Properties LLC
1215 4th Avenue, Suite 600
Seattle, Washington 98161

BY E-MAIL ONLY

RE: SUMMARY OF SUBSURFACE INVESTIGATION
PEMCO PROPERTY
325 EASTLAKE AVENUE EAST
SEATTLE, WASHINGTON
FARALLON PN: 463-012

Dear Mr. Smith:

Farallon Consulting, L.L.C. (Farallon) has prepared this letter to provide a summary of the subsurface investigation conducted between April 13 and June 1, 2015 on behalf of Unico Properties LLC (Unico) at 325 Eastlake Avenue East in Seattle, Washington (herein referred to as the Site) (Figure 1). The scope of work for the subsurface investigation was described in our proposal to you dated April 7, 2015. It was based on the results of the *Phase I Environmental Site Assessment Report, 301, 325, and 327 Eastlake Avenue East and 300-330 Yale Avenue North, Seattle, Washington* dated January 16, 2015, prepared by Farallon (Phase I ESA); local knowledge of the Site vicinity; review of previous investigations; review of City permits; a Site visit; and discussions with Unico and PEMCO representatives.

The purpose of the subsurface investigation was to assess whether certain historical conditions have resulted in the release of hazardous substances at concentrations exceeding the Washington State Department of Ecology (Ecology) Model Toxics Control Act Cleanup Regulation (MTCA) cleanup levels for sites with unrestricted future land uses. The historical conditions of interest are: 1) gas and diesel product lines between underground storage tanks (USTs) formerly located on the northern end of the Site and fuel dispensers in the garage; 2) former print shops in the basement of the Site office building; and 3) an ethylene glycol spill into the sanitary sewer in 1993.

This letter includes a summary of the relevant Site background, the geology and hydrogeology of the Site vicinity, a summary of the results of the subsurface investigation conducted by Farallon, and Farallon's conclusions and recommendations.

BACKGROUND

The Site includes King County Tax Parcel Nos. 684770-0065, 684770-0091, 684770-0095, 684770-0105, and 684770-0115, and includes 2.08 acres of land developed with three

commercial buildings on the eastern portion of the Site, a parking garage on the southwestern portion of the Site, and a commercial surface parking lot on the northwestern portion of the Site (Figure 2).

- The Site building at 301 Eastlake Avenue East is 80,411 square feet in area and was built in 1973 (Building 1). Building 1 is occupied by Pemco Insurance Company.
- The Site building at 325 Eastlake Avenue East is 103,167 square feet in area and was built in 1981 (Building 2). Building 2 is occupied by Pemco Insurance Company and School Employees Credit Union.
- The Site building at 327 Eastlake Avenue East is 1,232 square feet in area and was built in 1949 (Building 3). Historical documents reviewed as a part of the Phase I ESA indicate that Building 3 was built between 1956 and 1965. Building 3 is primarily vacant, with limited storage use by Pemco Insurance Company information technologies department.
- The parking garage is 116,178 square feet in area and was constructed in 1981. The parking garage provides parking for employees and customers, and chemical storage for Pemco Insurance Company maintenance and janitorial staff.

Access to the Site is gained from Harrison Street to the north, Eastlake Avenue East to the east, Thomas Street to the south, and Yale Avenue North to the west.

Historically, the Site was developed with residences. A small auto repair shop appeared for a brief but poorly documented period of time around 1950 in the approximate location of the northeastern corner of the parking garage. The residences were demolished over time as the Site was redeveloped with commercial structures. The current commercial structures, including Buildings 1 through 3, the parking garage, and the commercial parking lot, were in place by 1985.

At the time of the site reconnaissance, adjacent properties consisted of a church, an auto repair facility, and a commercial parking lot to the north across Harrison Street; Interstate 5 and residences to the east across Eastlake Avenue East; Recreational Equipment, Incorporated (REI) to the south across Thomas Street; and a series of storage buildings for Seattle Public Schools to the west across Yale Avenue North. Historically, the north-adjacent properties were developed with residences. A church and an auto repair shop were built on the north-adjacent property prior to 1950 and currently remain in operation.

SUBSURFACE INVESTIGATION

Farallon conducted a subsurface investigation at the Site between April 13 and June 1, 2015. The subsurface investigation included soil gas sampling, soil and groundwater sampling, and a sewer line inspection. The constituents of potential concern (COPCs) identified for the subsurface investigation included:

- Volatile organic compounds (VOCs) and halogenated volatile organic compounds (HVOCs);
- Total petroleum hydrocarbons as diesel-range organics (DRO), as oil-range organics (ORO), and as gasoline-range organics (GRO);
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX); and
- Total lead.

A summary of the subsurface investigation field program is provided below.

RECONNAISSANCE SAMPLING

Borings FB-1 through FB-9 were advanced to depths ranging from 20 to 45 feet below ground surface (bgs) on the northwestern portion of the Site (Figures 2 and 3). A summary of the rationale for each boring is provided below.

- Borings FB-1 and FB-7 were advanced proximate to the northwestern corner of Building 2 to assess soil and groundwater quality, if encountered, in the inferred down-gradient area of the former print shops in Buildings 1 and 2; and
- Borings FB-2 through FB-6, FB-8, and FB-9 were advanced along the western and northern portions of the Site to assess potential releases proximate to the former gasoline and diesel product lines.

Soil samples were collected continuously during the advancement of borings FB-1 through FB-6, FB-8, and FB-9 using a direct-push drill rig. Soil samples were collected every 5 feet during the advancement of boring FB-7 using a hollow-stem auger drill rig. A Farallon Geologist observed subsurface conditions and retained soil samples from selected intervals for laboratory analysis based on field indications of potential contamination. Soil samples collected from borings FB-1 through FB-9 were collected and preserved in accordance with U.S. Environmental Protection Agency (EPA) Method 5035A. The soil samples were transferred directly into laboratory-prepared glass sample containers, placed on ice in a cooler, and delivered under standard chain-of-custody protocols to OnSite Environmental Inc. of Redmond, Washington (OnSite). The information recorded on the boring logs included soil types encountered, visual and olfactory evidence of potential contamination, and volatile organic vapor concentrations as measured using a photoionization detector. The completed boring logs are provided in Attachment A.

A reconnaissance groundwater sample was collected from boring FB-4 using a temporary 5-foot polyvinyl chloride screen interval. The reconnaissance groundwater sample was transferred directly into laboratory-prepared sample containers, placed on ice in a cooler, and delivered under standard chain-of-custody protocols to OnSite.

Laboratory Analysis

Select soil and reconnaissance groundwater samples collected from borings FB-1 through FB-6, FB-8, and FB-9 were analyzed for VOCs and HVOCs by EPA Method 8260C; DRO and ORO by Northwest Method NWTPH-Dx; GRO by Northwest Method NWTPH-Gx; BTEX by EPA Method 8021B or EPA Method 8260C; and/or total lead by EPA Method 6010C.

SOIL GAS SAMPLING

Five discrete soil gas samples were collected on April 16, 2015 proximate to the former print shop area in Building 1 identified during Phase I ESA to quantify the soil gas concentrations, and to evaluate the soil gas concentrations relative to the Draft *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action* dated 2009, prepared by Ecology (Ecology Guidance), for evaluating potential soil vapor intrusion to indoor air.

The discrete soil gas samples were collected in 1-liter Summa canisters from within a temporary helium-filled shroud to prevent sample contamination from ambient conditions. The Summa canisters were submitted to Eurofins Air Toxics, Inc. in Folsom, California for laboratory analysis by Modified EPA Method TO-15.

INVESTIGATION-DERIVED WASTE

Soil cuttings, decontamination water, purge water, and other wastewater generated during the subsurface investigation were temporarily stored on the Site in labeled drums. The analytical results for the soil and groundwater samples are being used to develop a waste profile for disposal of the waste off the Site to an Ecology-approved disposal facility.

RESULTS

A summary of laboratory analytical results for soil samples collected from the Site is provided in Tables 1 and 2. A summary of the laboratory analytical results for the reconnaissance groundwater sample collected from boring FB-4 is provided in Tables 3 and 4. A summary of the analytical results for the discrete soil gas samples collected from the Site is provided in Table 5. The laboratory analytical reports for the soil, groundwater, and soil gas samples collected during the subsurface investigation are provided in Attachment B.

GEOLOGY/HYDROGEOLOGY

The general Site stratigraphy encountered in the borings advanced by Farallon predominantly comprises silt with minor interbeds of silty sand and poorly graded sand to approximately 35 feet bgs underlain by interbedded silt and silty sand to the total depth explored of 45 feet bgs in boring FB-7. The boring logs for FB-1 through FB-9 are included in Attachment A.

Shallow discontinuous wet intervals were observed at depths ranging from 5 to 16 feet bgs in the majority of the borings. A wet interval also was encountered in boring FB-7 in a silty sand interbed at approximately 39.5 feet bgs. However, only boring FB-4 had sufficient yield to collect a reconnaissance groundwater sample from a poorly graded sand interval encountered from 15 to 16 feet bgs.

SOIL

Benzene, DRO, and/or ORO were the only COPCs detected in soil samples collected from borings FB-1 through FB-6 at the Site (Figure 3). Benzene was detected at a concentration of 0.032 milligrams per kilogram (mg/kg) in one soil sample collected from boring FB-3 at 7.5 feet bgs, which exceeds the MTCA Method A cleanup level of 0.03 mg/kg (Table 1). Boring FB-3 was advanced on the northern side of the Site west of the former UST area along the alignment of the abandoned gasoline and diesel product lines extending from the former USTs (Figure 3). DRO and ORO were also detected in the deeper sample collected from 16 feet bgs in FB-3 at concentrations of 32 mg/kg and 76 mg/kg, respectively, which are less than the MTCA Method A cleanup level of 2,000 mg/kg. Other results for soil samples collected from boring FB-3 were reported non-detect at the laboratory practical quantitation limit (PQL) (Table 1). GRO and BTEX were also reported non-detect at the laboratory PQL in the remaining soil samples collected from borings FB-1 through FB-6, FB-8, and FB-9 (Figure 3; Table 1).

DRO and/or ORO were also detected at concentrations ranging from 32 to 530 mg/kg in select soil samples collected from borings FB-1, FB-2, and FB-4 through FB-6 advanced on the northwestern portion of the Site along the alignment of the abandoned gasoline and diesel product lines extending from the former USTs (Figure 3; Table 1). Specifically, DRO was detected in the deep soil samples collected from approximately 16 to 17.5 feet bgs in borings FB-4, FB-5, and FB-6; ORO was detected in the shallow soil samples collected from approximately 2.5 to 4.5 feet bgs in borings FB-1, FB-2, and FB-5; and ORO was detected in the deep soil samples collected from approximately 16 to 17.5 feet bgs in borings FB-4 and FB-5. All detections were at concentrations less than the MTCA Method A cleanup level of 2,000 mg/kg for DRO and ORO. DRO and ORO were reported non-detect at the laboratory PQL in soil samples collected from borings FB-8 and FB-9 advanced on the western side of the parking garage (Figure 3; Table 1).

Total lead concentrations ranging from 6.6 to 21 mg/kg were detected in soil samples collected from borings FB-1, FB-2, FB-5, FB-6, FB-8, and FB-9, which are less than the MTCA Method A cleanup level of 250 mg/kg for total lead in soil (Table 1). Total lead was reported non-detect at the laboratory PQL in soil samples collected from borings FB-3 and FB-4.

HVOCs were reported non-detect at the laboratory PQL in the soil samples collected from boring FB-1 advanced in the parking area northwest of Building 2 (Figure 3; Table 2).

GROUNDWATER

Only ethylbenzene and xylenes were detected in the reconnaissance groundwater sample collected from boring FB-4. Reported concentrations were less than the MTCA Method A cleanup level. DRO, ORO, GRO, benzene, toluene, and HVOCs were reported non-detect at the laboratory PQL in the reconnaissance groundwater sample collected from boring FB-4 (Figure 4; Tables 3 and 4).

SOIL GAS SAMPLING

Five discrete soil gas samples were collected proximate to the former print shop area in Building 1 to evaluate the potential release of HVOCs and/or petroleum hydrocarbon-range VOCs in the shallow subsurface, and to assess the potential for vapor intrusion into indoor air at the Site in accordance with Ecology Guidance.

Soil gas samples SS-1 through SS-5 were collected proximate to the former print shop area in Building 1 directly beneath the floor slab (Figure 5). Petroleum hydrocarbon-range VOCs, including BTEX and several HVOCs including tetrachloroethene (PCE), were detected at low concentrations ranging from 0.92 to 71 micrograms per cubic meter ($\mu g/m^3$) in soil gas samples SS-1 through SS-5 (Figure 5; Table 5). PCE degradation compounds, including trichloroethene, cis 1-2 and trans 1,2 dichloroethene isomers, and vinyl chloride, were reported non-detect at the laboratory PQL (Table 5; Appendix B).

The soil gas sampling results for the analytes detected in SS-1 through SS-5 were compared to the screening levels for a residential setting and a commercial setting based on the most current published non-carcinogenic and carcinogenic exposure parameters presented in Tables 6 and 7. Because no MTCA Method A cleanup levels are available for soil gas, the results were compared to MTCA Method B screening levels for soil gas for the default residential setting and the Modified MTCA Method B screening levels for soil gas calculated for a commercial setting at the Site. The detected analytes were reported at concentrations less than the residential and commercial screening levels, and are not considered indicative of a release or source of HVOCs and/or petroleum hydrocarbon-range VOCs in the shallow subsurface beneath the former print shop area in Building 1 (Table 5).

SEWER LINE INSPECTION

Approximately 80 gallons of ethylene glycol was reportedly spilled in the large mechanical room in the basement of Building 2 in 1993. An unknown volume of the spilled material entered a floor drain and the sanitary sewer. Farallon contracted Applied Professional Services of North Bend, Washington to conduct a video camera inspection of the sewer drain line in the mechanical room of the basement of Building 2 near the backup generator on April 13, 2015. During the video inspection, no obvious cracks or breaks were observed in the section of the drain line inspected, from a clean-out approximately 6 feet upstream of the floor drain to the downstream connection of the drain line to the sanitary sewer main line.

CONCLUSIONS AND RECOMMENDATIONS

Benzene in soil was the only COPC detected at a concentration exceeding the MTCA cleanup levels at the Site. Benzene was detected at a concentration of 0.032 mg/kg in a soil sample collected from 7.5 feet bgs in boring FB-3 advanced on the northern side of the Site west of the former UST excavation area and along the alignment of the abandoned gasoline and diesel product lines extending from the former USTs (Figure 3; Table 1). DRO and ORO were also detected in a deeper soil sample collected from boring FB-3 at 16 feet bgs, but at concentrations less than the MTCA Method A cleanup level (Figure 3; Table 1). These data indicate a localized area of shallow soil contamination exceeding the MTCA Method A cleanup level proximate to boring FB-3 that is likely associated with the historical operation of the gas and diesel product lines between former USTs and the parking garage.

The low concentrations of DRO and/or ORO detected in soil samples collected from borings FB-1 through FB-6 indicate a localized area of petroleum-contaminated soil in the northwestern portion of the Site along the alignment of and likely associated with the historical operation of the former product lines. Although the DRO and ORO concentrations detected in soil do not exceed the MTCA Method A cleanup level of 2,000 mg/kg, soil with visual, olfactory, and/or detectable concentrations of petroleum hydrocarbons may require special handling and disposal in accordance with Ecology *Guidance for Remediation of Petroleum Contaminated Soils* dated 2011, if excavated during future construction and/or redevelopment of the Site. However, the low concentrations of DRO and ORO detected in soil at concentrations less than the MTCA Method A cleanup level do not present a threat to human health or the environment.

The low concentrations of several HVOCs, including PCE and petroleum hydrocarbon-range VOCs, detected in the soil gas samples collected from the former print shop area in Building 1 are well below the MTCA Method B Screening Levels for soil gas for the default residential setting (Figure 5; Table 5). These quantitative soil gas sampling results confirm that there is no potential vapor intrusion exposure pathway to indoor air in the occupied commercial space of Building 1 at the Site requiring mitigation and/or cleanup in accordance with Ecology Guidance. In addition, the low concentrations of several HVOCs and petroleum hydrocarbon-range VOCs detected in the soil gas samples collected from SS-1 through SS-5 are not considered indicative of a release or source of HVOCs and/or petroleum hydrocarbon-range VOCs in the shallow subsurface beneath the former print shop area in Building 1.

Based on the results of the subsurface investigation, Farallon recommends additional characterization to sufficiently bound and confirm the nature and extent of benzene contamination exceeding the MTCA Method A cleanup level in shallow soil proximate to boring FB-3, and evaluation of remedial alternatives for cleanup in accordance with MTCA. In addition, Farallon recommends assessing whether or not there is a release reporting requirement in accordance with the requirements of Section 300 of Chapter 173-340 of the Washington Administrative Code (WAC 173-340-300) pending completion of the additional characterization.

CLOSING

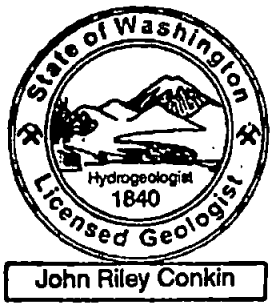
Farallon appreciates the opportunity to provide Unico with environmental consulting services. Please contact either of the undersigned at (425) 295-0800 if you have questions or comments regarding this letter.

Sincerely,

Farallon Consulting, L.L.C.

Joe Rounds
Senior Project Manager

J. Riley Conkin, L.G., L.H.G.
Principal Geologist



Attachments: Figure 1, *Site Vicinity Map*
Figure 2, *Site Plan*
Figure 3, *Soil Analytical Results*
Figure 4, *Groundwater Analytical Results*
Figure 5, *Site Plan Showing Soil Gas Sampling Locations*

Table 1, *Soil Analytical Data for Petroleum Hydrocarbons and Lead*
Table 2, *Soil Analytical Data for HVOCs*
Table 3, *Groundwater Analytical Data for TPH and BTEX*
Table 4, *Groundwater Analytical Data for HVOCs*
Table 5, *Soil Gas Analytical Results*
Table 6, *MTCA Standard Method B and Modified Method B Air Cleanup Level and Soil Gas Screening Level Calculations PCE, TCE, and Vinyl Chloride*
Table 7, *MTCA Standard Method B and Modified Method B Air Cleanup Level and Soil Gas Screening Level Calculations Benzene, Toluene, Ethylbenzene, and Xylenes*

Attachment A, Boring Logs
Attachment B, Laboratory Analytical Reports

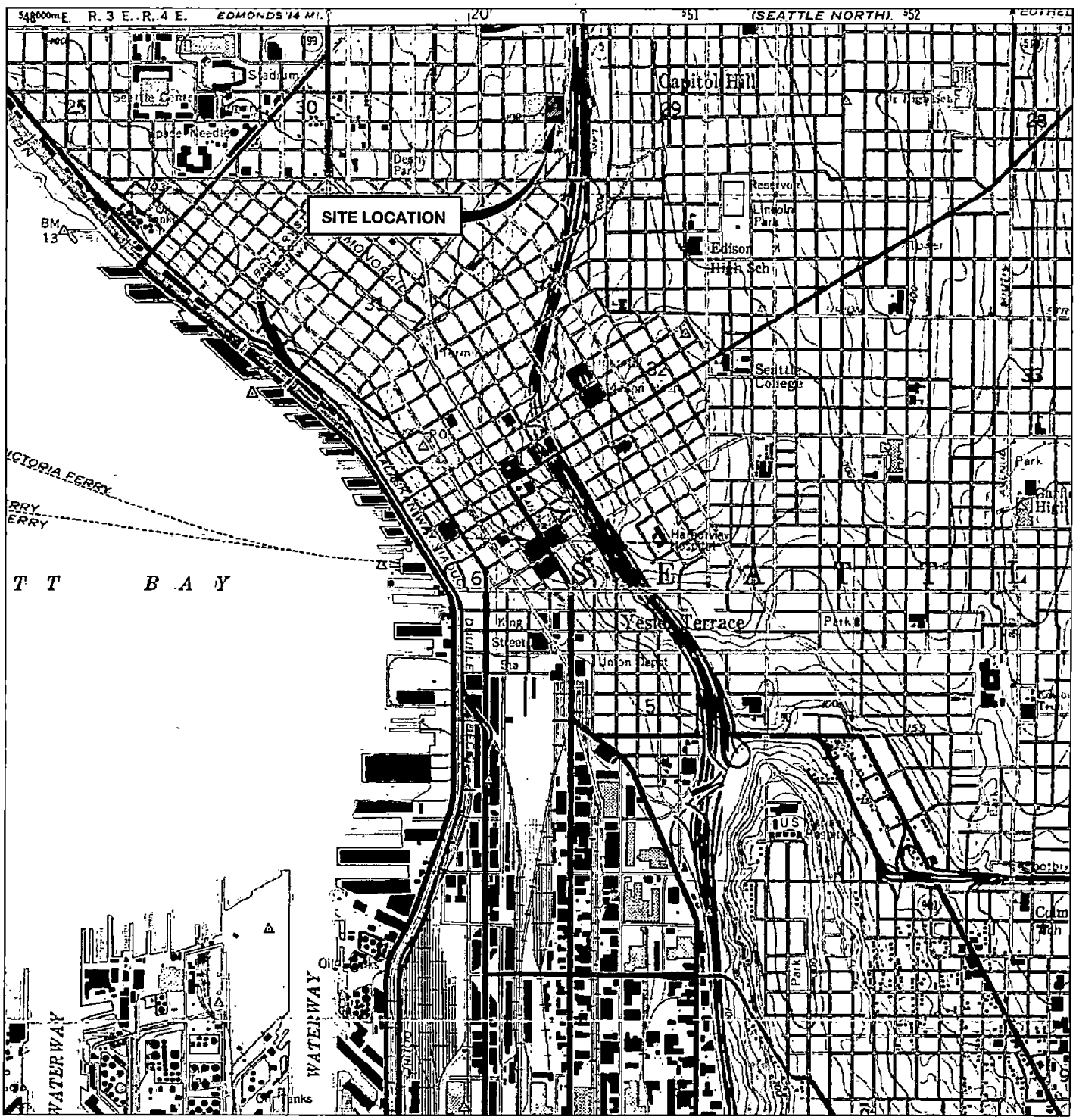
cc: Matthew Wells, Tupper Mack Wells PLLC

JR/JRC:bw

FIGURES

SUMMARY OF SUBSURFACE INVESTIGATION
Pemco Property
325 Eastlake Avenue East
Seattle, Washington

Farallon PN: 463-012



REFERENCE: 7.5 MINUTE USGS QUADRANGLE SEATTLE SOUTH, WASHINGTON. DATED 1949 AND PHOTOREVISED 1973.

FARALLON CONSULTING
Quality Service for Environmental Solutions | farallonconsulting.com

Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Bend

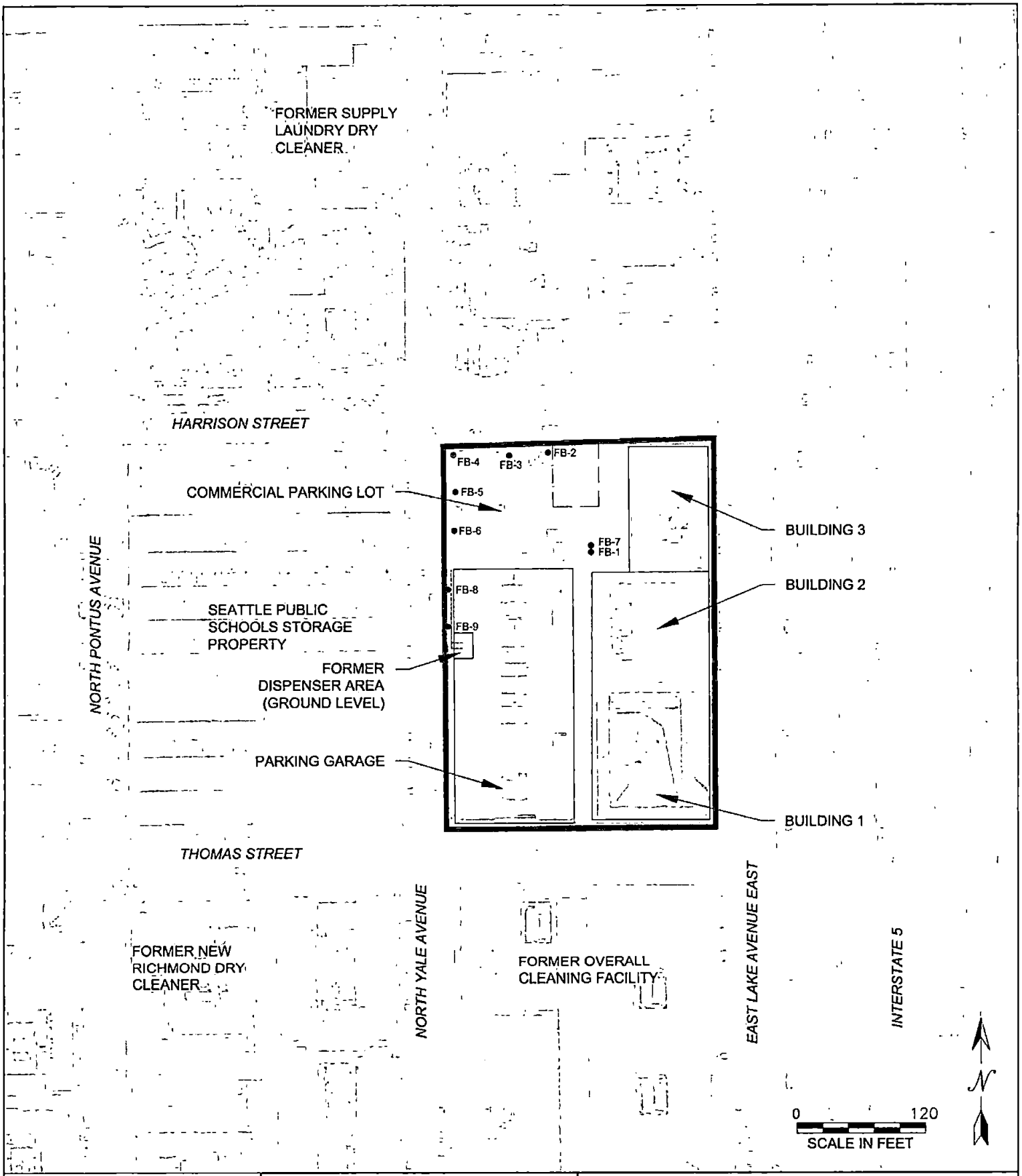
California
Oakland | Sacramento | Irvine

FIGURE 1

SITE VICINITY MAP
301, 325, AND 327 EASTLAKE AND
300-330 YALE AVENUE NORTH
SEATTLE, WASHINGTON

FARALLON PN: 463-012

Drawn By: DJR | Checked By: DW | Date: 5/11/2015 | Disk Reference: 463-012_00



LEGEND

SITE BOUNDARY

FB-1 ● BORING LOCATION (FARALLON, 2015)

PARCEL BOUNDARY

ALL LOCATIONS APPROXIMATE

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Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Bend

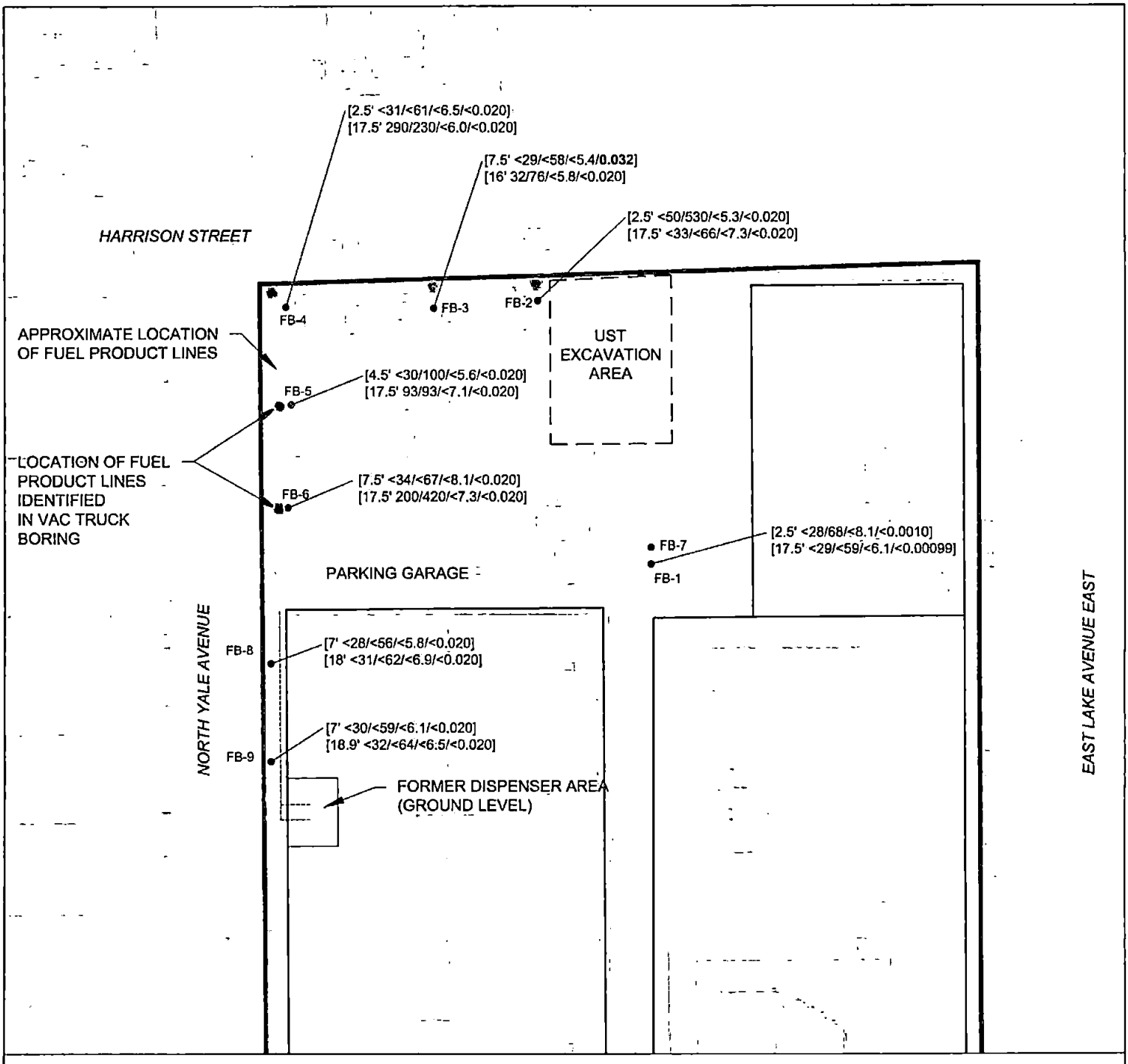
California
Oakland | Sacramento | Irvine

FIGURE 2

SITE PLAN
301, 325, AND 327 EASTLAKE AND
300-330 YALE AVENUE NORTH
SEATTLE, WASHINGTON

FARALLON PN: 463-012

Drawn By: DJR | Checked By: DW | Date: 5/11/2015 | Disk Reference: 463-012_00



LEGEND

- PARCEL BOUNDARY
- SITE BOUNDARY
- FB-1 ● BORING LOCATION (FARALLON, 2015)
- CONFIRMED LOCATION OF FUEL PRODUCT LINES IN VAC TRUCK BORING
- BORING LOCATION BY VAC TRUCK - NO PRODUCT LINES ENCOUNTERED

SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM

[7' <30/<59/<6.1/<0.020] = SOIL SAMPLE SAMPLE FEET BELOW GROUND SURFACE DRO/ORO/GRO/B

< = INDICATES CONCENTRATIONS NOT DETECTED ABOVE THE STATED LABORATORY PRACTICAL QUANTITATION LIMIT

DRO = TPH AS DIESEL-RANGE ORGANICS

ORO = TPH AS OIL-RANGE ORGANICS

GRO = TPH AS GASOLINE-RANGE ORGANICS

B = BENZENE

N

0 50

SCALE IN FEET

ALL LOCATIONS APPROXIMATE

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Washington
Issaquah | Bellingham | Seattle

Oregon
Portland | Bend

California
Oakland | Sacramento | Irvine

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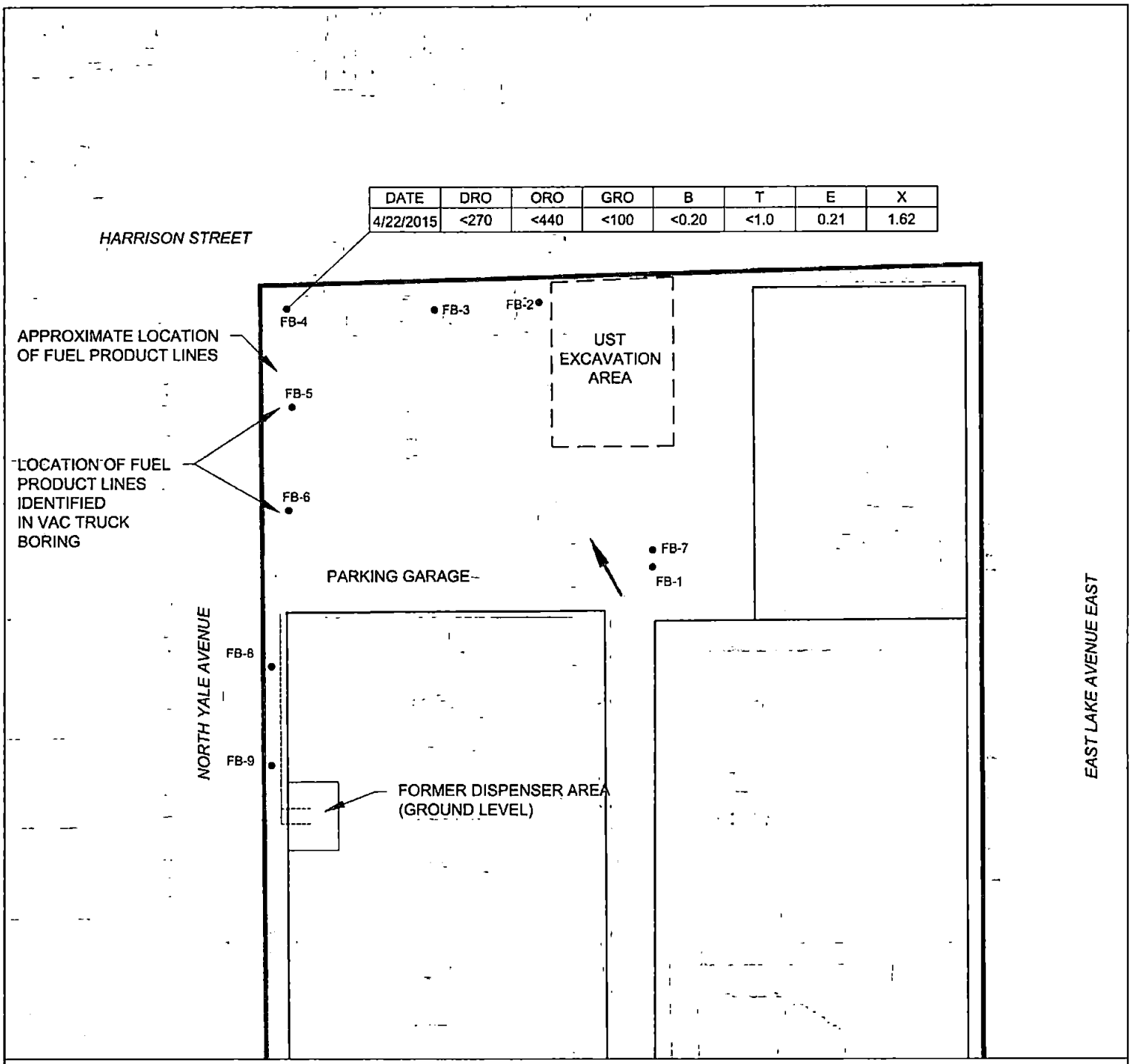
FIGURE 3

SOIL ANALYTICAL RESULTS
301, 325, AND 327 EASTLAKE AND
300-330 YALE AVENUE NORTH
SEATTLE, WASHINGTON

FARALLON PN: 463-012

Drawn By: DJR Checked By: DEW Date: 5/11/2015 Disk Reference: 463-012_00



LEGEND

- PARCEL BOUNDARY
- SITE BOUNDARY
- FB-1 ● BORING LOCATION (FARALLON, 2015)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW

GROUNDWATER RESULTS IN MICROGRAMS PER LITER

DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS

ORO = TPH AS OIL-RANGE ORGANICS

GRO = TPH AS GASOLINE-RANGE ORGANICS

< = INDICATES CONCENTRATIONS NOT DETECTED ABOVE THE STATED LABORATORY PRACTICAL QUANTITATION LIMIT

B = BENZENE
T = TOLUENE
E = ETHYLBENZENE
X = TOTAL XYLENES

N

0 50

SCALE IN FEET
ALL LOCATIONS APPROXIMATE

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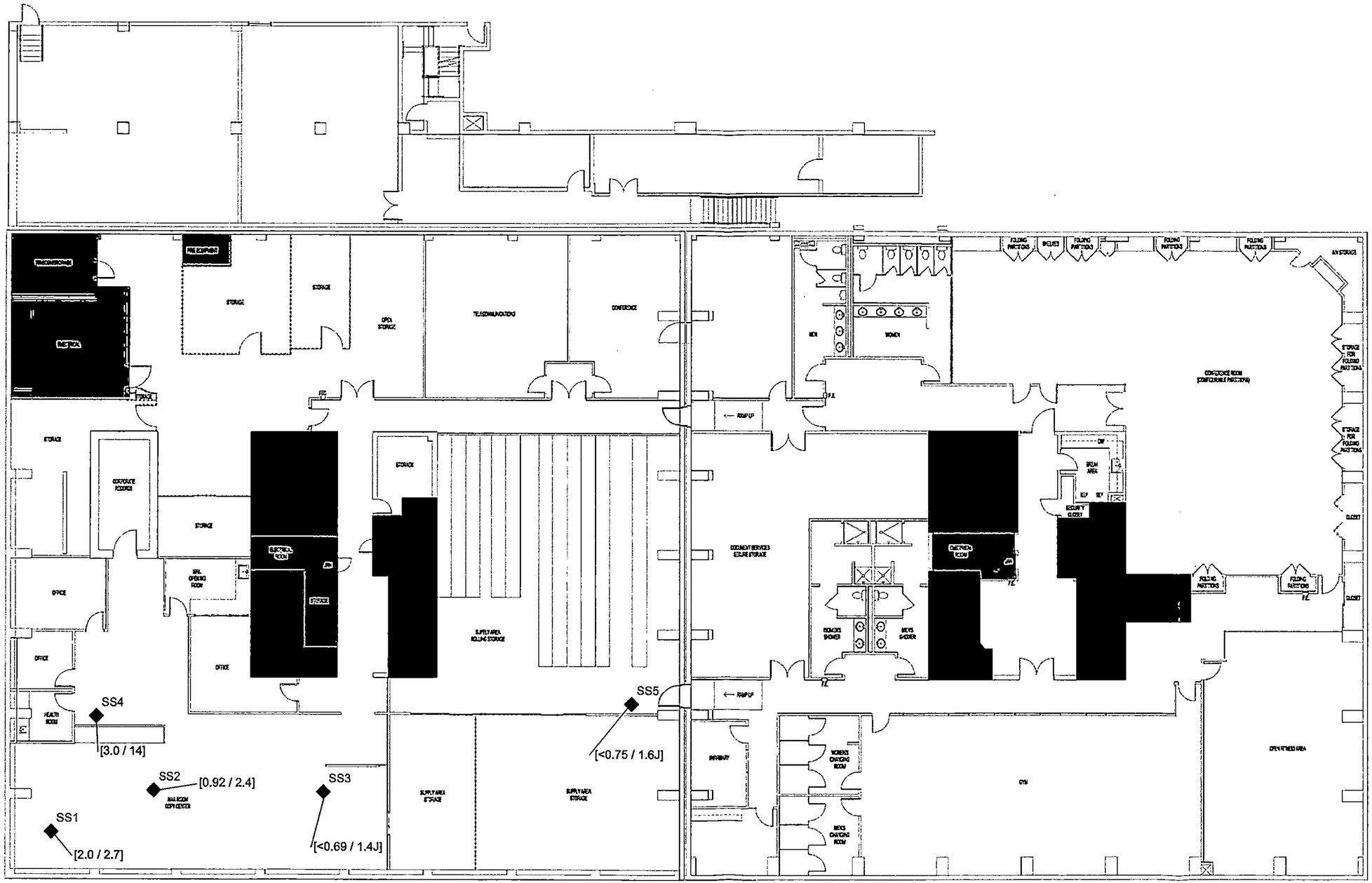
Washington: Issaquah | Bellingham | Seattle
Oregon: Portland | Bend
California: Oakland | Sacramento | Irvine

FIGURE 4

GROUNDWATER ANALYTICAL RESULTS
301, 325, AND 327 EASTLAKE AND
300-330 YALE AVENUE NORTH
SEATTLE, WASHINGTON

FARALLON PN: 463-012

Drawn By: DJR | Checked By: DEW | Date: 5/11/2015 | Disk Reference: 463-012_00



LEGEND

◆ SOIL GAS SAMPLE LOCATIONS

NOT TO SCALE

SOIL GAS ANALYTICAL RESULTS IN MICROGRAMS PER CUBIC METER
[2.0 / 2.7] = SOIL GAS SAMPLE CONCENTRATIONS
[BENZENE / TETRACHLOROETHENE (PCE)]

< = NON-DETECT AT THE LABORATORY PRACTICAL QUANTITATION LIMIT

RESULTS FOR TOLUENE, ETHYLBENZENE, XYLENES, TRICHLOROETHENE (TCE), AND VINYL CHLORIDE ARE ON TABLE 5

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Oregon
Portland | Bend

California
Oakland | Sacramento | Irvine

FIGURE 5

SITE PLAN SHOWING SOIL GAS SAMPLE LOCATIONS

PEMCO BUILDING 1 AND BUILDING 2 COMBINED LEVEL 2
325 EASTLAKE AVENUE EAST
SEATTLE, WASHINGTON

FARALLON PN: 463-012

Drawn By: DEW Checked By: JR Date: 6/18/2015 Disk Reference: 463012

TABLES

SUMMARY OF SUBSURFACE INVESTIGATION
Pemco Property
325 Eastlake Avenue East
Seattle, Washington

Farallon PN: 463-012

Table 1
Soil Analytical Data for Petroleum Hydrocarbons and Lead
Pemco Property
Seattle, Washington
Farallon PN: 463-012

Sample Location	Sample Identification	Sample Depth (feet)[1]	Sample Date	Analytical Results (milligrams per kilogram)							
				DRO[2]	ORO[2]	GRO[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Total Xylenes[4]	Total Lead[5]
FB1	FB1-2.5	2.5	04/22/2015	< 28	68	< 8.1	< 0.0010	< 0.0052	< 0.0010	< 0.0021	21
	FB1-17.5	17.5	04/22/2015	< 29	< 59	< 6.1	< 0.00099	< 0.0050	< 0.00099	< 0.0020	--
FB2	FB2-2.5	2.5	04/22/2015	< 50	530	< 5.3	< 0.020	< 0.053	< 0.053	< 0.053	15
	FB2-17.5	17.5	04/22/2015	< 33	< 66	< 7.3	< 0.020	< 0.073	< 0.073	< 0.073	--
FB3	FB3-7.5	7.5	04/22/2015	< 29	< 58	< 5.4	**0.032**	< 0.054	< 0.054	< 0.054	<5.8
	FB3-16.0	16	04/22/2015	32	76	< 5.8	< 0.020	< 0.058	< 0.058	< 0.058	--
FB4	FB4-2.5	2.5	04/22/2015	< 31	< 61	< 6.5	< 0.020	< 0.065	< 0.065	< 0.065	<6.1
	FB4-16.0	16	04/22/2015	290	230	< 6.0	< 0.020	< 0.060	< 0.060	< 0.060	--
FB5	FB5-4.5	4.5	04/22/2015	< 30	100	< 5.6	< 0.020	< 0.056	< 0.056	< 0.056	11
	FB5-17.5	17.5	04/22/2015	93	93	< 7.1	< 0.020	< 0.071	< 0.071	< 0.071	--
FB6	FB6-7.5	7.5	04/22/2015	< 34	< 67	< 8.1	< 0.020	< 0.081	< 0.081	< 0.081	8.2
	FB6-17.5	17.5	04/22/2015	200	420	< 7.3	< 0.020	< 0.073	< 0.073	< 0.073	--
FB8	FB8-7.0-060115	7	6/1/2015	<28	<56	<5.8	<0.020	<0.058	<0.058	<0.058	<5.6
	FB8-18.0-060115	18	6/1/2015	<31	<62	<6.9	<0.020	<0.069	<0.069	<0.069	6.8
FB9	FB9-7.0-060115	7	6/1/2015	<30	<59	<6.1	<0.020	<0.061	<0.061	<0.061	<5.9
	FB9-18.9-060115	18.9	6/1/2015	<32	<64	<6.5	<0.020	< 0.065	< 0.065	< 0.065	6.6
MTCA Method A Cleanup Levels for Soil[6]				**2,000**	**2,000**	**30**	**0.03**	**7**	**6**	**9**	**250**

NOTES:
Results in bold denote concentrations exceeding applicable cleanup levels.
< denotes analyte not detected at or exceeding the laboratory reporting limit listed.
-- denotes sample was not analyzed.
[1]Depth in feet below ground surface.
[2]Analyzed by Northwest Method NWTPH-Dx.
[3]Analyzed by Northwest Method NWTPH-Gx.
[4]Analyzed by EPA Methods 8021B or 8260C.
[5]Analyzed by EPA Method 6010C.
[6]Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as amended 2013.

BTEX = benzene, toluene, ethylbenzene, and xylenes
DRO = total petroleum hydrocarbons (TPH) as diesel-range organics
GRO = TPH as gasoline-range organics
ORO = TPH as oil-range organics
-- = Not Sampled

Table 2
Soil Analytical Data for HVOCs
Pemco Property
Seattle, Washington
Farallon PN: 463-012

Sample Identification	Sample Location	Sampled By	Sample Date	Sample Depth (feet)[1]	Analytical Results (milligrams per kilogram)[2]				
					PCE	TCE	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride
FB1	FB1-2.5	2.5	04/22/2015	2.5	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	FB1-17.5	17.5	04/22/2015	17.5	<0.00099	<0.00099	<0.00099	<0.00099	<0.00099
MTCA Cleanup Levels for Soil					**0.05**[3]	**0.03**[3]	**160**[4]	**1,600**[4]	**0.67**[4]

NOTES:

Results in **bold** denote concentrations exceeding applicable cleanup levels.

< denotes analyte not detected at or exceeding the reporting limit listed.

[1]Depth in feet below ground surface.

[2]Analyzed by U.S. Environmental Protection Agency Method 8260C.

[3]Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

[4]Washington State Cleanup Levels and Risk Calculations under the Washington State Model Toxics Control Act Cleanup Regulation, Standard Method B Formula Values for Soil (Unrestricted Land Use) - Direct Contact (Ingestion Only) and Leaching Pathway, https://fortress.wa.gov/ecy/clarc/Reporting/ChemicalQuery.aspx

Farallon = Farallon Consulting, L.L.C.

HVOCs = halogenated volatile organic compounds

PCE = tetrachloroethene

TCE = trichloroethene

Table 3
Groundwater Analytical Data for TPH and BTEX
Pemco Property
Seattle, Washington
Farallon PN: 463-012

Sample Location	Date	Sample Identification	Analytical Results (micrograms per liter)						
			DRO[1]	ORO[1]	GRO[2]	Benzene[3]	Toluene[3]	Ethylbenzene[3]	Total Xylenes[3]
FB4	04/22/2015	FB4-042215-GW	< 270	< 440	< 100	< 0.20	< 1.0	0.21	1.62
MTCA Method A Cleanup Level for Groundwater[4]			**500**	**500**	**800**	**5**	**1,000**	**700**	**1,000**

NOTES:

Results in bold denote concentrations exceeding applicable cleanup levels.

< denotes analyte not detected at or exceeding the reporting limit listed.

- = depth of sample unknown.

[1]Analyzed by Northwest Method NWTPH-Dx.

[2]Analyzed by Northwest Method NWTPH-Gx.

[3]Analyzed by U.S. Environmental Protection Agency Method 8260C.

[4]Washington State Model Toxics Control Act Cleanup Regulation Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

BTEX = benzene, toluene, ethylbenzene, and xylenes

DRO = total petroleum hydrocarbons (TPH) as diesel-range organics

GRO = TPH as gasoline-range organics

ORO = TPH as oil-range organics

Table 4
Groundwater Analytical Data for HVOCs
Pemco Property
Seattle, Washington
Farallon PN: 463-012

Sample Location	Date	Sample Identification	Analytical Results (micrograms per liter)				
			PCE[1]	TCE[1]	cis-1,2-Dichloroethene[1]	trans-1,2-Dichloroethene[1]	Vinyl Chloride[1]
FB4	04/22/2015	FB4-042215-GW	<0.20	<0.20	<0.20	<0.20	<0.20
MTCA Cleanup Levels for Groundwater			**5[2]**	**5[2]**	**80[3]**	**160[3]**	**0.2[2]**

NOTES:

Results in **bold** denote concentrations exceeding applicable cleanup levels.

< denotes analyte not detected at or exceeding the reporting limit listed.

[1]Analyzed by U.S. Environmental Protection Agency Method 8260C.

[2]Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised 2013.

[3]Washington State Model Toxics Control Act Cleanup Regulation Cleanup Levels and Risk Calculations, Standard Method B Values for Groundwater, https://fortress.wa.gov/ecy/clarc/Reporting/ChemicalQuery.aspx

Farallon = Farallon Consulting, L.L.C.

HVOCs = halogenated volatile organic compounds

PCE = tetrachloroethene

TCE = trichloroethene

Table 5
Soil Gas Analytical Results
Pemco Property
Seattle, Washington
Farallon PN: 463-012

Sample Location	Sample Date	Analytical Results (micrograms per cubic meter)							
		Benzene[1]	Toluene[1]	Ethylbenzene[1]	Xylenes (m, p-)[1]	Xylenes (o-)[1]	PCE[1]	TCE[1]	Vinyl Chloride[1]
SS1	4/16/2015	2.0	14	17	71	39	2.7	<1.2	<0.58
SS2	4/16/2015	0.92	1.2	1.4	4.5	2.2	2.4	<1.2	<0.59
SS3	4/16/2015	<0.69	4.6	5.3	22	12	1.4J	<1.2	<0.55
SS4	4/16/2015	3.0	9.0	6.6	20	9.5	14	<1.3	<0.60
SS5	4/16/2015	<0.75	3.5	5.2	18	9.7	1.6J	<1.3	<0.60
MTCA Method B Screening Levels for Soil Gas for Default Residential Setting[2]		**10.8**	**73,333**	**15,333**	**1524**	**1524**	**320.5**	**12.4**	**9.4**
Modified MTCA Method B Screening Levels for Soil Gas for Commercial Setting[3]		**56**	**697,464**	**145,833**	**14,493**	**14,493**	**1,672.2**	**64.8**	**49.1**

NOTES:

Results in **bold** denote concentrations exceeding applicable screening levels.

< denotes analyte not detected at or exceeding the reporting limit listed.

[1]Analyzed by Modified U.S. Environmental Protection Agency Method TO15 for 13 selected constituents. Refer to laboratory reporting for non-detect results for other five tested constituents.

[2]Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method B Screening Level for Shallow Soil Gas, Table B-1 of Appendix B of the Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. October 2009. Inhalation Cancer Potency Factor for PCE and TCE as revised by U.S. Environmental Protection Agency in the Integrated Risk Information System (IRIS) database in February 2012. Specifics provided in the following tables.

[3]Washington State Model Toxics Control Act Cleanup Regulation Method B Screening Level for Shallow Soil Gas, Table B-1 of Appendix B of the Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. October 2009. Modified Commercial Exposure Scenario. Inhalation Cancer Potency Factor for PCE and TCE as revised by U.S. Environmental Protection Agency in the Integrated Risk Information System (IRIS) database in February 2012. Specifics provided in the following tables.

J = Estimated value

PCE = tetrachloroethene

TCE = trichloroethene

Table 6
MTCA Standard Method B and Modified Method B Air Cleanup Level and Soil Gas Screening Level Calculations PCE, TCE, and Vinyl Chloride
Pemco Property
Seattle, Washington
Farallon PN: 463-012

Equation 750-2 for Carcinogenic Compounds[1]			PCE		TCE		Vinyl Chloride	
Parameters		Units	Residential[2]	Commercial[3]	Residential[2]	Commercial[3]	Residential[2]	Commercial[3]
Carcinogenic Risk	RISK	unitless	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06	1.00E-06
Inhalation Cancer Potency Factor	CPFI	kg-day/mg	0.00091 [2]	0.00091 [2]	0.0235 [2]	0.0235 [2]	0.031	0.031
Average Body Weight	ABW	kg	70	70	70	70	70	70
Averaging Time	AT	years	75	75	75	75	75	75
Exposure Duration	ED	years	30	25	30	25	30	25
Exposure Frequency	EF	unitless	1	0.23	1	0.23	1	0.23
Air Breathing Rate	BR	m^3/day	20	20	20	20	20	20
Inhalation Absorption Fraction	ABS1	unitless	1	1	1	1	1	1
Unit Conversion Factor	UCF	µg/mg	1,000	1,000	1,000	1,000	1,000	1,000
MTCA Method B Air Cleanup Level[1]	CUL	µg/m3	9.6	50.2	0.37	1.9	0.28	1.5
MTCA Method B Soil Gas Screening Level[4]	SL	µg/m3	**320.5**	**1672.2**	**12.4**	**64.8**	**9.4**	**49.1**

Exposure Duration

Default: 30 years for residential occupant

Modified: 25 years for occupational worker

Exposure Frequency

Default: 1 = 365 days assumed occupancy at 24 hours per day = 8,760 hours/year

Modified: 250 days per year at 8 hours per day = 2,000 hours/year

Modified EF = 2,000/8,760 = **0.23**

NOTES:

[1] Equation 750-2 of Section 750 of Chapter 173-340 of the Washington Administrative Code. Model Toxics Control Act Cleanup Regulation (MTCA): CUL = (RISK*ABW*AT*UCF)/(CPF*BR*ABS*ED*EF).

[2] MTCA Method B cleanup level calculation default parameters for Standard Method B calculation protective of residential use.

[3] MTCA Method B cleanup level calculation with modified exposure parameters adjusted for commercial exposure per Section 750 of MTCA.

[4] Soil gas screening level for soil gas present beneath a building slab and to depths up to 15 feet below the ground surface that are not expected to result in exceedance of the air cleanup level in an overlying structure under most circumstances.

Soil Gas Screening Level = Air Cleanup Level/attenuation factor of 0.03 per Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action, Review Draft, October 2009 and revised on April 15, 2015. Inhalation Cancer Potency Factor for PCE and TCE as revised by U.S. Environmental Protection Agency in the Integrated Risk Information System (IRIS) database in February 2012.

kg = kilograms

m^3/day = cubic meters per day

mg/kg-day = milligrams per kilogram per day

µg/mg = micrograms per milligram

µg/m^3 = micrograms per cubic meter

PCE = tetrachloroethene

TCE = trichloroethene

Table 7
MTCA Standard Method B and Modified Method B Air Cleanup Level and Soil Gas Screening Level Calculations
Benzene, Toluene, Ethylbenzene, and Xylenes
Pemco Property
Seattle, Washington
Farallon PN: 463-012

Equation 750-1 for Noncarcinogens[1]			m-Xylenes		o-Xylenes		Toluene		Ethylbenzene	
Parameters		Units	Residential[2]	Commercial[3]	Residential[2]	Commercial[3]	Residential[2]	Commercial[3]	Residential[2]	Commercial[3]
Reference dose	RfD	mg/kg-day	0.029	0.029	0.029	0.029	1.375	1.375	0.2875	0.2875
Average body weight	ABW	kg	16	70	16	70	16	70	16	70
Unit conversion factor	UCF	µg/mg	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Breathing rate	BR	m^3/day	10	20	10	20	10	20	10	20
Inhalation absorption fraction	ABS	unitless	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Hazard quotient	HQ	unitless	1	1	1	1	1	1	1	1
Averaging time	AT	years	6	25	6	25	6	25	6	25
Exposure duration	ED	years	6	25	6	25	6	25	6	25
Exposure frequency	EF	unitless	1.0	0.23	1.0	0.23	1.0	0.23	1.0	0.23
MTCA Method B Air Cleanup Level[1]	CUL	µg/m3	**46**	**435**	**46**	**435**	**2,200**	**20,924**	**460**	**4,375**
MTCA Method B Soil Gas Screening Level[4]	SL	µg/m3	**1,524**	**14,493**	**1,524**	**14,493**	**73,333**	**697,464**	**15,333**	**145,833**

Equation 750-2 for Carcinogens[5]			Benzene	
Parameters		Units	Residential[2]	Commercial[3]
Carcinogenic Risk	RISK	unitless	1.00E-06	1.00E-06
Average body weight	ABW	kg	70	70
Averaging time	AT	years	75	75
Unit conversion factor	UCF	µg/mg	1,000	1,000
Carcinogenic potency factor	CPF	kg-day/mg	0.027	0.027
Breathing rate	BR	m^3/day	20	20
Inhalation absorption fraction	ABS	unitless	1	1
Exposure duration	ED	years	30	25
Exposure frequency	EF	unitless	1.0	0.23
MTCA Method B Air Cleanup Level[5]	CUL	µg/m3	**0.32**	**1.7**
MTCA Method B Soil Gas Screening Level[4]	SL	µg/m3	**10.8**	**56**

Exposure Duration

Default: 30 years for residential occupant

Modified: 25 years for occupational worker

Exposure Frequency

Default: 1 = 365 days assumed occupancy at 24 hours per day = 8,760 hours/year

Modified: 250 days per year at 8 hours per day = 2,000 hours/year

Modified EF = 2,000/8,760 = **0.23**

NOTES:

[1] Equation 750-1 of Section 750 of Chapter 173-340 of the Washington Administrative Code, Model Toxics Control Act Cleanup Regulation:: CUL = (RfD*ABW*UCF*HQ*AT)/(BR*ABS*ED*EF).

[2] MTCA Method B cleanup level calculation default parameters for Standard Method B calculation protective of residential use.

[3] MTCA Method B cleanup level calculation with modified exposure parameters adjusted for commercial exposure per Section 750 of MTCA.

[4] Soil gas screening level for soil gas present beneath a building slab and to depths up to 15 feet below the ground surface that are not expected to result in exceedance of the air cleanup level in an overlying structure under most circumstances. Soil Gas Screening Level = Air Cleanup Level/attenuation factor of 0.03 per Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action, Review Draft, October 2009 and revised on April 15, 2015.

[5] Equation 750-2 of Section 750 of Chapter 173-340 of the Washington Administrative Code, Model Toxics Control Act Cleanup Regulation: CUL = (RISK*ABW*AT*UCF)/(CPF*BR*ABS*ED*EF).

kg = kilograms
m^3/day = cubic meters per day
mg/kg-day = milligrams per kilogram per day
µg/mg = micrograms per milligram
µg/m^3 = micrograms per cubic meter
MTCA = Washington State Model Toxics Control Act Cleanup Regulation
HQ = Hazard Quotient

ATTACHMENT A
BORING LOGS

SUMMARY OF SUBSURFACE INVESTIGATION
Pemco Property
325 Eastlake Avenue East
Seattle, Washington

Farallon PN: 463-012

Log of Boring: FB1

FARALLON CONSULTING

Client: Unico Properties, LLC
Project: Pemco
Location: Seattle, WA
Farallon PN: 463-012
Logged By: Ken Scott

Date/Time Started:	4/22/15 @ 0915	**Sampler Type:**	5' Macrocore
Date/Time Completed:	4/22/15 @ 0950	**Drive Hammer (lbs.):**	Auto
Equipment:	Geoprobe 7800	**Depth of Water ATD (ft bgs):**	7.5', 16.0'
Drilling Company:	ESN NW	**Total Boring Depth (ft bgs):**	21.5'
Drilling Foreman:	Brian Bowes	**Total Well Depth (ft bgs):**	NA
Drilling Method:	Direct Push		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-0.3': Asphalt (100% asphalt), black.	AC						Concrete
		0.3-0.8': Sandy SILT with gravel (50% silt, 30% sand, 20% gravel), fine to medium sand, fine to coarse gravel, brown, moist, no odor, no sheen.	ML						
		0.8-1.4': 2nd Layer Asphalt (100% asphalt), black.	AC	55	NA	0.0	FB1-2.5 @ 0920	X	
		1.4-2.8': Sandy SILT with gravel (55% silt, 30% sand, 15% gravel), fine to medium sand, fine to coarse gravel, brown, moist, no odor, no sheen.	ML						
5		2.8-5.0': No Recovery	AC						
		5.0-5.6': 3rd Layer Asphalt (100% asphalt), black.	ML						
		5.6-8.1': Sandy SILT (60% silt, 40% sand), fine to medium sand, yellowish-brown, moist to wet @ 7.5-feet bgs, no odor, no sheen.		60	NA	0.0	FB1-7.5 @ 0935		▽ Water Level
		8.1-10.0': No Recovery							
10		10.0-11.2': Sandy SILT (60% silt, 40% sand), fine to medium sand, yellowish-brown, wet to moist, no odor, no sheen.	ML						
		11.2-13.2': SILT (100% silt), tan, moist, no odor, no sheen.	ML	85	NA	0.0	FB1-12.5 @ 0940		Bentonite
		13.2-14.4': SILT (100% silt), grey, moist, no odor, no sheen.	ML						
15		14.4-15.0': No Recovery							
		15.0-16.4': SILT (95% silt, 5% sand), fine sand, yellowish-brown, wet, no odor, no sheen.	ML						▽ Water Level
		16.4-20.0': SILT (100% silt), dark-grey, moist, no odor, no sheen.	ML	100	NA	0.0	FB1-17.5 @ 0945	X	
20		20.0-21.5': SILT (100% silt), dark-grey, moist, no odor, no sheen, very dense. Driller states refusal at 21.5-feet bgs due to denser material.	ML	20		0.0	FB1-21.5 @ 1335		

Well Construction Information

Monument Type:	NA	**Filter Pack:**	NA	**Ground Surface Elevation (ft):**	NA
Casing Diameter (inches):	NA	**Surface Seal:**	Concrete	**Top of Casing Elevation (ft):**	NA
Screen Slot Size (inches):	NA	**Annular Seal:**	NA	**Surveyed Location:**	X: NA
Screened Interval (ft bgs):	NA	**Boring Abandonment:**	Bentonite		Y: NA

FARALLON CONSULTING

Log of Boring: FB2

Client: Unico Properties, LLC
Project: Pemco
Location: Seattle, WA

Farallon PN: 463-012

Logged By: Ken Scott

Date/Time Started:	4/22/15 @ 0955	**Sampler Type:**	5' Macrocore
Date/Time Completed:	4/22/15 @ 1020	**Drive Hammer (lbs.):**	Auto
Equipment:	Geoprobe 7800	**Depth of Water ATD (ft bgs):**	16.0'
Drilling Company:	ESN NW	**Total Boring Depth (ft bgs):**	20.0'
Drilling Foreman:	Brian Bowes	**Total Well Depth (ft bgs):**	NA
Drilling Method:	Direct Push		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-0.3': Asphalt (100% asphalt), black. Boring airknifed prior to clear for utilities, drilled boring on South edge of hole to identify lithology.	AC						Concrete
		0.3-3.1': Sandy SILT with gravel (50% silt, 30% sand, 20% gravel), fine to medium sand, fine to coarse gravel, brown, moist, no odor, no sheen.	ML	90	NA	0.0	FB2-2.5 @ 0955	X	
		3.1-4.4': SILT (100% silt), brown, moist, no odor, no sheen.	ML						
5		4.4-5.0': No Recovery							
		5.0-7.1': SILT (100% silt), brown, moist, no odor, no sheen.	ML						
		7.1-10.0': SILT (100% silt), dark grey, moist, no odor, no sheen.	ML	100	NA	0.0	FB2-7.5 @ 1000		
10		10.0-15.0': SILT (100% silt), dark grey, moist, no odor, no sheen.	ML	100	NA	0.0	FB2-12.5 @ 1005		Bentonite
15		15.0-15.8': SILT (100% silt), dark grey, moist, no odor, no sheen.	ML						▽ Water Level
		15.8-16.4': SILT with gravel (85% silt, 15% gravel), fine gravel, dark grey, wet, no odor, no sheen.	ML						
		16.4-20.0': SILT (100% silt), grey, moist, no odor, no sheen.	ML	100	NA	0.0	FB2-17.5 @ 1010	X	
20									

Well Construction Information

Monument Type:	NA	**Filter Pack:**	NA	**Ground Surface Elevation (ft):**	NA
Casing Diameter (inches):	NA	**Surface Seal:**	Concrete	**Top of Casing Elevation (ft):**	NA
Screen Slot Size (inches):	NA	**Annular Seal:**	NA	**Surveyed Location:**	X: NA
Screened Interval (ft bgs):	NA	**Boring Abandonment:**	Bentonite		Y: NA

FARALLON CONSULTING

Log of Boring: FB3

Client: Unico Properties, LLC
Project: Pemco
Location: Seattle, WA
Farallon PN: 463-012
Logged By: Ken Scott

Date/Time Started:	4/22/15 @ 1025	**Sampler Type:**	5' Macrocore
Date/Time Completed:	4/22/15 @ 1100	**Drive Hammer (lbs.):**	Auto
Equipment:	Geoprobe 7800	**Depth of Water ATD (ft bgs):**	10.0', 15.0'
Drilling Company:	ESN NW	**Total Boring Depth (ft bgs):**	20.0'
Drilling Foreman:	Brian Bowes	**Total Well Depth (ft bgs):**	NA
Drilling Method:	Direct Push		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-0.3': Asphalt (100% asphalt), black. Boring airknifed prior to clear for utilities, drilled boring on South edge of hole to identify lithology.	AC						Concrete
		0.3-3.1': Sandy SILT with gravel (50% silt, 30% sand, 20% gravel), fine to medium sand, fine to coarse gravel, yellowish brown, moist, no odor, no sheen.	ML	100	NA	0.0	FB3-4.0 @ 1030		
5		4.7-5.0': Poorly graded SAND (90% sand, 5% silt, 5% gravel), fine to medium sand, fine gravel, grey, moist, no odor, no sheen.	SP						
		5.0-7.8': Silty SAND with gravel (60% sand, 25% silt, 15% gravel), fine to medium sand, fine to coarse gravel, grey, moist, slight petroleum-like odor, no sheen.	ML	100	NA	1.5	FB3-7.5 @ 1035	X	
		7.8-8.4': SILT (95% silt, 5% sand), fine sand, grey, wet, slight odor, no sheen.	ML						
		8.4-10.0': SILT (100% silt), tan, moist, no odor, no sheen.	ML						
10		10.0-12.5': Silty SAND with gravel (60% sand, 25% silt, 15% gravel), fine to medium sand, fine to coarse gravel, grey, wet, no odor, no sheen.	ML						▽ Water Level
		12.5-15.0': SILT (95% silt, 5% sand), fine sand, dark grey, moist, no odor, no sheen.	ML	100	NA	0.0	FB3-12.5 @ 1040		Bentonite
15		15.0-16.0': Silty SAND with gravel (60% sand, 25% silt, 15% gravel), fine to medium sand, fine gravel, grey, wet, septic-like odor, no sheen.	ML						▽ Water Level
		16.0-20.0': SILT (100% silt), grey, moist, no odor, no sheen.	ML	100	NA	0.0	FB3-16.0 @ 1050	X	
20						0.0	FB3-20.0 @ 1055		

Well Construction Information

Monument Type:	NA	**Filter Pack:**	NA	**Ground Surface Elevation (ft):**	NA
Casing Diameter (inches):	NA	**Surface Seal:**	Concrete	**Top of Casing Elevation (ft):**	NA
Screen Slot Size (inches):	NA	**Annular Seal:**	NA	**Surveyed Location:**	X: NA
Screened Interval (ft bgs):	NA	**Boring Abandonment:**	Bentonite		Y: NA

FARALLON CONSULTING

Log of Boring: FB4

Client: Unico Properties, LLC
Project: Pemco
Location: Seattle, WA

Farallon PN: 463-012

Logged By: Ken Scott

Date/Time Started:	4/22/15 @ 1105	**Sampler Type:**	5' Macrocore
Date/Time Completed:	4/22/15 @ 1155	**Drive Hammer (lbs.):**	Auto
Equipment:	Geoprobe 7800	**Depth of Water ATD (ft bgs):**	10.0', 15.0'
Drilling Company:	ESN NW	**Total Boring Depth (ft bgs):**	20.0'
Drilling Foreman:	Brian Bowes	**Total Well Depth (ft bgs):**	NA
Drilling Method:	Direct Push		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed
0		0.0-0.3': Asphalt (100% asphalt), black. Boring airknifed prior to clear for utilities, drilled boring on SE edge of hole to identify lithology.	AC					
		0.3-2.5': Sandy SILT (60% silt, 35% sand, 5% gravel), fine to medium sand, fine to coarse gravel, yellowish brown, moist, no odor, no sheen.	ML					
		2.5-2.9': Silty SAND (70% sand, 25% silt, 5% gravel), fine to medium sand, fine gravel, yellowish brown, moist, no odor, no sheen.	SM	60	NA	0.0	FB4-2.5 @ 1110	X
		2.9-5.0': No Recovery						
5		5.0-5.5': SILT (100% silt), tan, wet, no odor, no sheen.	ML					
		5.5-5.9': 2nd Layer Asphalt (100% asphalt), black.	AC					
		5.9-7.1': SILT (95% silt, 5% sand), fine sand, yellowish brown, moist, no odor, no sheen.	ML	100	NA	1.5	FB4-7.5 @ 1115	
		7.1-8.4': SILT (100% silt), yellowish brown, moist, no odor, no sheen.	ML					
		8.4-10.0': SILT (100% silt), light brown, moist, no odor, no sheen.	ML					
10		10.0-12.7': Silty SAND with gravel (50% sand, 35% silt, 15% gravel), fine to medium sand, fine to coarse gravel, yellowish brown, wet, no odor, no sheen.	ML					
		12.7-15.0': SILT (100% silt), light brown, moist, no odor, no sheen.	ML	100	NA	0.0	FB4-12.5 @ 1120	
15		15.0-16.0': Poorly graded SAND (90% sand, 5% silt, 5% gravel), fine to medium sand, fine to coarse gravel, yellowish brown, wet, no odor, no sheen.	SP					
			ML			0.0	FB4-16.0 @ 1130	X
		16.0-18.2': SILT (100% silt), light brown, moist, no odor, no sheen.		100	NA		FB4-042215-GW @1140	X
		18.2-20.0': SILT (100% silt), dark grey, moist, no odor, no sheen.	ML					
20						0.0	FB4-20.0 @ 1135	

Concrete
Bentonite
Water Level
Water Level

Well Construction Information

Monument Type:	NA	**Filter Pack:**	NA	**Ground Surface Elevation (ft):**	NA
Casing Diameter (inches):	NA	**Surface Seal:**	Concrete	**Top of Casing Elevation (ft):**	NA
Screen Slot Size (inches):	0.010	**Annular Seal:**	NA	**Surveyed Location:**	X: NA
Screened Interval (ft bgs):	15-20-feet bgs	**Boring Abandonment:**	Bentonite		Y: NA

Log of Boring: FB5

FARALLON CONSULTING

Client: Unico Properties, LLC
Project: Pemco
Location: Seattle, WA
Farallon PN: 463-012
Logged By: Ken Scott

Date/Time Started:	4/22/15 @ 1200	**Sampler Type:**	5' Macrocore
Date/Time Completed:	4/22/15 @ 1230	**Drive Hammer (lbs.):**	Auto
Equipment:	Geoprobe 7800	**Depth of Water ATD (ft bgs):**	5.0', 10.0', 15.0'
Drilling Company:	ESN NW	**Total Boring Depth (ft bgs):**	20.0'
Drilling Foreman:	Brian Bowes	**Total Well Depth (ft bgs):**	NA
Drilling Method:	Direct Push		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-0.3': Asphalt (100% asphalt), black.	AC							Concrete
		0.3-4.5': No Recovery, boring airknifed prior to clear for utilities.			5	NA				
5		4.5-5.0': Sandy SILT (60% silt, 40% sand), fine sand, yellowish brown, moist, no odor, no sheen.	ML				0.0	FB5-4.5 @ 1205		▽ Water Level
		5.0-6.5': Silty SAND with gravel (60% silt, 35% sand,15% gravel), fine to medium sand, fine to coarse gravel, yellowish brown, wet, no odor, no sheen.	ML							
		6.5-7.1': SILT (100% silt), grey, wet, no odor, no sheen.	ML		100	NA	0.0	FB5-7.5 @ 1210	X	
		7.1-10.0': SILT (90% silt, 5% sand, 5% gravel), fine sand, fine gravel, yellowish brown, moist, no odor, no sheen.								
10		10.0-12.8': SILT (90% silt, 5% sand, 5% gravel), fine sand, fine gravel, yellowish brown, wet, slight odor, no sheen.	ML							▽ Water Level
		12.8-15.0': SILT (100% silt), light brown, moist, no odor, no sheen.	ML		100	NA	0.0	FB5-12.5 @ 1215		Bentonite
15		15.0-18.2': SILT (100% silt), light brown, wet, no odor, no sheen.	ML							▽ Water Level
		18.2-20.0': SILT (100% silt), brown, moist, no odor, no sheen.	ML		100	NA	0.0	FB5-17.5 @ 1220	X	
20										

Well Construction Information

Monument Type:	NA	**Filter Pack:**	NA	**Ground Surface Elevation (ft):**	NA
Casing Diameter (inches):	NA	**Surface Seal:**	Concrete	**Top of Casing Elevation (ft):**	NA
Screen Slot Size (inches):	0.010	**Annular Seal:**	NA	**Surveyed Location:**	X: NA
Screened Interval (ft bgs):	5-10-feet bgs	**Boring Abandonment:**	Bentonite		Y: NA

FARALLON CONSULTING

Log of Boring: FB6

Client: Unico Properties, LLC
Project: Pemco
Location: Seattle, WA
Farallon PN: 463-012
Logged By: Ken Scott

Date/Time Started:	4/22/15 @ 1245	**Sampler Type:**	5' Macrocore
Date/Time Completed:	4/22/15 @ 1310	**Drive Hammer (lbs.):**	Auto
Equipment:	Geoprobe 7800	**Depth of Water ATD (ft bgs):**	10.0', 15.0'
Drilling Company:	ESN NW	**Total Boring Depth (ft bgs):**	20.0'
Drilling Foreman:	Brian Bowes	**Total Well Depth (ft bgs):**	NA
Drilling Method:	Direct Push		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-0.4': Asphalt (100% asphalt), black. Boring airknifed prior to clear for utilities.	AC							Concrete
		0.4-5.0': No Recovery.			0	NA				
5		5.0-7.5': SILT (95% silt, 5% sand), fine sand, yellowish brown, moist, no odor, no sheen.	ML							Bentonite
		7.5-10.0': SILT (100% silt), light brown, moist, no odor, no sheen.	ML		100	NA	0.0	FB6-7.5 @ 1250	X	
10		10.0-12.8': SILT (90% silt, 5% sand, 5% gravel), fine sand, fine gravel, yellowish brown, wet, no odor, no sheen.	ML							▽ Water Level
		12.8-15.0': SILT (100% silt), dark grey, moist, no odor, no sheen.	ML		100	NA	0.0	FB6-12.5 @ 1255		
15		15.0-16.7': SILT with gravel (80% silt, 15% gravel, 5% sand), fine gravel, fine sand, yellowish brown, wet, no odor, no sheen.	ML							▽ Water Level
		16.7-20.0': SILT (100% silt), dark grey, moist, no odor, no sheen.	ML		100	NA	0.0	FB6-17.5 @ 1300	X	
20										

Well Construction Information

Monument Type:	NA	**Filter Pack:**	NA	**Ground Surface Elevation (ft):**	NA
Casing Diameter (inches):	NA	**Surface Seal:**	Concrete	**Top of Casing Elevation (ft):**	NA
Screen Slot Size (inches):	0.010	**Annular Seal:**	NA	**Surveyed Location:**	X: NA
Screened Interval (ft bgs):	10-15-feet bgs	**Boring Abandonment:**	Bentonite		Y: NA

FARALLON CONSULTING

Log of Boring: FB7

Client: Unico Properties LLC
Project: Pemco Property
Location: Seattle, WA

Farallon PN: 463-012

Logged By: Jerome Chen

Date/Time Started:	4-27-2015 / 0917	**Sampler Type:**	2" Split Spoon
Date/Time Completed:	4-27-2015 / 1051	**Drive Hammer (lbs.):**	300 lb
Equipment:	CME 85	**Depth of Water ATD (ft bgs):**	39.5'
Drilling Company:	Holt Services	**Total Boring Depth (ft bgs):**	45.0'
Drilling Foreman:	John Bennett	**Total Well Depth (ft bgs):**	NA
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
20		0.0-20.0': Refer to FB-1 for lithology.								Concrete
		23.5-25.0': SILT (80% silt, 20% sand), fine sand, dark grey, dry, no odor, hard.	ML		75	7/14/18	0.0	Soil Screen @ 24.0'		
25		24.5-25.0': No Recovery								
		28.0-30.0': SILT (70% silt, 30% sand), fine sand, dark grey, dry, no odor, stiff.	ML		100	3/6/10	0.0	Soil Screen @ 29.0'		
30										Bentonite
		33.0-33.7': Silty SAND (60% sand, 40% silt), fine to medium sand, dark grey, dry, no odor.	SM		100	7/12/17	0.0	Soil Screen @ 33.5'		
		33.7-35.0': SILT (70% silt, 30% sand), fine sand, dark grey, dry, no odor, very stiff.	ML				0.0	Soil Screen @ 34.5'		
35										
		38.4-38.7': SILT (75% silt, 25% sand), fine sand, dark grey, dry, no odor, hard.	ML		80	7/12/20	0.0	Soil Screen @ 38.5'		
		38.7-40.0': Silty SAND (60% sand, 40% silt), fine to medium sand, dark grey, moist to wet (wet at ~39.5'), no odor.	SM				0.0	Soil Screen @ 39.5'		⊠ Water Level
40										
		43.0-44.7': SILT (80% silt, 20% sand), fine sand, dark grey, dry, no odor, hard.	ML		100	7/14/19	0.0	FB7-43.0-042715 @ 1056		Bentonite
		44.7-45.0': Silty SAND (65% sand, 35% silt), fine to coarse sand, dark grey, moist, no odor.	SM				0.0	FB7-45.0-042715 @ 1102		
45										

Well Construction Information

Monument Type:	NA	**Filter Pack:**	NA	**Ground Surface Elevation (ft):**	NA
Casing Diameter (inches):	NA	**Surface Seal:**	Concrete	**Top of Casing Elevation (ft):**	NA
Screen Slot Size (inches):	NA	**Annular Seal:**	NA	**Surveyed Location:**	X: NA
Screened Interval (ft bgs):	NA	**Boring Abandonment:**	Bentonite		Y: NA

FARALLON CONSULTING

Log of Boring: FB8

Client: Unico Properties LLC
Project: Pemco Property
Location: Seattle, WA

Farallon PN: 463-012

Logged By: Anna Sigel

Date/Time Started:	6/1/2015 @ 0945	**Sampler Type:**	5' Macrocore
Date/Time Completed:	6/1/2015 @ 1055	**Drive Hammer (lbs.):**	Auto
Equipment:	Geoprobe 7700DT	**Depth of Water ATD (ft bgs):**	NE
Drilling Company:	Holt Services	**Total Boring Depth (ft bgs):**	20.0'
Drilling Foreman:	Jason Marsh	**Total Well Depth (ft bgs):**	NA
Drilling Method:	Direct Push		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-0.3': Concrete	CO							Concrete
		0.3-0.8': FILL with gravel base	FILL							
		0.8-3.0': SILT with sand (80% silt, 15% sand, 5% gravel), fine sand, fine to coarse gravel, light brown to dark brown at 1.7' bgs, moist, no odor, no sheen.	ML				0.3	Soil Screen @ 1.5'		
					60		0.3	FB8-2.5-060115		
		3.0-5.0': No Recovery								
5		5.0-5.4': Silty SAND with gravel (60% sand, 25% silt, 15% gravel), medium sand, fine gravel, light brown, moist, no odor, no sheen.	SM				0.3	Soil Screen @ 5.0'		Bentonite
		5.4-5.6': Well-graded GRAVEL with sand (60% gravel, 40% sand), fine to coarse sand and gravel, grey, moist, no odor, no sheen.	GW							
		5.6-7.0': Sandy SILT (60% silt, 40% sand), medium sand, <5% fine gravel, light brown, moist, no odor, no sheen.	ML							
		7.0-7.5': SILT with sand (90% silt, 10% sand), medium sand, brown, moist, no odor, no sheen.	ML				0.1	FB8-7.0-060115	X	
		7.5-10.0': SILT (90% silt, 5% sand, 5% gravel), fine sand, coarse gravel, light brown, moist, no odor, no sheen.	ML		100					
							0.2	Soil Screen @ 9.5'		
10										

Well Construction Information

Monument Type:	NA	**Filter Pack:**	NA	**Ground Surface Elevation (ft):**	NA
Casing Diameter (inches):	NA	**Surface Seal:**	Concrete	**Top of Casing Elevation (ft):**	NA
Screen Slot Size (inches):	NA	**Annular Seal:**	NA	**Surveyed Location:**	X: NA
Screened Interval (ft bgs):	NA	**Boring Abandonment:**	Bentonite		Y: NA

FARALLON CONSULTING

Log of Boring: FB8

Client: Unico Properties LLC
Project: Pemco Property
Location: Seattle, WA

Farallon PN: 463-012

Logged By: Anna Sigel

Date/Time Started:	6/1/2015 @ 0945	**Sampler Type:**	5' Macrocore
Date/Time Completed:	6/1/2015 @ 1055	**Drive Hammer (lbs.):**	Auto
Equipment:	Geoprobe 7700DT	**Depth of Water ATD (ft bgs):**	NE
Drilling Company:	Holt Services	**Total Boring Depth (ft bgs):**	20.0'
Drilling Foreman:	Jason Marsh	**Total Well Depth (ft bgs):**	NA
Drilling Method:	Direct Push		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
10		10.0-10.5': SILT (90% silt, 5% sand, 5% gravel), fine sand, coarse gravel, light brown, moist, no odor, no sheen.	ML				0.2	Soil Screen @ 10.5'		
		10.5-10.8': Well-graded SAND with gravel (80% sand, 15% gravel, 5% silt), fine to medium sand, fine to coarse gravel, brown, moist, no odor, no sheen.	SW / ML				0.2	Soil Screen @ 11.5'		
		10.8-12.0': SILT with SAND (85% silt, 15% sand), fine sand, light brown, moist, no odor, no sheen.	ML				0.3	Soil Screen @ 13.0'		
		12.0-15.9': SILT (95% silt, 5% sand), fine sand, light brown to gray at 14.5' bgs, moist, no odor, no sheen.	ML		100		0.0	Soil Screen @ 15.4'		Bentonite
15		15.9-16.4': Silty GRAVEL with sand (50% gravel, 25% sand, 25% silt), fine to medium sand, fine to coarse gravel, gray, moist, no odor, no sheen.	GM / ML				0.0	FB8-18.0-060115	X	
		16.4-19.1': SILT with sand (85% silt, 15% sand), fine sand, gray, moist, no odor, no sheen.	ML		100		0.4	Soil Screen @ 19.5'		
20		19.1-20.0': Sandy SILT (70% silt, 30% sand), fine sand, gray, moist, no odor, no sheen.	ML							

Well Construction Information

Monument Type:	NA	**Filter Pack:**	NA	**Ground Surface Elevation (ft):**	NA
Casing Diameter (inches):	NA	**Surface Seal:**	Concrete	**Top of Casing Elevation (ft):**	NA
Screen Slot Size (inches):	NA	**Annular Seal:**	NA	**Surveyed Location:**	X: NA
Screened Interval (ft bgs):	NA	**Boring Abandonment:**	Bentonite		Y: NA

FARALLON CONSULTING

Log of Boring: FB9

Client: Unico Properties LLC
Project: Pemco Property
Location: Seattle, WA

Farallon PN: 463-012

Logged By: Anna Sigel

Date/Time Started:	6/1/2015 @ 1130	**Sampler Type:**	5' Macrocore
Date/Time Completed:	6/1/2015 @ 1215	**Drive Hammer (lbs.):**	Auto
Equipment:	Geoprobe 7700DT	**Depth of Water ATD (ft bgs):**	NE
Drilling Company:	Holt Services	**Total Boring Depth (ft bgs):**	20.0'
Drilling Foreman:	Jason Marsh	**Total Well Depth (ft bgs):**	NA
Drilling Method:	Direct Push		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-0.2' Concrete	CO							Concrete
		0.2-0.8' FILL with gravel base	FILL							
		0.8-1.8' Silty SAND (75% sand, 20% silt, 5% gravel), fine sand, fine gravel, brown, moist, no odor, no sheen.	SM							
		1.8-2.4' SILT with Sand (80% silt, 20% sand), fine sand, dark brown, moist, no odor, no sheen.	ML				0.4	FB9-1.8-060115	X	
		2.4-2.7' SILT with Sand (75% silt, 25% sand), fine sand, light brown, moist, no odor, no sheen.	ML		54					
		2.7-5.0' No Recovery								
5		5.0-8.9' Sandy SILT (55% silt, 40% sand, 5% gravel), fine sand, brown, moist, no odor, no sheen.	ML				0.3	Soil Screen @ 5.0'		Bentonite
					100		0.4	FB9-7.0-060115	X	
		8.9-10.0' Sandy SILT (60% silt, 40% sand), <5% fine gravel, fine sand, brown, no odor, no sheen.	ML				0.5	Soil Screen @ 9.5'		
10										

Well Construction Information

Monument Type:	NA	**Filter Pack:**	NA	**Ground Surface Elevation (ft):**	NA
Casing Diameter (inches):	NA	**Surface Seal:**	Concrete	**Top of Casing Elevation (ft):**	NA
Screen Slot Size (inches):	NA	**Annular Seal:**	NA	**Surveyed Location:**	X: NA
Screened Interval (ft bgs):	NA	**Boring Abandonment:**	Bentonite		Y: NA

FARALLON CONSULTING

Log of Boring: FB9

Client: Unico Properties LLC
Project: Pemco Property
Location: Seattle, WA

Farallon PN: 463-012

Logged By: Anna Sigel

Date/Time Started:	6/1/2015 @ 1130	**Sampler Type:**	5' Macrocore
Date/Time Completed:	6/1/2015 @ 1215	**Drive Hammer (lbs.):**	Auto
Equipment:	Geoprobe 7700DT	**Depth of Water ATD (ft bgs):**	NE
Drilling Company:	Holt Services	**Total Boring Depth (ft bgs):**	20.0'
Drilling Foreman:	Jason Marsh	**Total Well Depth (ft bgs):**	NA
Drilling Method:	Direct Push		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
10		10.0-11.5' Sandy SILT (55% silt, 40% sand, 5% gravel), fine sand, brown, moist, no odor, no sheen.	ML							
		11.5-12.6' Poorly graded SAND with Gravel (80% sand, 15% gravel, 5% silt), fine sand, coarse gravel, moist, light brown, no odor, no sheen.	SP		100		0.3	Soil Screen @ 11.5'		
		12.6-13.3' SILT (90% silt, 10% sand), < 5% gravel, brown, moist, no odor, no sheen.	ML							
		13.3-13.9' Silty SAND (60% sand, 40% silt), medium sand, light brown, moist, no odor, no sheen.	SM				0.0	Soil Screen @ 13.3'		
		13.9-15.0' SILT (90% silt, 10% sand), trace amount of gravel, brown, moist, no odor, no sheen.	ML				0.0	Soil Screen @ 14.5'		
15		15.0-20.0' SILT (95% silt, 5% sand), fine sand, gray, moist, no odor, no sheen. Sand lense present at 18.9' bgs.	ML				0.0	Soil Screen @ 15.5'		Bentonite
					100		0.1	Soil Screen @ 17.0'		
							0.2	FB9-18.9-060115	X	
20										

Well Construction Information

Monument Type:	NA	**Filter Pack:**	NA	**Ground Surface Elevation (ft):**	NA
Casing Diameter (inches):	NA	**Surface Seal:**	Concrete	**Top of Casing Elevation (ft):**	NA
Screen Slot Size (inches):	NA	**Annular Seal:**	NA	**Surveyed Location:**	X: NA
Screened Interval (ft bgs):	NA	**Boring Abandonment:**	Bentonite		Y: NA

ATTACHMENT B
LABORATORY ANALYTICAL REPORTS

SUMMARY OF SUBSURFACE INVESTIGATION
Pemco Property
325 Eastlake Avenue East
Seattle, Washington

Farallon PN: 463-012

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

May 1, 2015

Joe Rounds
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 463-012
Laboratory Reference No. 1504-206

Dear Joe:

Enclosed are the analytical results and associated quality control data for samples submitted on April 23, 2015.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

Case Narrative

Samples were collected on April 22, 2015 and received by the laboratory on April 23, 2015. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX (soil) Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Volatiles EPA 8260C (soil) Analysis

Method 5035 vials were not provided, samples were therefore extracted from standard glass jars. Some loss of volatiles may have occurred.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB1-2.5**					
Laboratory ID:	04-206-01					
Gasoline	**ND**	8.1	NWTPH-Gx	4-27-15	4-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*68-123*				
Client ID:	**FB1-17.5**					
Laboratory ID:	04-206-04					
Gasoline	**ND**	6.1	NWTPH-Gx	4-27-15	4-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*102*	*68-123*				
Client ID:	**FB2-2.5**					
Laboratory ID:	04-206-05					
Benzene	**ND**	0.020	EPA 8021B	4-27-15	4-27-15	
Toluene	**ND**	0.053	EPA 8021B	4-27-15	4-27-15	
Ethyl Benzene	**ND**	0.053	EPA 8021B	4-27-15	4-27-15	
m,p-Xylene	**ND**	0.053	EPA 8021B	4-27-15	4-27-15	
o-Xylene	**ND**	0.053	EPA 8021B	4-27-15	4-27-15	
Gasoline	**ND**	5.3	NWTPH-Gx	4-27-15	4-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*68-123*				
Client ID:	**FB2-17.5**					
Laboratory ID:	04-206-08					
Benzene	**ND**	0.020	EPA 8021B	4-27-15	4-27-15	
Toluene	**ND**	0.073	EPA 8021B	4-27-15	4-27-15	
Ethyl Benzene	**ND**	0.073	EPA 8021B	4-27-15	4-27-15	
m,p-Xylene	**ND**	0.073	EPA 8021B	4-27-15	4-27-15	
o-Xylene	**ND**	0.073	EPA 8021B	4-27-15	4-27-15	
Gasoline	**ND**	7.3	NWTPH-Gx	4-27-15	4-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*109*	*68-123*				

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB3-7.5**					
Laboratory ID:	04-206-10					
Benzene	**0.032**	0.020	EPA 8021B	4-27-15	4-27-15	
Toluene	**ND**	0.054	EPA 8021B	4-27-15	4-27-15	
Ethyl Benzene	**ND**	0.054	EPA 8021B	4-27-15	4-27-15	
m,p-Xylene	**ND**	0.054	EPA 8021B	4-27-15	4-27-15	
o-Xylene	**ND**	0.054	EPA 8021B	4-27-15	4-27-15	
Gasoline	**ND**	5.4	NWTPH-Gx	4-27-15	4-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*68-123*				
Client ID:	**FB3-16.0**					
Laboratory ID:	04-206-12					
Benzene	**ND**	0.020	EPA 8021B	4-27-15	4-27-15	
Toluene	**ND**	0.058	EPA 8021B	4-27-15	4-27-15	
Ethyl Benzene	**ND**	0.058	EPA 8021B	4-27-15	4-27-15	
m,p-Xylene	**ND**	0.058	EPA 8021B	4-27-15	4-27-15	
o-Xylene	**ND**	0.058	EPA 8021B	4-27-15	4-27-15	
Gasoline	**ND**	5.8	NWTPH-Gx	4-27-15	4-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*100*	*68-123*				
Client ID:	**FB4-2.5**					
Laboratory ID:	04-206-14					
Benzene	**ND**	0.020	EPA 8021B	4-27-15	4-27-15	
Toluene	**ND**	0.065	EPA 8021B	4-27-15	4-27-15	
Ethyl Benzene	**ND**	0.065	EPA 8021B	4-27-15	4-27-15	
m,p-Xylene	**ND**	0.065	EPA 8021B	4-27-15	4-27-15	
o-Xylene	**ND**	0.065	EPA 8021B	4-27-15	4-27-15	
Gasoline	**ND**	6.5	NWTPH-Gx	4-27-15	4-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*68-123*				

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB4-16.0**					
Laboratory ID:	04-206-17					
Benzene	**ND**	0.020	EPA 8021B	4-27-15	4-27-15	
Toluene	**ND**	0.060	EPA 8021B	4-27-15	4-27-15	
Ethyl Benzene	**ND**	0.060	EPA 8021B	4-27-15	4-27-15	
m,p-Xylene	**ND**	0.060	EPA 8021B	4-27-15	4-27-15	
o-Xylene	**ND**	0.060	EPA 8021B	4-27-15	4-27-15	
Gasoline	**ND**	6.0	NWTPH-Gx	4-27-15	4-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*68-123*				
Client ID:	**FB5-4.5**					
Laboratory ID:	04-206-20					
Benzene	**ND**	0.020	EPA 8021B	4-27-15	4-27-15	
Toluene	**ND**	0.056	EPA 8021B	4-27-15	4-27-15	
Ethyl Benzene	**ND**	0.056	EPA 8021B	4-27-15	4-27-15	
m,p-Xylene	**ND**	0.056	EPA 8021B	4-27-15	4-27-15	
o-Xylene	**ND**	0.056	EPA 8021B	4-27-15	4-27-15	
Gasoline	**ND**	5.6	NWTPH-Gx	4-27-15	4-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*100*	*68-123*				
Client ID:	**FB5-17.5**					
Laboratory ID:	04-206-23					
Benzene	**ND**	0.020	EPA 8021B	4-27-15	4-27-15	
Toluene	**ND**	0.071	EPA 8021B	4-27-15	4-27-15	
Ethyl Benzene	**ND**	0.071	EPA 8021B	4-27-15	4-27-15	
m,p-Xylene	**ND**	0.071	EPA 8021B	4-27-15	4-27-15	
o-Xylene	**ND**	0.071	EPA 8021B	4-27-15	4-27-15	
Gasoline	**ND**	7.1	NWTPH-Gx	4-27-15	4-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*68-123*				

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB6-7.5**					
Laboratory ID:	04-206-24					
Benzene	**ND**	0.020	EPA 8021B	4-27-15	4-27-15	
Toluene	**ND**	0.081	EPA 8021B	4-27-15	4-27-15	
Ethyl Benzene	**ND**	0.081	EPA 8021B	4-27-15	4-27-15	
m,p-Xylene	**ND**	0.081	EPA 8021B	4-27-15	4-27-15	
o-Xylene	**ND**	0.081	EPA 8021B	4-27-15	4-27-15	
Gasoline	**ND**	8.1	NWTPH-Gx	4-27-15	4-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*106*	*68-123*				
Client ID:	**FB6-17.5**					
Laboratory ID:	04-206-26					
Benzene	**ND**	0.020	EPA 8021B	4-27-15	4-27-15	
Toluene	**ND**	0.073	EPA 8021B	4-27-15	4-27-15	
Ethyl Benzene	**ND**	0.073	EPA 8021B	4-27-15	4-27-15	
m,p-Xylene	**ND**	0.073	EPA 8021B	4-27-15	4-27-15	
o-Xylene	**ND**	0.073	EPA 8021B	4-27-15	4-27-15	
Gasoline	**ND**	7.3	NWTPH-Gx	4-27-15	4-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*102*	*68-123*				

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0427S1					
Benzene	**ND**	0.020	EPA 8021B	4-27-15	4-27-15	
Toluene	**ND**	0.050	EPA 8021B	4-27-15	4-27-15	
Ethyl Benzene	**ND**	0.050	EPA 8021B	4-27-15	4-27-15	
m,p-Xylene	**ND**	0.050	EPA 8021B	4-27-15	4-27-15	
o-Xylene	**ND**	0.050	EPA 8021B	4-27-15	4-27-15	
Gasoline	**ND**	5.0	NWTPH-Gx	4-27-15	4-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*68-123*				
Laboratory ID:	MB0427S2					
Benzene	**ND**	0.020	EPA 8021B	4-27-15	4-27-15	
Toluene	**ND**	0.050	EPA 8021B	4-27-15	4-27-15	
Ethyl Benzene	**ND**	0.050	EPA 8021B	4-27-15	4-27-15	
m,p-Xylene	**ND**	0.050	EPA 8021B	4-27-15	4-27-15	
o-Xylene	**ND**	0.050	EPA 8021B	4-27-15	4-27-15	
Gasoline	**ND**	5.0	NWTPH-Gx	4-27-15	4-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*68-123*				

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-211-02										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*94*	*96*	*68-123*			
Laboratory ID:	04-221-02										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*89*	*86*	*68-123*			
SPIKE BLANKS											
Laboratory ID:	SB0427S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**0.930**	**0.981**	1.00	1.00		**93**	**98**	75-117	5	13	
Toluene	**0.937**	**0.983**	1.00	1.00		**94**	**98**	78-118	5	12	
Ethyl Benzene	**0.940**	**0.988**	1.00	1.00		**94**	**99**	78-118	5	12	
m,p-Xylene	**0.945**	**0.994**	1.00	1.00		**95**	**99**	78-121	5	13	
o-Xylene	**0.944**	**0.993**	1.00	1.00		**94**	**99**	77-119	5	13	
Surrogate:											
Fluorobenzene						*91*	*96*	*68-123*			

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB4-042215-GW**					
Laboratory ID:	04-206-19					
Gasoline	**ND**	100	NWTPH-Gx	4-28-15	4-28-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*71-113*				

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0428W1					
Gasoline	**ND**	100	NWTPH-Gx	4-28-15	4-28-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*71-113*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-209-13										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*87*	*88*	*71-113*			

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB1-2.5**					
Laboratory ID:	04-206-01					
Diesel Range Organics	**ND**	28	NWTPH-Dx	4-29-15	4-29-15	
Lube Oil	**68**	56	NWTPH-Dx	4-29-15	4-29-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**FB1-17.5**					
Laboratory ID:	04-206-04					
Diesel Range Organics	**ND**	29	NWTPH-Dx	4-29-15	4-29-15	
Lube Oil Range Organics	**ND**	59	NWTPH-Dx	4-29-15	4-29-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*75*	*50-150*				
Client ID:	**FB2-2.5**					
Laboratory ID:	04-206-05					
Diesel Range Organics	**ND**	50	NWTPH-Dx	4-29-15	4-29-15	U1
Lube Oil	**530**	57	NWTPH-Dx	4-29-15	4-29-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				
Client ID:	**FB2-17.5**					
Laboratory ID:	04-206-08					
Diesel Range Organics	**ND**	33	NWTPH-Dx	4-29-15	4-29-15	
Lube Oil Range Organics	**ND**	66	NWTPH-Dx	4-29-15	4-29-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				
Client ID:	**FB3-7.5**					
Laboratory ID:	04-206-10					
Diesel Range Organics	**ND**	29	NWTPH-Dx	4-29-15	4-29-15	
Lube Oil Range Organics	**ND**	58	NWTPH-Dx	4-29-15	4-29-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*82*	*50-150*				
Client ID:	**FB3-16.0**					
Laboratory ID:	04-206-12					
Diesel Fuel #2	**32**	31	NWTPH-Dx	4-29-15	4-29-15	
Lube Oil	**76**	61	NWTPH-Dx	4-29-15	4-29-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*70*	*50-150*				

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB4-2.5**					
Laboratory ID:	04-206-14					
Diesel Range Organics	**ND**	31	NWTPH-Dx	4-29-15	4-29-15	
Lube Oil Range Organics	**ND**	61	NWTPH-Dx	4-29-15	4-29-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*79*	*50-150*				
Client ID:	**FB4-16.0**					
Laboratory ID:	04-206-17					
Diesel Fuel #2	**290**	29	NWTPH-Dx	4-29-15	4-29-15	
Lube Oil	**230**	58	NWTPH-Dx	4-29-15	4-29-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*107*	*50-150*				
Client ID:	**FB5-4.5**					
Laboratory ID:	04-206-20					
Diesel Range Organics	**ND**	30	NWTPH-Dx	4-29-15	4-29-15	
Lube Oil	**100**	60	NWTPH-Dx	4-29-15	4-29-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*77*	*50-150*				
Client ID:	**FB5-17.5**					
Laboratory ID:	04-206-23					
Diesel Fuel #2	**93**	30	NWTPH-Dx	4-29-15	4-29-15	
Lube Oil	**93**	60	NWTPH-Dx	4-29-15	4-29-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*87*	*50-150*				
Client ID:	**FB6-7.5**					
Laboratory ID:	04-206-24					
Diesel Range Organics	**ND**	34	NWTPH-Dx	4-29-15	4-29-15	
Lube Oil Range Organics	**ND**	67	NWTPH-Dx	4-29-15	4-29-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**FB6-17.5**					
Laboratory ID:	04-206-26					
Diesel Fuel #2	**200**	32	NWTPH-Dx	4-29-15	4-30-15	
Lube Oil	**420**	63	NWTPH-Dx	4-29-15	4-30-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*85*	*50-150*				

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0429S2					
Diesel Range Organics	**ND**	25	NWTPH-Dx	4-29-15	4-29-15	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	4-29-15	4-29-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*106*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-252-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*103*	*105*	*50-150*			
Laboratory ID:	04-252-02										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*100*	*89*	*50-150*			

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB4-042215-GW**					
Laboratory ID:	04-206-19					
Diesel Range Organics	**ND**	0.27	NWTPH-Dx	4-28-15	4-28-15	
Lube Oil Range Organics	**ND**	0.44	NWTPH-Dx	4-28-15	4-28-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*80*	*50-150*				

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Laboratory Reference: 1504-206
Project: 463-012

NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0428W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	4-28-15	4-28-15	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	4-28-15	4-28-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*82*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-223-05										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*86*	*75*	*50-150*			

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB1-2.5**					
Laboratory ID:	04-206-01					
Dichlorodifluoromethane	ND	0.0020	EPA 8260C	4-29-15	4-29-15	
Chloromethane	ND	0.015	EPA 8260C	4-29-15	4-29-15	
Vinyl Chloride	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Bromomethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Chloroethane	ND	0.0052	EPA 8260C	4-29-15	4-29-15	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Acetone	0.0061	0.0052	EPA 8260C	4-29-15	4-29-15	H
Iodomethane	ND	0.0052	EPA 8260C	4-29-15	4-29-15	
Carbon Disulfide	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Methylene Chloride	ND	0.0052	EPA 8260C	4-29-15	4-29-15	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Vinyl Acetate	ND	0.0052	EPA 8260C	4-29-15	4-29-15	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
2-Butanone	ND	0.0052	EPA 8260C	4-29-15	4-29-15	
Bromochloromethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Chloroform	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Benzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Trichloroethene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Dibromomethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Bromodichloromethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
2-Chloroethyl Vinyl Ether	ND	0.0052	EPA 8260C	4-29-15	4-29-15	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Methyl Isobutyl Ketone	ND	0.0052	EPA 8260C	4-29-15	4-29-15	
Toluene	ND	0.0052	EPA 8260C	4-29-15	4-29-15	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	

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Laboratory Reference: 1504-206
Project: 463-012

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB1-2.5**					
Laboratory ID:	04-206-01					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Tetrachloroethene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
2-Hexanone	ND	0.0052	EPA 8260C	4-29-15	4-29-15	
Dibromochloromethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Chlorobenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Ethylbenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
m,p-Xylene	ND	0.0021	EPA 8260C	4-29-15	4-29-15	
o-Xylene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Styrene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Bromoform	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Isopropylbenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Bromobenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
n-Propylbenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
2-Chlorotoluene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
4-Chlorotoluene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
tert-Butylbenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
sec-Butylbenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
n-Butylbenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,2-Dibromo-3-chloropropane	ND	0.0052	EPA 8260C	4-29-15	4-29-15	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Hexachlorobutadiene	ND	0.0052	EPA 8260C	4-29-15	4-29-15	
Naphthalene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*76-131*				
Toluene-d8	*111*	*82-129*				
4-Bromofluorobenzene	*104*	*79-126*				

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB1-17.5**					
Laboratory ID:	04-206-04					
Dichlorodifluoromethane	ND	0.0019	EPA 8260C	4-29-15	4-29-15	
Chloromethane	ND	0.014	EPA 8260C	4-29-15	4-29-15	
Vinyl Chloride	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Bromomethane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Chloroethane	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
Trichlorofluoromethane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,1-Dichloroethene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Acetone	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
Iodomethane	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
Carbon Disulfide	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Methylene Chloride	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
(trans) 1,2-Dichloroethene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Methyl t-Butyl Ether	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,1-Dichloroethane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Vinyl Acetate	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
2,2-Dichloropropane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
(cis) 1,2-Dichloroethene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
2-Butanone	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
Bromochloromethane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Chloroform	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,1,1-Trichloroethane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Carbon Tetrachloride	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,1-Dichloropropene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Benzene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,2-Dichloroethane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Trichloroethene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,2-Dichloropropane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Dibromomethane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Bromodichloromethane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
(cis) 1,3-Dichloropropene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
Toluene	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
(trans) 1,3-Dichloropropene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	

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Project: 463-012

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB1-17.5**					
Laboratory ID:	04-206-04					
1,1,2-Trichloroethane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Tetrachloroethene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,3-Dichloropropane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
2-Hexanone	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
Dibromochloromethane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,2-Dibromoethane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Chlorobenzene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,1,1,2-Tetrachloroethane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Ethylbenzene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
m,p-Xylene	ND	0.0020	EPA 8260C	4-29-15	4-29-15	
o-Xylene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Styrene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Bromoform	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Isopropylbenzene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Bromobenzene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,1,2,2-Tetrachloroethane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,2,3-Trichloropropane	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
n-Propylbenzene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
2-Chlorotoluene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
4-Chlorotoluene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,3,5-Trimethylbenzene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
tert-Butylbenzene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,2,4-Trimethylbenzene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
sec-Butylbenzene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,3-Dichlorobenzene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
p-Isopropyltoluene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,4-Dichlorobenzene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,2-Dichlorobenzene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
n-Butylbenzene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
1,2,4-Trichlorobenzene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
Naphthalene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
1,2,3-Trichlorobenzene	ND	0.00099	EPA 8260C	4-29-15	4-29-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*105*	*76-131*				
Toluene-d8	*105*	*82-129*				
4-Bromofluorobenzene	*102*	*79-126*				

Date of Report: May 1, 2015
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VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0429S1					
Dichlorodifluoromethane	ND	0.0019	EPA 8260C	4-29-15	4-29-15	
Chloromethane	ND	0.014	EPA 8260C	4-29-15	4-29-15	
Vinyl Chloride	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Bromomethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Chloroethane	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Acetone	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
Iodomethane	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
Carbon Disulfide	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Methylene Chloride	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Vinyl Acetate	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
2-Butanone	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
Bromochloromethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Chloroform	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Benzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Trichloroethene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Dibromomethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Bromodichloromethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
Toluene	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	

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VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0429S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Tetrachloroethene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
2-Hexanone	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
Dibromochloromethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Chlorobenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Ethylbenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
m,p-Xylene	ND	0.0020	EPA 8260C	4-29-15	4-29-15	
o-Xylene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Styrene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Bromoform	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Isopropylbenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Bromobenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
n-Propylbenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
2-Chlorotoluene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
4-Chlorotoluene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
tert-Butylbenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
sec-Butylbenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
n-Butylbenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	4-29-15	4-29-15	
Naphthalene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	4-29-15	4-29-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*99*	*76-131*				
Toluene-d8	*101*	*82-129*				
4-Bromofluorobenzene	*96*	*79-126*				

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0429S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0474**	**0.0492**	0.0500	0.0500	95	98	66-129	4	15	
Benzene	**0.0485**	**0.0488**	0.0500	0.0500	97	98	71-123	1	15	
Trichloroethene	**0.0469**	**0.0484**	0.0500	0.0500	94	97	75-115	3	15	
Toluene	**0.0473**	**0.0492**	0.0500	0.0500	95	98	75-120	4	15	
Chlorobenzene	**0.0438**	**0.0452**	0.0500	0.0500	88	90	75-121	3	15	
Surrogate:										
Dibromofluoromethane					*95*	*100*	*76-131*			
Toluene-d8					*93*	*100*	*82-129*			
4-Bromofluorobenzene					*91*	*97*	*79-126*			

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB4-042215-GW**					
Laboratory ID:	04-206-19					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Chloromethane	ND	1.0	EPA 8260C	4-27-15	4-27-15	
Vinyl Chloride	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Bromomethane	ND	0.26	EPA 8260C	4-27-15	4-27-15	
Chloroethane	ND	1.0	EPA 8260C	4-27-15	4-27-15	
Trichlorofluoromethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,1-Dichloroethene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Acetone	ND	5.0	EPA 8260C	4-27-15	4-27-15	
Iodomethane	ND	1.6	EPA 8260C	4-27-15	4-27-15	
Carbon Disulfide	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Methylene Chloride	ND	1.0	EPA 8260C	4-27-15	4-27-15	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,1-Dichloroethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Vinyl Acetate	ND	1.0	EPA 8260C	4-27-15	4-27-15	
2,2-Dichloropropane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
2-Butanone	ND	5.0	EPA 8260C	4-27-15	4-27-15	
Bromochloromethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Chloroform	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Carbon Tetrachloride	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,1-Dichloropropene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Benzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,2-Dichloroethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Trichloroethene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,2-Dichloropropane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Dibromomethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Bromodichloromethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
2-Chloroethyl Vinyl Ether	ND	1.6	EPA 8260C	4-27-15	4-27-15	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	4-27-15	4-27-15	
Toluene	ND	1.0	EPA 8260C	4-27-15	4-27-15	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-27-15	4-27-15	

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB4-042215-GW**					
Laboratory ID:	04-206-19					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Tetrachloroethene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,3-Dichloropropane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
2-Hexanone	ND	2.0	EPA 8260C	4-27-15	4-27-15	
Dibromochloromethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,2-Dibromoethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Chlorobenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Ethylbenzene	0.21	0.20	EPA 8260C	4-27-15	4-27-15	
m,p-Xylene	0.98	0.40	EPA 8260C	4-27-15	4-27-15	
o-Xylene	0.64	0.20	EPA 8260C	4-27-15	4-27-15	
Styrene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Bromoform	ND	1.0	EPA 8260C	4-27-15	4-27-15	
Isopropylbenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Bromobenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
n-Propylbenzene	0.23	0.20	EPA 8260C	4-27-15	4-27-15	
2-Chlorotoluene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
4-Chlorotoluene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,3,5-Trimethylbenzene	0.48	0.20	EPA 8260C	4-27-15	4-27-15	
tert-Butylbenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,2,4-Trimethylbenzene	1.8	0.20	EPA 8260C	4-27-15	4-27-15	
sec-Butylbenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
p-Isopropyltoluene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
n-Butylbenzene	0.34	0.20	EPA 8260C	4-27-15	4-27-15	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	4-27-15	4-27-15	
1,2,4-Trichlorobenzene	ND	0.27	EPA 8260C	4-27-15	4-27-15	
Hexachlorobutadiene	ND	0.26	EPA 8260C	4-27-15	4-27-15	
Naphthalene	ND	1.4	EPA 8260C	4-27-15	4-27-15	
1,2,3-Trichlorobenzene	ND	0.30	EPA 8260C	4-27-15	4-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*93*	*79-131*				
Toluene-d8	*101*	*80-120*				
4-Bromofluorobenzene	*95*	*80-120*				

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0427W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Chloromethane	ND	1.0	EPA 8260C	4-27-15	4-27-15	
Vinyl Chloride	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Bromomethane	ND	0.26	EPA 8260C	4-27-15	4-27-15	
Chloroethane	ND	1.0	EPA 8260C	4-27-15	4-27-15	
Trichlorofluoromethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,1-Dichloroethene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Acetone	ND	5.0	EPA 8260C	4-27-15	4-27-15	
Iodomethane	ND	1.6	EPA 8260C	4-27-15	4-27-15	
Carbon Disulfide	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Methylene Chloride	ND	1.0	EPA 8260C	4-27-15	4-27-15	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,1-Dichloroethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Vinyl Acetate	ND	1.0	EPA 8260C	4-27-15	4-27-15	
2,2-Dichloropropane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
2-Butanone	ND	5.0	EPA 8260C	4-27-15	4-27-15	
Bromochloromethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Chloroform	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Carbon Tetrachloride	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,1-Dichloropropene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Benzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,2-Dichloroethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Trichloroethene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,2-Dichloropropane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Dibromomethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Bromodichloromethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
2-Chloroethyl Vinyl Ether	ND	1.6	EPA 8260C	4-27-15	4-27-15	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	4-27-15	4-27-15	
Toluene	ND	1.0	EPA 8260C	4-27-15	4-27-15	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-27-15	4-27-15	

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0427W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Tetrachloroethene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,3-Dichloropropane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
2-Hexanone	ND	2.0	EPA 8260C	4-27-15	4-27-15	
Dibromochloromethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,2-Dibromoethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Chlorobenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Ethylbenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
m,p-Xylene	ND	0.40	EPA 8260C	4-27-15	4-27-15	
o-Xylene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Styrene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Bromoform	ND	1.0	EPA 8260C	4-27-15	4-27-15	
Isopropylbenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
Bromobenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	4-27-15	4-27-15	
n-Propylbenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
2-Chlorotoluene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
4-Chlorotoluene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
tert-Butylbenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
sec-Butylbenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
p-Isopropyltoluene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
n-Butylbenzene	ND	0.20	EPA 8260C	4-27-15	4-27-15	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	4-27-15	4-27-15	
1,2,4-Trichlorobenzene	ND	0.27	EPA 8260C	4-27-15	4-27-15	
Hexachlorobutadiene	ND	0.26	EPA 8260C	4-27-15	4-27-15	
Naphthalene	ND	1.4	EPA 8260C	4-27-15	4-27-15	
1,2,3-Trichlorobenzene	ND	0.30	EPA 8260C	4-27-15	4-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*100*	*79-131*				
Toluene-d8	*101*	*80-120*				
4-Bromofluorobenzene	*100*	*80-120*				

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0427W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**10.5**	**9.90**	10.0	10.0	105	99	64-138	6	16	
Benzene	**10.1**	**9.43**	10.0	10.0	101	94	76-125	7	14	
Trichloroethene	**10.1**	**9.33**	10.0	10.0	101	93	70-125	8	16	
Toluene	**10.2**	**9.59**	10.0	10.0	102	96	75-125	6	15	
Chlorobenzene	**9.70**	**8.69**	10.0	10.0	97	87	80-140	11	15	
Surrogate:										
Dibromofluoromethane					*97*	*101*	*79-131*			
Toluene-d8					*100*	*103*	*80-120*			
4-Bromofluorobenzene					*97*	*99*	*80-120*			

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

TOTAL LEAD
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	04-206-01					
Client ID:	**FB1-2.5**					
Lead	**21**	5.6	6010C	4-29-15	4-29-15	
Lab ID:	04-206-05					
Client ID:	**FB2-2.5**					
Lead	**15**	5.7	6010C	4-29-15	4-29-15	
Lab ID:	04-206-10					
Client ID:	**FB3-7.5**					
Lead	**ND**	5.8	6010C	4-29-15	4-29-15	
Lab ID:	04-206-14					
Client ID:	**FB4-2.5**					
Lead	**ND**	6.1	6010C	4-29-15	4-29-15	
Lab ID:	04-206-20					
Client ID:	**FB5-4.5**					
Lead	**11**	6.0	6010C	4-29-15	4-29-15	
Lab ID:	04-206-24					
Client ID:	**FB6-7.5**					
Lead	**8.2**	6.7	6010C	4-29-15	4-29-15	

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

TOTAL LEAD
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	4-29-15
Date Analyzed:	4-29-15
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0429SM1

Analyte	Method	Result	PQL
Lead	6010C	**ND**	5.0

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

TOTAL LEAD
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 4-29-15
Date Analyzed: 4-29-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 04-259-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**17.7**	**15.3**	15	5.0	

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

TOTAL LEAD
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 4-29-15
Date Analyzed: 4-29-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 04-259-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	250	**253**	94	**249**	93	2	

Date of Report: May 1, 2015
Samples Submitted: April 23, 2015
Laboratory Reference: 1504-206
Project: 463-012

% MOISTURE

Date Analyzed: 4-27&29-15

Client ID	Lab ID	% Moisture
FB1-2.5	04-206-01	11
FB1-17.5	04-206-04	15
FB2-2.5	04-206-05	13
FB2-17.5	04-206-08	24
FB3-7.5	04-206-10	13
FB3-16.0	04-206-12	18
FB4-2.5	04-206-14	18
FB4-16.0	04-206-17	14
FB5-4.5	04-206-20	17
FB5-17.5	04-206-23	17
FB6-7.5	04-206-24	26
FB6-17.5	04-206-26	21

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Laboratory Number: 04-206

Company: FARALLON
Project Number: 463-012
Project Name: PEMCO
Project Manager: Joe Rounds
Sampled by: Ken Scott, Andrew Taylor

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	TOTAL LEAD					% Moisture
1	FB1-2.5	4/22/15	920	S	2			X	X	X												X					X
2	FB1-7.5		935	S	2																						
3	FB1-12.5		940	S	2																						
4	FB1-17.5		945	S	2			X	X	X																	X
5	FB2-2.5		955	S	2		X		X													X					X
6	FB2-7.5		1000	S	2																						
7	FB2-12.5		1005	S	2																						
8	FB2-17.5		1010	S	2		X		X																		X
9	FB3-~~2.5~~ 4.0 DB		1030	S	2																						
10	FB3-7.5	↓	1035	S	2		X		X													X					X

	Signature	Company	Date	Time
Relinquished	Ken Scott	FARALLON	4/22/15	1530
Received		GeoTech	4/23/15	1145
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
~~Hold samples, will call~~ ~~for analysis~~ DB

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

OnSite Environmental Inc.

Analytical Laboratory Testing Services
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Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Laboratory Number: 04-206

Company: FARALLON
Project Number: 463-012
Project Name: PEMCO
Project Manager: JOE ROUNDS
Sampled by: Ken [signature], Andrea Taylor

Turnaround Request (in working days)
(Check One)
- [ ] Same Day
- [ ] 1 Day
- [ ] 2 Days
- [ ] 3 Days
- [x] Standard (7 Days) (TPH analysis 5 Days)
- [ ] ______ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	TOTAL LEAD					% Moisture
11	FB3-12.5	4/22/15	1040	S	2																						
12	FB3-16.0		1050	S	2		X		X																		X
13	FB3-20.0		1055	S	2																						
14	FB4-2.5		1110	S	2		X		X													X					X
15	FB4-7.5		1115	S	2																						
16	FB4-12.5		1120	S	2																						
17	FB4-16.0		1130	S	2		X		X																		X
18	FB4-20.0		1135	S	2																						
19	FB4-042215 GW		1140	W	7			X	X	X																	
20	FB5-4.5	↓	1205	S	2		X		X													X					X

	Signature	Company	Date	Time
Relinquished	Ken [signature]	FARALLON	4/22/15	1530
Received	[signature]	OnSite Env	4/23/15	1145
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
~~See comments page #1~~ DB

Chromatograms with final report ☐

a Pa(itand Leve Leve ectro Deliv (EDD

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Laboratory Number: 04-206

Company: PARALLON
Project Number: 463-012
Project Name: PEMCO
Project Manager: JOE ROUNDS
Sampled by: Ken Smith, Andrew Taylor

Turnaround Request (In working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	TOTAL LEAD					% Moisture
21	FB5-7.5	4/22/15	1210	S	2																						
22	FB5-12.5		1215	S	2																						
23	FB5-17.5		1220	S	2		X		X																		X
24	FB6-7.5		1250	S	2		X		X													X					X
25	FB6-12.5		1255	S	2																						
26	FB6-17.5		1300	S	2		X		X																		X
27	FB1-21.5	✓	1335	S	~~2~~ 1 JB																						

	Signature	Company	Date	Time
Relinquished	Ken Smith	FARALLON	4/22/15	1530
Received		OnSite Env	4/23/15	1445
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
~~SEE PAGE #1 COMMENTS~~
JB

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 9, 2015

Joe Rounds
Farallon Consulting, LLC
975 5th Avenue NW
Issaquah, WA 98027

Re: Analytical Data for Project 463-012
Laboratory Reference No. 1506-005

Dear Joe:

Enclosed are the analytical results and associated quality control data for samples submitted on June 1, 2015.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: June 9, 2015
Samples Submitted: June 1, 2015
Laboratory Reference: 1506-005
Project: 463-012

Case Narrative

Samples were collected on June 1, 2015 and received by the laboratory on June 1, 2015. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: June 9, 2015
Samples Submitted: June 1, 2015
Laboratory Reference: 1506-005
Project: 463-012

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB8-7.0-060115**					
Laboratory ID:	06-005-02					
Benzene	**ND**	0.020	EPA 8021B	6-4-15	6-4-15	
Toluene	**ND**	0.058	EPA 8021B	6-4-15	6-4-15	
Ethyl Benzene	**ND**	0.058	EPA 8021B	6-4-15	6-4-15	
m,p-Xylene	**ND**	0.058	EPA 8021B	6-4-15	6-4-15	
o-Xylene	**ND**	0.058	EPA 8021B	6-4-15	6-4-15	
Gasoline	**ND**	5.8	NWTPH-Gx	6-4-15	6-4-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*82*	*68-123*				
Client ID:	**FB8-18.0-060115**					
Laboratory ID:	06-005-03					
Benzene	**ND**	0.020	EPA 8021B	6-4-15	6-4-15	
Toluene	**ND**	0.069	EPA 8021B	6-4-15	6-4-15	
Ethyl Benzene	**ND**	0.069	EPA 8021B	6-4-15	6-4-15	
m,p-Xylene	**ND**	0.069	EPA 8021B	6-4-15	6-4-15	
o-Xylene	**ND**	0.069	EPA 8021B	6-4-15	6-4-15	
Gasoline	**ND**	6.9	NWTPH-Gx	6-4-15	6-4-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*68-123*				
Client ID:	**FB9-7.0-060115**					
Laboratory ID:	06-005-05					
Benzene	**ND**	0.020	EPA 8021B	6-4-15	6-4-15	
Toluene	**ND**	0.061	EPA 8021B	6-4-15	6-4-15	
Ethyl Benzene	**ND**	0.061	EPA 8021B	6-4-15	6-4-15	
m,p-Xylene	**ND**	0.061	EPA 8021B	6-4-15	6-4-15	
o-Xylene	**ND**	0.061	EPA 8021B	6-4-15	6-4-15	
Gasoline	**ND**	6.1	NWTPH-Gx	6-4-15	6-4-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*68-123*				

Date of Report: June 9, 2015
Samples Submitted: June 1, 2015
Laboratory Reference: 1506-005
Project: 463-012

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB9-18.9-060115**					
Laboratory ID:	06-005-06					
Benzene	**ND**	0.020	EPA 8021B	6-4-15	6-4-15	
Toluene	**ND**	0.065	EPA 8021B	6-4-15	6-4-15	
Ethyl Benzene	**ND**	0.065	EPA 8021B	6-4-15	6-4-15	
m,p-Xylene	**ND**	0.065	EPA 8021B	6-4-15	6-4-15	
o-Xylene	**ND**	0.065	EPA 8021B	6-4-15	6-4-15	
Gasoline	**ND**	6.5	NWTPH-Gx	6-4-15	6-4-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*68-123*				

Date of Report: June 9, 2015
Samples Submitted: June 1, 2015
Laboratory Reference: 1506-005
Project: 463-012

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0604S2					
Benzene	**ND**	0.020	EPA 8021B	6-4-15	6-5-15	
Toluene	**ND**	0.050	EPA 8021B	6-4-15	6-5-15	
Ethyl Benzene	**ND**	0.050	EPA 8021B	6-4-15	6-5-15	
m,p-Xylene	**ND**	0.050	EPA 8021B	6-4-15	6-5-15	
o-Xylene	**ND**	0.050	EPA 8021B	6-4-15	6-5-15	
Gasoline	**ND**	5.0	NWTPH-Gx	6-4-15	6-5-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*83*	*68-123*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	06-029-03										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*94*	*97*	*68-123*			
SPIKE BLANKS											
Laboratory ID:	SB0604S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**0.828**	**0.826**	1.00	1.00		**83**	**83**	75-117	0	13	
Toluene	**0.837**	**0.840**	1.00	1.00		**84**	**84**	78-118	0	12	
Ethyl Benzene	**0.841**	**0.844**	1.00	1.00		**84**	**84**	78-118	0	12	
m,p-Xylene	**0.852**	**0.853**	1.00	1.00		**85**	**85**	78-121	0	13	
o-Xylene	**0.859**	**0.852**	1.00	1.00		**86**	**85**	77-119	1	13	
Surrogate:											
Fluorobenzene						*84*	*84*	*68-123*			

Date of Report: June 9, 2015
Samples Submitted: June 1, 2015
Laboratory Reference: 1506-005
Project: 463-012

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FB8-7.0-060115**					
Laboratory ID:	06-005-02					
Diesel Range Organics	**ND**	28	NWTPH-Dx	6-2-15	6-2-15	
Lube Oil Range Organics	**ND**	56	NWTPH-Dx	6-2-15	6-2-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**FB8-18.0-060115**					
Laboratory ID:	06-005-03					
Diesel Range Organics	**ND**	31	NWTPH-Dx	6-2-15	6-2-15	
Lube Oil Range Organics	**ND**	62	NWTPH-Dx	6-2-15	6-2-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*70*	*50-150*				
Client ID:	**FB9-7.0-060115**					
Laboratory ID:	06-005-05					
Diesel Range Organics	**ND**	30	NWTPH-Dx	6-2-15	6-2-15	
Lube Oil Range Organics	**ND**	59	NWTPH-Dx	6-2-15	6-2-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				
Client ID:	**FB9-18.9-060115**					
Laboratory ID:	06-005-06					
Diesel Range Organics	**ND**	32	NWTPH-Dx	6-2-15	6-2-15	
Lube Oil Range Organics	**ND**	64	NWTPH-Dx	6-2-15	6-2-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*89*	*50-150*				

Date of Report: June 9, 2015
Samples Submitted: June 1, 2015
Laboratory Reference: 1506-005
Project: 463-012

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0602S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	6-2-15	6-2-15	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	6-2-15	6-2-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*72*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	06-016-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*76*	*67*	*50-150*			

Date of Report: June 9, 2015
Samples Submitted: June 1, 2015
Laboratory Reference: 1506-005
Project: 463-012

TOTAL LEAD
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	06-005-02					
Client ID:	**FB8-7.0-060115**					
Lead	**ND**	5.6	6010C	6-9-15	6-9-15	
Lab ID:	06-005-03					
Client ID:	**FB8-18.0-060115**					
Lead	**6.8**	6.2	6010C	6-9-15	6-9-15	
Lab ID:	06-005-05					
Client ID:	**FB9-7.0-060115**					
Lead	**ND**	5.9	6010C	6-9-15	6-9-15	
Lab ID:	06-005-06					
Client ID:	**FB9-18.9-060115**					
Lead	**6.6**	6.4	6010C	6-9-15	6-9-15	

Date of Report: June 9, 2015
Samples Submitted: June 1, 2015
Laboratory Reference: 1506-005
Project: 463-012

TOTAL LEAD
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	6-9-15
Date Analyzed:	6-9-15
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0609SM1

Analyte	Method	Result	PQL
Lead	6010C	**ND**	5.0

Date of Report: June 9, 2015
Samples Submitted: June 1, 2015
Laboratory Reference: 1506-005
Project: 463-012

TOTAL LEAD
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 6-9-15
Date Analyzed: 6-9-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-005-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	**ND**	**ND**	NA	5.0	

Date of Report: June 9, 2015
Samples Submitted: June 1, 2015
Laboratory Reference: 1506-005
Project: 463-012

TOTAL LEAD
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 6-9-15
Date Analyzed: 6-9-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-005-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	250	**223**	89	**223**	89	0	

Date of Report: June 9, 2015
Samples Submitted: June 1, 2015
Laboratory Reference: 1506-005
Project: 463-012

% MOISTURE

Date Analyzed: 6-3-15

Client ID	Lab ID	% Moisture
FB8-7.0-060115	06-005-02	11
FB8-18.0-060115	06-005-03	19
FB9-7.0-060115	06-005-05	16
FB9-18.9-060115	06-005-06	22

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Laboratory Number: 06-005

Company: FARALLON
Project Number: 463-012
Project Name: PEMCO
Project Manager: JOE ROUNDS
Sampled by: ANNA SIGEL

Turnaround Request (In working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	BTEX EPA 8021B	TOTAL LEAD 6010C				% Moisture
1	FB8-2.5-060115	6/1/15	9:55	SOIL	2																						
2	FB8-7.0-060115		10:05					X	X													X	X				X
3	FB8-18.0-060115		10:25					X	X													X	X				X
4	FB9-1.8-060115		11:40																								
5	FB9-7.0-060115		11:50					X	X													X	X				X
6	FB9-18.9-060115		12:10					X	X													X	X				X

	Signature	Company	Date	Time
Relinquished		FARALLON	6/1/15	14:20
Received		OSE	6/1/15	1420
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
HOLD SAMPLES FOR
FB8-2.5-060115 ~~ET~~
FB9-1.8-060115

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

eurofins | Air Toxics

5/5/2015
Mr. Joe Rounds
Farallon Consulting, LLC
975 Fifth Avenue NW

Issaquah WA 98027-3333

Project Name: PEMCO
Project #: 463-012
Workorder #: 1504358

Dear Mr. Joe Rounds

The following report includes the data for the above referenced project for sample(s) received on 4/21/2015 at Air Toxics Ltd.

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

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

Regards,

Kelly Buettner

Project Manager

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WORK ORDER #: 1504358

Work Order Summary

CLIENT:	Mr. Joe Rounds Farallon Consulting, LLC 975 Fifth Avenue NW Issaquah, WA 98027-3333	**BILL TO:**	Mr. Joe Rounds Farallon Consulting, LLC 975 Fifth Avenue NW Issaquah, WA 98027-3333
PHONE:	425-427-0061	**P.O. #**	
FAX:	425-427-0067	**PROJECT #**	463-012 PEMCO
DATE RECEIVED:	04/21/2015	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	05/04/2015		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SS1-35680-041615	Modified TO-15	3.1 "Hg	15.3 psi
02A	SS2-3059-041615	Modified TO-15	3.5 "Hg	15.2 psi
03A	SS3-35605-041615	Modified TO-15	2.2 "Hg	14.7 psi
04A	SS4-34124-041615	Modified TO-15	4.3 "Hg	15 psi
05A	SS5-37339-041615	Modified TO-15	4.3 "Hg	15 psi
06A	Lab Blank	Modified TO-15	NA	NA
06B	Lab Blank	Modified TO-15	NA	NA
07A	CCV	Modified TO-15	NA	NA
07B	CCV	Modified TO-15	NA	NA
08A	LCS	Modified TO-15	NA	NA
08AA	LCSD	Modified TO-15	NA	NA
08B	LCS	Modified TO-15	NA	NA
08BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Rayo DATE: 05/05/15

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
Farallon Consulting, LLC
Workorder# 1504358

Five 1 Liter Summa Canister (100% Certified) samples were received on April 21, 2015. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

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

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

Requirement	*TO-15*	*ATL Modifications*
Initial Calibration	</=30% RSD with 2 compounds allowed out to < 40% RSD	</=30% RSD with 4 compounds allowed out to < 40% RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SS1-35680-041615

Lab ID#: 1504358-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.23	0.96	1.1	4.7
Freon 11	0.23	0.31	1.3	1.7
Ethanol	1.1	49	2.1	92
Acetone	1.1	14 J0	2.7	34 J0
2-Propanol	1.1	5.9	2.8	14
Methylene Chloride	0.45	0.48	1.6	1.6
Hexane	0.23	0.68	0.80	2.4
2-Butanone (Methyl Ethyl Ketone)	1.1	2.3	3.3	6.7
Cyclohexane	0.23	19	0.78	64
Benzene	0.23	0.63	0.72	2.0
Heptane	0.23	2.4	0.93	9.9
4-Methyl-2-pentanone	0.23	3.5	0.93	14
Toluene	0.23	3.8	0.86	14
Tetrachloroethene	0.23	0.40	1.5	2.7
Chlorobenzene	0.23	0.81	1.0	3.7
Ethyl Benzene	0.23	3.9	0.98	17
m,p-Xylene	0.23	16	0.98	71
o-Xylene	0.23	9.1	0.98	39
Cumene	0.23	1.5	1.1	7.4
Propylbenzene	0.23	2.0	1.1	10
4-Ethyltoluene	0.23	11	1.1	56
1,3,5-Trimethylbenzene	0.23	5.1	1.1	25
1,2,4-Trimethylbenzene	0.23	16	1.1	78

Client Sample ID: SS2-3059-041615

Lab ID#: 1504358-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.23	0.84	1.1	4.2
Freon 11	0.23	0.28	1.3	1.6
Ethanol	1.2	8.8	2.2	16
Acetone	1.2	32 J0	2.7	77 J0
2-Propanol	1.2	3.6	2.8	8.9

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SS2-3059-041615

Lab ID#: 1504358-02A

2-Butanone (Methyl Ethyl Ketone)	1.2	6.5	3.4	19
Cyclohexane	0.23	1.1	0.79	3.8
Benzene	0.23	0.29	0.73	0.92
4-Methyl-2-pentanone	0.23	0.82	0.94	3.4
Toluene	0.23	0.31	0.87	1.2
Tetrachloroethene	0.23	0.35	1.6	2.4
Ethyl Benzene	0.23	0.33	1.0	1.4
m,p-Xylene	0.23	1.0	1.0	4.5
o-Xylene	0.23	0.50	1.0	2.2
4-Ethyltoluene	0.23	0.83	1.1	4.1
1,3,5-Trimethylbenzene	0.23	0.40	1.1	2.0
1,2,4-Trimethylbenzene	0.23	1.2	1.1	6.0

Client Sample ID: SS3-35605-041615

Lab ID#: 1504358-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.22	0.70	1.1	3.5
Freon 11	0.22	0.28	1.2	1.6
Ethanol	1.1	25	2.0	47
Acetone	1.1	8.9 J0	2.6	21 J0
2-Propanol	1.1	1.9	2.6	4.7
Carbon Disulfide	1.1	4.8	3.4	15
Methylene Chloride	0.43	0.89	1.5	3.1
Cyclohexane	0.22	3.1	0.74	11
Heptane	0.22	0.43	0.88	1.7
1,4-Dioxane	0.22	0.21 J	0.78	0.76 J
4-Methyl-2-pentanone	0.22	0.43	0.88	1.8
Toluene	0.22	1.2	0.81	4.6
Tetrachloroethene	0.22	0.20 J	1.5	1.4 J
Ethyl Benzene	0.22	1.2	0.94	5.3
m,p-Xylene	0.22	5.2	0.94	22
o-Xylene	0.22	2.7	0.94	12
Cumene	0.22	0.51	1.1	2.5
Propylbenzene	0.22	0.75	1.1	3.7

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SS3-35605-041615

Lab ID#: 1504358-03A

4-Ethyltoluene	0.22	4.7	1.1	23
1,3,5-Trimethylbenzene	0.22	2.2	1.1	11
1,2,4-Trimethylbenzene	0.22	6.8	1.1	33

Client Sample ID: SS4-34124-041615

Lab ID#: 1504358-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.24	0.74	1.2	3.6
Freon 11	0.24	0.28	1.3	1.6
Ethanol	1.2	15	2.2	29
Acetone	1.2	16 J0	2.8	38 J0
2-Propanol	1.2	4.2	2.9	10
Hexane	0.24	0.59	0.83	2.1
2-Butanone (Methyl Ethyl Ketone)	1.2	1.6	3.5	4.8
Cyclohexane	0.24	3.5	0.81	12
Benzene	0.24	0.94	0.75	3.0
Heptane	0.24	0.76	0.97	3.1
4-Methyl-2-pentanone	0.24	0.64	0.97	2.6
Toluene	0.24	2.4	0.89	9.0
Tetrachloroethene	0.24	2.1	1.6	14
Chlorobenzene	0.24	0.66	1.1	3.0
Ethyl Benzene	0.24	1.5	1.0	6.6
m,p-Xylene	0.24	4.6	1.0	20
o-Xylene	0.24	2.2	1.0	9.5
Cumene	0.24	0.39	1.2	1.9
Propylbenzene	0.24	0.55	1.2	2.7
4-Ethyltoluene	0.24	2.6	1.2	13
1,3,5-Trimethylbenzene	0.24	0.91	1.2	4.5
1,2,4-Trimethylbenzene	0.24	2.4	1.2	12

Client Sample ID: SS5-37339-041615

Lab ID#: 1504358-05A

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SS5-37339-041615

Lab ID#: 1504358-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.24	0.62	1.2	3.1
Freon 11	0.24	0.28	1.3	1.6
Ethanol	1.2	18	2.2	33
Acetone	1.2	7.0 J0	2.8	17 J0
2-Propanol	1.2	4.4	2.9	11
Carbon Disulfide	1.2	2.0	3.7	6.1
Cyclohexane	0.24	3.2	0.81	11
Heptane	0.24	0.40	0.97	1.6
4-Methyl-2-pentanone	0.24	0.51	0.97	2.1
Toluene	0.24	0.93	0.89	3.5
Tetrachloroethene	0.24	0.23 J	1.6	1.6 J
Ethyl Benzene	0.24	1.2	1.0	5.2
m,p-Xylene	0.24	4.2	1.0	18
o-Xylene	0.24	2.2	1.0	9.7
Cumene	0.24	0.50	1.2	2.5
Propylbenzene	0.24	0.71	1.2	3.5
4-Ethyltoluene	0.24	3.7	1.2	18
1,3,5-Trimethylbenzene	0.24	1.6	1.2	8.1
1,2,4-Trimethylbenzene	0.24	5.2	1.2	25

Client Sample ID: SS1-35680-041615

Lab ID#: 1504358-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042319**	**Date of Collection:**	**4/16/15 9:31:00 AM**
Dil. Factor:	**2.27**	**Date of Analysis:**	**4/23/15 10:16 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.23	0.96	1.1	4.7
Freon 114	0.23	Not Detected	1.6	Not Detected
Chloromethane	1.1	Not Detected	2.3	Not Detected
Vinyl Chloride	0.23	Not Detected	0.58	Not Detected
1,3-Butadiene	0.23	Not Detected	0.50	Not Detected
Bromomethane	1.1	Not Detected	4.4	Not Detected
Chloroethane	1.1	Not Detected	3.0	Not Detected
Freon 11	0.23	0.31	1.3	1.7
Ethanol	1.1	49	2.1	92
Freon 113	0.23	Not Detected	1.7	Not Detected
1,1-Dichloroethene	0.23	Not Detected	0.90	Not Detected
Acetone	1.1	14 J0	2.7	34 J0
2-Propanol	1.1	5.9	2.8	14
Carbon Disulfide	1.1	Not Detected	3.5	Not Detected
3-Chloropropene	1.1	Not Detected	3.6	Not Detected
Methylene Chloride	0.45	0.48	1.6	1.6
Methyl tert-butyl ether	0.23	Not Detected	0.82	Not Detected
trans-1,2-Dichloroethene	0.23	Not Detected	0.90	Not Detected
Hexane	0.23	0.68	0.80	2.4
1,1-Dichloroethane	0.23	Not Detected	0.92	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	2.3	3.3	6.7
cis-1,2-Dichloroethene	0.23	Not Detected	0.90	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.3	Not Detected
Chloroform	0.23	Not Detected	1.1	Not Detected
1,1,1-Trichloroethane	0.23	Not Detected	1.2	Not Detected
Cyclohexane	0.23	19	0.78	64
Carbon Tetrachloride	0.23	Not Detected	1.4	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.3	Not Detected
Benzene	0.23	0.63	0.72	2.0
1,2-Dichloroethane	0.23	Not Detected	0.92	Not Detected
Heptane	0.23	2.4	0.93	9.9
Trichloroethene	0.23	Not Detected	1.2	Not Detected
1,2-Dichloropropane	0.23	Not Detected	1.0	Not Detected
1,4-Dioxane	0.23	Not Detected	0.82	Not Detected
Bromodichloromethane	0.23	Not Detected	1.5	Not Detected
cis-1,3-Dichloropropene	0.23	Not Detected	1.0	Not Detected
4-Methyl-2-pentanone	0.23	3.5	0.93	14
Toluene	0.23	3.8	0.86	14
trans-1,3-Dichloropropene	0.23	Not Detected	1.0	Not Detected
1,1,2-Trichloroethane	0.23	Not Detected	1.2	Not Detected
Tetrachloroethene	0.23	0.40	1.5	2.7
2-Hexanone	1.1	Not Detected	4.6	Not Detected

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Client Sample ID: SS1-35680-041615

Lab ID#: 1504358-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042319**	**Date of Collection: 4/16/15 9:31:00 AM**	
Dil. Factor:	**2.27**	**Date of Analysis: 4/23/15 10:16 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.23	Not Detected	1.9	Not Detected
1,2-Dibromoethane (EDB)	0.23	Not Detected	1.7	Not Detected
Chlorobenzene	0.23	0.81	1.0	3.7
Ethyl Benzene	0.23	3.9	0.98	17
m,p-Xylene	0.23	16	0.98	71
o-Xylene	0.23	9.1	0.98	39
Styrene	0.23	Not Detected	0.97	Not Detected
Bromoform	0.23	Not Detected	2.3	Not Detected
Cumene	0.23	1.5	1.1	7.4
1,1,2,2-Tetrachloroethane	0.23	Not Detected	1.6	Not Detected
Propylbenzene	0.23	2.0	1.1	10
4-Ethyltoluene	0.23	11	1.1	56
1,3,5-Trimethylbenzene	0.23	5.1	1.1	25
1,2,4-Trimethylbenzene	0.23	16	1.1	78
1,3-Dichlorobenzene	0.23	Not Detected	1.4	Not Detected
1,4-Dichlorobenzene	0.23	Not Detected	1.4	Not Detected
alpha-Chlorotoluene	0.23	Not Detected	1.2	Not Detected
1,2-Dichlorobenzene	0.23	Not Detected	1.4	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected	8.4	Not Detected
Hexachlorobutadiene	1.1	Not Detected	12	Not Detected

J0 = Estimated value due to bias in the CCV.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: SS2-3059-041615

Lab ID#: 1504358-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042320**	**Date of Collection:**	**4/16/15 10:12:00 AM**
Dil. Factor:	**2.30**	**Date of Analysis:**	**4/23/15 10:58 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.23	0.84	1.1	4.2
Freon 114	0.23	Not Detected	1.6	Not Detected
Chloromethane	1.2	Not Detected	2.4	Not Detected
Vinyl Chloride	0.23	Not Detected	0.59	Not Detected
1,3-Butadiene	0.23	Not Detected	0.51	Not Detected
Bromomethane	1.2	Not Detected	4.5	Not Detected
Chloroethane	1.2	Not Detected	3.0	Not Detected
Freon 11	0.23	0.28	1.3	1.6
Ethanol	1.2	8.8	2.2	16
Freon 113	0.23	Not Detected	1.8	Not Detected
1,1-Dichloroethene	0.23	Not Detected	0.91	Not Detected
Acetone	1.2	32 J0	2.7	77 J0
2-Propanol	1.2	3.6	2.8	8.9
Carbon Disulfide	1.2	Not Detected	3.6	Not Detected
3-Chloropropene	1.2	Not Detected	3.6	Not Detected
Methylene Chloride	0.46	Not Detected	1.6	Not Detected
Methyl tert-butyl ether	0.23	Not Detected	0.83	Not Detected
trans-1,2-Dichloroethene	0.23	Not Detected	0.91	Not Detected
Hexane	0.23	Not Detected	0.81	Not Detected
1,1-Dichloroethane	0.23	Not Detected	0.93	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	6.5	3.4	19
cis-1,2-Dichloroethene	0.23	Not Detected	0.91	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.4	Not Detected
Chloroform	0.23	Not Detected	1.1	Not Detected
1,1,1-Trichloroethane	0.23	Not Detected	1.2	Not Detected
Cyclohexane	0.23	1.1	0.79	3.8
Carbon Tetrachloride	0.23	Not Detected	1.4	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.4	Not Detected
Benzene	0.23	0.29	0.73	0.92
1,2-Dichloroethane	0.23	Not Detected	0.93	Not Detected
Heptane	0.23	Not Detected	0.94	Not Detected
Trichloroethene	0.23	Not Detected	1.2	Not Detected
1,2-Dichloropropane	0.23	Not Detected	1.1	Not Detected
1,4-Dioxane	0.23	Not Detected	0.83	Not Detected
Bromodichloromethane	0.23	Not Detected	1.5	Not Detected
cis-1,3-Dichloropropene	0.23	Not Detected	1.0	Not Detected
4-Methyl-2-pentanone	0.23	0.82	0.94	3.4
Toluene	0.23	0.31	0.87	1.2
trans-1,3-Dichloropropene	0.23	Not Detected	1.0	Not Detected
1,1,2-Trichloroethane	0.23	Not Detected	1.2	Not Detected
Tetrachloroethene	0.23	0.35	1.6	2.4
2-Hexanone	1.2	Not Detected	4.7	Not Detected

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Client Sample ID: SS2-3059-041615

Lab ID#: 1504358-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042320**	**Date of Collection: 4/16/15 10:12:00 AM**	
Dil. Factor:	**2.30**	**Date of Analysis: 4/23/15 10:58 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.23	Not Detected	2.0	Not Detected
1,2-Dibromoethane (EDB)	0.23	Not Detected	1.8	Not Detected
Chlorobenzene	0.23	Not Detected	1.0	Not Detected
Ethyl Benzene	0.23	0.33	1.0	1.4
m,p-Xylene	0.23	1.0	1.0	4.5
o-Xylene	0.23	0.50	1.0	2.2
Styrene	0.23	Not Detected	0.98	Not Detected
Bromoform	0.23	Not Detected	2.4	Not Detected
Cumene	0.23	Not Detected	1.1	Not Detected
1,1,2,2-Tetrachloroethane	0.23	Not Detected	1.6	Not Detected
Propylbenzene	0.23	Not Detected	1.1	Not Detected
4-Ethyltoluene	0.23	0.83	1.1	4.1
1,3,5-Trimethylbenzene	0.23	0.40	1.1	2.0
1,2,4-Trimethylbenzene	0.23	1.2	1.1	6.0
1,3-Dichlorobenzene	0.23	Not Detected	1.4	Not Detected
1,4-Dichlorobenzene	0.23	Not Detected	1.4	Not Detected
alpha-Chlorotoluene	0.23	Not Detected	1.2	Not Detected
1,2-Dichlorobenzene	0.23	Not Detected	1.4	Not Detected
1,2,4-Trichlorobenzene	1.2	Not Detected	8.5	Not Detected
Hexachlorobutadiene	1.2	Not Detected	12	Not Detected

J0 = Estimated value due to bias in the CCV.

Container Type: 1 Liter Summa Canister (100% Certified)

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

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Client Sample ID: SS3-35605-041615

Lab ID#: 1504358-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042321**	**Date of Collection:**	**4/16/15 10:50:00 AM**
Dil. Factor:	**2.16**	**Date of Analysis:**	**4/24/15 05:17 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.22	0.70	1.1	3.5
Freon 114	0.22	Not Detected	1.5	Not Detected
Chloromethane	1.1	Not Detected	2.2	Not Detected
Vinyl Chloride	0.22	Not Detected	0.55	Not Detected
1,3-Butadiene	0.22	Not Detected	0.48	Not Detected
Bromomethane	1.1	Not Detected	4.2	Not Detected
Chloroethane	1.1	Not Detected	2.8	Not Detected
Freon 11	0.22	0.28	1.2	1.6
Ethanol	1.1	25	2.0	47
Freon 113	0.22	Not Detected	1.6	Not Detected
1,1-Dichloroethene	0.22	Not Detected	0.86	Not Detected
Acetone	1.1	8.9 J0	2.6	21 J0
2-Propanol	1.1	1.9	2.6	4.7
Carbon Disulfide	1.1	4.8	3.4	15
3-Chloropropene	1.1	Not Detected	3.4	Not Detected
Methylene Chloride	0.43	0.89	1.5	3.1
Methyl tert-butyl ether	0.22	Not Detected	0.78	Not Detected
trans-1,2-Dichloroethene	0.22	Not Detected	0.86	Not Detected
Hexane	0.22	Not Detected	0.76	Not Detected
1,1-Dichloroethane	0.22	Not Detected	0.87	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	Not Detected	3.2	Not Detected
cis-1,2-Dichloroethene	0.22	Not Detected	0.86	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected
Chloroform	0.22	Not Detected	1.0	Not Detected
1,1,1-Trichloroethane	0.22	Not Detected	1.2	Not Detected
Cyclohexane	0.22	3.1	0.74	11
Carbon Tetrachloride	0.22	Not Detected	1.4	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected
Benzene	0.22	Not Detected	0.69	Not Detected
1,2-Dichloroethane	0.22	Not Detected	0.87	Not Detected
Heptane	0.22	0.43	0.88	1.7
Trichloroethene	0.22	Not Detected	1.2	Not Detected
1,2-Dichloropropane	0.22	Not Detected	1.0	Not Detected
1,4-Dioxane	0.22	0.21 J	0.78	0.76 J
Bromodichloromethane	0.22	Not Detected	1.4	Not Detected
cis-1,3-Dichloropropene	0.22	Not Detected	0.98	Not Detected
4-Methyl-2-pentanone	0.22	0.43	0.88	1.8
Toluene	0.22	1.2	0.81	4.6
trans-1,3-Dichloropropene	0.22	Not Detected	0.98	Not Detected
1,1,2-Trichloroethane	0.22	Not Detected	1.2	Not Detected
Tetrachloroethene	0.22	0.20 J	1.5	1.4 J
2-Hexanone	1.1	Not Detected	4.4	Not Detected

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Client Sample ID: SS3-35605-041615

Lab ID#: 1504358-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042321**	**Date of Collection:**	**4/16/15 10:50:00 AM**
Dil. Factor:	**2.16**	**Date of Analysis:**	**4/24/15 05:17 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.22	Not Detected	1.8	Not Detected
1,2-Dibromoethane (EDB)	0.22	Not Detected	1.6	Not Detected
Chlorobenzene	0.22	Not Detected	0.99	Not Detected
Ethyl Benzene	0.22	1.2	0.94	5.3
m,p-Xylene	0.22	5.2	0.94	22
o-Xylene	0.22	2.7	0.94	12
Styrene	0.22	Not Detected	0.92	Not Detected
Bromoform	0.22	Not Detected	2.2	Not Detected
Cumene	0.22	0.51	1.1	2.5
1,1,2,2-Tetrachloroethane	0.22	Not Detected	1.5	Not Detected
Propylbenzene	0.22	0.75	1.1	3.7
4-Ethyltoluene	0.22	4.7	1.1	23
1,3,5-Trimethylbenzene	0.22	2.2	1.1	11
1,2,4-Trimethylbenzene	0.22	6.8	1.1	33
1,3-Dichlorobenzene	0.22	Not Detected	1.3	Not Detected
1,4-Dichlorobenzene	0.22	Not Detected	1.3	Not Detected
alpha-Chlorotoluene	0.22	Not Detected	1.1	Not Detected
1,2-Dichlorobenzene	0.22	Not Detected	1.3	Not Detected
1,2,4-Trichlorobenzene	1.1	Not Detected	8.0	Not Detected
Hexachlorobutadiene	1.1	Not Detected	12	Not Detected

J0 = Estimated value due to bias in the CCV.
J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: SS4-34124-041615

Lab ID#: 1504358-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042322**	**Date of Collection:**	**4/16/15 11:30:00 AM**
Dil. Factor:	**2.36**	**Date of Analysis:**	**4/24/15 06:00 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.24	0.74	1.2	3.6
Freon 114	0.24	Not Detected	1.6	Not Detected
Chloromethane	1.2	Not Detected	2.4	Not Detected
Vinyl Chloride	0.24	Not Detected	0.60	Not Detected
1,3-Butadiene	0.24	Not Detected	0.52	Not Detected
Bromomethane	1.2	Not Detected	4.6	Not Detected
Chloroethane	1.2	Not Detected	3.1	Not Detected
Freon 11	0.24	0.28	1.3	1.6
Ethanol	1.2	15	2.2	29
Freon 113	0.24	Not Detected	1.8	Not Detected
1,1-Dichloroethene	0.24	Not Detected	0.94	Not Detected
Acetone	1.2	16 J0	2.8	38 J0
2-Propanol	1.2	4.2	2.9	10
Carbon Disulfide	1.2	Not Detected	3.7	Not Detected
3-Chloropropene	1.2	Not Detected	3.7	Not Detected
Methylene Chloride	0.47	Not Detected	1.6	Not Detected
Methyl tert-butyl ether	0.24	Not Detected	0.85	Not Detected
trans-1,2-Dichloroethene	0.24	Not Detected	0.94	Not Detected
Hexane	0.24	0.59	0.83	2.1
1,1-Dichloroethane	0.24	Not Detected	0.96	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	1.6	3.5	4.8
cis-1,2-Dichloroethene	0.24	Not Detected	0.94	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.5	Not Detected
Chloroform	0.24	Not Detected	1.2	Not Detected
1,1,1-Trichloroethane	0.24	Not Detected	1.3	Not Detected
Cyclohexane	0.24	3.5	0.81	12
Carbon Tetrachloride	0.24	Not Detected	1.5	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.5	Not Detected
Benzene	0.24	0.94	0.75	3.0
1,2-Dichloroethane	0.24	Not Detected	0.96	Not Detected
Heptane	0.24	0.76	0.97	3.1
Trichloroethene	0.24	Not Detected	1.3	Not Detected
1,2-Dichloropropane	0.24	Not Detected	1.1	Not Detected
1,4-Dioxane	0.24	Not Detected	0.85	Not Detected
Bromodichloromethane	0.24	Not Detected	1.6	Not Detected
cis-1,3-Dichloropropene	0.24	Not Detected	1.1	Not Detected
4-Methyl-2-pentanone	0.24	0.64	0.97	2.6
Toluene	0.24	2.4	0.89	9.0
trans-1,3-Dichloropropene	0.24	Not Detected	1.1	Not Detected
1,1,2-Trichloroethane	0.24	Not Detected	1.3	Not Detected
Tetrachloroethene	0.24	2.1	1.6	14
2-Hexanone	1.2	Not Detected	4.8	Not Detected

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Client Sample ID: SS4-34124-041615

Lab ID#: 1504358-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042322**	**Date of Collection: 4/16/15 11:30:00 AM**	
Dil. Factor:	**2.36**	**Date of Analysis: 4/24/15 06:00 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.24	Not Detected	2.0	Not Detected
1,2-Dibromoethane (EDB)	0.24	Not Detected	1.8	Not Detected
Chlorobenzene	0.24	0.66	1.1	3.0
Ethyl Benzene	0.24	1.5	1.0	6.6
m,p-Xylene	0.24	4.6	1.0	20
o-Xylene	0.24	2.2	1.0	9.5
Styrene	0.24	Not Detected	1.0	Not Detected
Bromoform	0.24	Not Detected	2.4	Not Detected
Cumene	0.24	0.39	1.2	1.9
1,1,2,2-Tetrachloroethane	0.24	Not Detected	1.6	Not Detected
Propylbenzene	0.24	0.55	1.2	2.7
4-Ethyltoluene	0.24	2.6	1.2	13
1,3,5-Trimethylbenzene	0.24	0.91	1.2	4.5
1,2,4-Trimethylbenzene	0.24	2.4	1.2	12
1,3-Dichlorobenzene	0.24	Not Detected	1.4	Not Detected
1,4-Dichlorobenzene	0.24	Not Detected	1.4	Not Detected
alpha-Chlorotoluene	0.24	Not Detected	1.2	Not Detected
1,2-Dichlorobenzene	0.24	Not Detected	1.4	Not Detected
1,2,4-Trichlorobenzene	1.2	Not Detected	8.8	Not Detected
Hexachlorobutadiene	1.2	Not Detected	12	Not Detected

J0 = Estimated value due to bias in the CCV.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: SS5-37339-041615

Lab ID#: 1504358-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042408**	**Date of Collection:**	**4/16/15 12:51:00 PM**
Dil. Factor:	**2.36**	**Date of Analysis:**	**4/24/15 11:37 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.24	0.62	1.2	3.1
Freon 114	0.24	Not Detected	1.6	Not Detected
Chloromethane	1.2	Not Detected	2.4	Not Detected
Vinyl Chloride	0.24	Not Detected	0.60	Not Detected
1,3-Butadiene	0.24	Not Detected	0.52	Not Detected
Bromomethane	1.2	Not Detected	4.6	Not Detected
Chloroethane	1.2	Not Detected	3.1	Not Detected
Freon 11	0.24	0.28	1.3	1.6
Ethanol	1.2	18	2.2	33
Freon 113	0.24	Not Detected	1.8	Not Detected
1,1-Dichloroethene	0.24	Not Detected	0.94	Not Detected
Acetone	1.2	7.0 J0	2.8	17 J0
2-Propanol	1.2	4.4	2.9	11
Carbon Disulfide	1.2	2.0	3.7	6.1
3-Chloropropene	1.2	Not Detected	3.7	Not Detected
Methylene Chloride	0.47	Not Detected	1.6	Not Detected
Methyl tert-butyl ether	0.24	Not Detected	0.85	Not Detected
trans-1,2-Dichloroethene	0.24	Not Detected	0.94	Not Detected
Hexane	0.24	Not Detected	0.83	Not Detected
1,1-Dichloroethane	0.24	Not Detected	0.96	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	0.24	Not Detected	0.94	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.5	Not Detected
Chloroform	0.24	Not Detected	1.2	Not Detected
1,1,1-Trichloroethane	0.24	Not Detected	1.3	Not Detected
Cyclohexane	0.24	3.2	0.81	11
Carbon Tetrachloride	0.24	Not Detected	1.5	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.5	Not Detected
Benzene	0.24	Not Detected	0.75	Not Detected
1,2-Dichloroethane	0.24	Not Detected	0.96	Not Detected
Heptane	0.24	0.40	0.97	1.6
Trichloroethene	0.24	Not Detected	1.3	Not Detected
1,2-Dichloropropane	0.24	Not Detected	1.1	Not Detected
1,4-Dioxane	0.24	Not Detected	0.85	Not Detected
Bromodichloromethane	0.24	Not Detected	1.6	Not Detected
cis-1,3-Dichloropropene	0.24	Not Detected	1.1	Not Detected
4-Methyl-2-pentanone	0.24	0.51	0.97	2.1
Toluene	0.24	0.93	0.89	3.5
trans-1,3-Dichloropropene	0.24	Not Detected	1.1	Not Detected
1,1,2-Trichloroethane	0.24	Not Detected	1.3	Not Detected
Tetrachloroethene	0.24	0.23 J	1.6	1.6 J
2-Hexanone	1.2	Not Detected	4.8	Not Detected

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Client Sample ID: SS5-37339-041615

Lab ID#: 1504358-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042408**	**Date of Collection:**	**4/16/15 12:51:00 PM**
Dil. Factor:	**2.36**	**Date of Analysis:**	**4/24/15 11:37 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.24	Not Detected	2.0	Not Detected
1,2-Dibromoethane (EDB)	0.24	Not Detected	1.8	Not Detected
Chlorobenzene	0.24	Not Detected	1.1	Not Detected
Ethyl Benzene	0.24	1.2	1.0	5.2
m,p-Xylene	0.24	4.2	1.0	18
o-Xylene	0.24	2.2	1.0	9.7
Styrene	0.24	Not Detected	1.0	Not Detected
Bromoform	0.24	Not Detected	2.4	Not Detected
Cumene	0.24	0.50	1.2	2.5
1,1,2,2-Tetrachloroethane	0.24	Not Detected	1.6	Not Detected
Propylbenzene	0.24	0.71	1.2	3.5
4-Ethyltoluene	0.24	3.7	1.2	18
1,3,5-Trimethylbenzene	0.24	1.6	1.2	8.1
1,2,4-Trimethylbenzene	0.24	5.2	1.2	25
1,3-Dichlorobenzene	0.24	Not Detected	1.4	Not Detected
1,4-Dichlorobenzene	0.24	Not Detected	1.4	Not Detected
alpha-Chlorotoluene	0.24	Not Detected	1.2	Not Detected
1,2-Dichlorobenzene	0.24	Not Detected	1.4	Not Detected
1,2,4-Trichlorobenzene	1.2	Not Detected	8.8	Not Detected
Hexachlorobutadiene	1.2	Not Detected	12	Not Detected

J0 = Estimated value due to bias in the CCV.
J = Estimated value.

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	106	70-130

Client Sample ID: Lab Blank

Lab ID#: 1504358-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042308**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/23/15 11:44 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.50	Not Detected	1.0	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected UJ	1.2	Not Detected UJ
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.10	Not Detected	0.35	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.10	Not Detected	0.34	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.10	Not Detected	0.41	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
2-Hexanone	0.50	Not Detected	2.0	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 1504358-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042308**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/23/15 11:44 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

UJ = Analyte associated with low bias in the CCV and/or LCS.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	97	70-130

Client Sample ID: Lab Blank

Lab ID#: 1504358-06B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042407**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/24/15 10:48 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.50	Not Detected	1.0	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected UJ	1.2	Not Detected UJ
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.10	Not Detected	0.35	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.10	Not Detected	0.34	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.10	Not Detected	0.41	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected
2-Hexanone	0.50	Not Detected	2.0	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 1504358-06B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042407**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/24/15 10:48 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

UJ = Analyte associated with low bias in the CCV and/or LCS.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	98	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1504358-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042302**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/23/15 07:00 AM**	

Compound	%Recovery
Freon 12	94
Freon 114	96
Chloromethane	85
Vinyl Chloride	87
1,3-Butadiene	87
Bromomethane	83
Chloroethane	78
Freon 11	88
Ethanol	71
Freon 113	83
1,1-Dichloroethene	81
Acetone	66 Q
2-Propanol	82
Carbon Disulfide	92
3-Chloropropene	80
Methylene Chloride	80
Methyl tert-butyl ether	87
trans-1,2-Dichloroethene	87
Hexane	89
1,1-Dichloroethane	88
2-Butanone (Methyl Ethyl Ketone)	81
cis-1,2-Dichloroethene	92
Tetrahydrofuran	84
Chloroform	89
1,1,1-Trichloroethane	91
Cyclohexane	84
Carbon Tetrachloride	96
2,2,4-Trimethylpentane	85
Benzene	88
1,2-Dichloroethane	99
Heptane	93
Trichloroethene	93
1,2-Dichloropropane	82
1,4-Dioxane	91
Bromodichloromethane	94
cis-1,3-Dichloropropene	85
4-Methyl-2-pentanone	88
Toluene	87
trans-1,3-Dichloropropene	84
1,1,2-Trichloroethane	88
Tetrachloroethene	96
2-Hexanone	87

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1504358-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042302**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 4/23/15 07:00 AM**

Compound	%Recovery
Dibromochloromethane	98
1,2-Dibromoethane (EDB)	96
Chlorobenzene	84
Ethyl Benzene	91
m,p-Xylene	90
o-Xylene	91
Styrene	98
Bromoform	94
Cumene	96
1,1,2,2-Tetrachloroethane	81
Propylbenzene	91
4-Ethyltoluene	100
1,3,5-Trimethylbenzene	101
1,2,4-Trimethylbenzene	94
1,3-Dichlorobenzene	95
1,4-Dichlorobenzene	93
alpha-Chlorotoluene	85
1,2-Dichlorobenzene	95
1,2,4-Trichlorobenzene	77
Hexachlorobutadiene	81

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: CCV

Lab ID#: 1504358-07B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042402**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/24/15 06:56 AM**	

Compound	%Recovery
Freon 12	93
Freon 114	96
Chloromethane	85
Vinyl Chloride	85
1,3-Butadiene	85
Bromomethane	82
Chloroethane	77
Freon 11	85
Ethanol	72
Freon 113	82
1,1-Dichloroethene	84
Acetone	65 Q
2-Propanol	81
Carbon Disulfide	75
3-Chloropropene	81
Methylene Chloride	77
Methyl tert-butyl ether	91
trans-1,2-Dichloroethene	87
Hexane	93
1,1-Dichloroethane	88
2-Butanone (Methyl Ethyl Ketone)	84
cis-1,2-Dichloroethene	89
Tetrahydrofuran	82
Chloroform	90
1,1,1-Trichloroethane	95
Cyclohexane	88
Carbon Tetrachloride	97
2,2,4-Trimethylpentane	87
Benzene	86
1,2-Dichloroethane	99
Heptane	95
Trichloroethene	98
1,2-Dichloropropane	81
1,4-Dioxane	88
Bromodichloromethane	91
cis-1,3-Dichloropropene	85
4-Methyl-2-pentanone	86
Toluene	89
trans-1,3-Dichloropropene	90
1,1,2-Trichloroethane	85
Tetrachloroethene	100
2-Hexanone	90

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1504358-07B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042402**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/24/15 06:56 AM**	

Compound	%Recovery
Dibromochloromethane	99
1,2-Dibromoethane (EDB)	97
Chlorobenzene	88
Ethyl Benzene	92
m,p-Xylene	96
o-Xylene	96
Styrene	102
Bromoform	96
Cumene	101
1,1,2,2-Tetrachloroethane	84
Propylbenzene	94
4-Ethyltoluene	109
1,3,5-Trimethylbenzene	103
1,2,4-Trimethylbenzene	97
1,3-Dichlorobenzene	100
1,4-Dichlorobenzene	98
alpha-Chlorotoluene	91
1,2-Dichlorobenzene	97
1,2,4-Trichlorobenzene	94
Hexachlorobutadiene	90

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	102	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1504358-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042303**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/23/15 07:44 AM**	

Compound	%Recovery	Method Limits
Freon 12	105	70-130
Freon 114	113	70-130
Chloromethane	99	70-130
Vinyl Chloride	99	70-130
1,3-Butadiene	95	70-130
Bromomethane	92	70-130
Chloroethane	92	70-130
Freon 11	101	70-130
Ethanol	84	70-130
Freon 113	94	70-130
1,1-Dichloroethene	89	70-130
Acetone	76	70-130
2-Propanol	98	70-130
Carbon Disulfide	75	70-130
3-Chloropropene	88	70-130
Methylene Chloride	88	70-130
Methyl tert-butyl ether	91	70-130
trans-1,2-Dichloroethene	84	70-130
Hexane	100	70-130
1,1-Dichloroethane	97	70-130
2-Butanone (Methyl Ethyl Ketone)	93	70-130
cis-1,2-Dichloroethene	109	70-130
Tetrahydrofuran	93	70-130
Chloroform	101	70-130
1,1,1-Trichloroethane	107	70-130
Cyclohexane	97	70-130
Carbon Tetrachloride	107	70-130
2,2,4-Trimethylpentane	96	70-130
Benzene	99	70-130
1,2-Dichloroethane	112	70-130
Heptane	102	70-130
Trichloroethene	108	70-130
1,2-Dichloropropane	94	70-130
1,4-Dioxane	105	70-130
Bromodichloromethane	110	70-130
cis-1,3-Dichloropropene	88	70-130
4-Methyl-2-pentanone	100	70-130
Toluene	99	70-130
trans-1,3-Dichloropropene	96	70-130
1,1,2-Trichloroethane	100	70-130
Tetrachloroethene	110	70-130
2-Hexanone	102	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1504358-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042303**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/23/15 07:44 AM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	114	70-130
1,2-Dibromoethane (EDB)	108	70-130
Chlorobenzene	97	70-130
Ethyl Benzene	104	70-130
m,p-Xylene	105	70-130
o-Xylene	106	70-130
Styrene	115	70-130
Bromoform	107	70-130
Cumene	109	70-130
1,1,2,2-Tetrachloroethane	94	70-130
Propylbenzene	105	70-130
4-Ethyltoluene	117	70-130
1,3,5-Trimethylbenzene	116	70-130
1,2,4-Trimethylbenzene	106	70-130
1,3-Dichlorobenzene	109	70-130
1,4-Dichlorobenzene	106	70-130
alpha-Chlorotoluene	112	70-130
1,2-Dichlorobenzene	106	70-130
1,2,4-Trichlorobenzene	107	70-130
Hexachlorobutadiene	87	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: LCSD

Lab ID#: 1504358-08AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042304**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/23/15 08:33 AM**	

Compound	%Recovery	Method Limits
Freon 12	106	70-130
Freon 114	115	70-130
Chloromethane	98	70-130
Vinyl Chloride	100	70-130
1,3-Butadiene	96	70-130
Bromomethane	93	70-130
Chloroethane	88	70-130
Freon 11	101	70-130
Ethanol	88	70-130
Freon 113	92	70-130
1,1-Dichloroethene	94	70-130
Acetone	72	70-130
2-Propanol	102	70-130
Carbon Disulfide	75	70-130
3-Chloropropene	88	70-130
Methylene Chloride	90	70-130
Methyl tert-butyl ether	95	70-130
trans-1,2-Dichloroethene	86	70-130
Hexane	102	70-130
1,1-Dichloroethane	100	70-130
2-Butanone (Methyl Ethyl Ketone)	91	70-130
cis-1,2-Dichloroethene	113	70-130
Tetrahydrofuran	96	70-130
Chloroform	102	70-130
1,1,1-Trichloroethane	108	70-130
Cyclohexane	97	70-130
Carbon Tetrachloride	110	70-130
2,2,4-Trimethylpentane	94	70-130
Benzene	95	70-130
1,2-Dichloroethane	111	70-130
Heptane	100	70-130
Trichloroethene	107	70-130
1,2-Dichloropropane	91	70-130
1,4-Dioxane	102	70-130
Bromodichloromethane	106	70-130
cis-1,3-Dichloropropene	87	70-130
4-Methyl-2-pentanone	99	70-130
Toluene	99	70-130
trans-1,3-Dichloropropene	97	70-130
1,1,2-Trichloroethane	99	70-130
Tetrachloroethene	106	70-130
2-Hexanone	102	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1504358-08AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042304**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/23/15 08:33 AM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	112	70-130
1,2-Dibromoethane (EDB)	109	70-130
Chlorobenzene	95	70-130
Ethyl Benzene	102	70-130
m,p-Xylene	104	70-130
o-Xylene	107	70-130
Styrene	116	70-130
Bromoform	109	70-130
Cumene	110	70-130
1,1,2,2-Tetrachloroethane	94	70-130
Propylbenzene	106	70-130
4-Ethyltoluene	116	70-130
1,3,5-Trimethylbenzene	114	70-130
1,2,4-Trimethylbenzene	106	70-130
1,3-Dichlorobenzene	109	70-130
1,4-Dichlorobenzene	106	70-130
alpha-Chlorotoluene	110	70-130
1,2-Dichlorobenzene	107	70-130
1,2,4-Trichlorobenzene	101	70-130
Hexachlorobutadiene	88	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	99	70-130

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Client Sample ID: LCS

Lab ID#: 1504358-08B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042403**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/24/15 07:38 AM**	

Compound	%Recovery	Method Limits
Freon 12	103	70-130
Freon 114	112	70-130
Chloromethane	91	70-130
Vinyl Chloride	94	70-130
1,3-Butadiene	92	70-130
Bromomethane	89	70-130
Chloroethane	86	70-130
Freon 11	99	70-130
Ethanol	84	70-130
Freon 113	92	70-130
1,1-Dichloroethene	92	70-130
Acetone	71	70-130
2-Propanol	99	70-130
Carbon Disulfide	72	70-130
3-Chloropropene	86	70-130
Methylene Chloride	84	70-130
Methyl tert-butyl ether	94	70-130
trans-1,2-Dichloroethene	85	70-130
Hexane	103	70-130
1,1-Dichloroethane	94	70-130
2-Butanone (Methyl Ethyl Ketone)	94	70-130
cis-1,2-Dichloroethene	109	70-130
Tetrahydrofuran	93	70-130
Chloroform	96	70-130
1,1,1-Trichloroethane	104	70-130
Cyclohexane	96	70-130
Carbon Tetrachloride	105	70-130
2,2,4-Trimethylpentane	92	70-130
Benzene	92	70-130
1,2-Dichloroethane	106	70-130
Heptane	101	70-130
Trichloroethene	103	70-130
1,2-Dichloropropane	86	70-130
1,4-Dioxane	99	70-130
Bromodichloromethane	101	70-130
cis-1,3-Dichloropropene	84	70-130
4-Methyl-2-pentanone	94	70-130
Toluene	95	70-130
trans-1,3-Dichloropropene	98	70-130
1,1,2-Trichloroethane	94	70-130
Tetrachloroethene	104	70-130
2-Hexanone	100	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1504358-08B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042403**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/24/15 07:38 AM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	110	70-130
1,2-Dibromoethane (EDB)	107	70-130
Chlorobenzene	94	70-130
Ethyl Benzene	100	70-130
m,p-Xylene	103	70-130
o-Xylene	107	70-130
Styrene	114	70-130
Bromoform	108	70-130
Cumene	108	70-130
1,1,2,2-Tetrachloroethane	92	70-130
Propylbenzene	104	70-130
4-Ethyltoluene	114	70-130
1,3,5-Trimethylbenzene	114	70-130
1,2,4-Trimethylbenzene	105	70-130
1,3-Dichlorobenzene	110	70-130
1,4-Dichlorobenzene	106	70-130
alpha-Chlorotoluene	113	70-130
1,2-Dichlorobenzene	108	70-130
1,2,4-Trichlorobenzene	115	70-130
Hexachlorobutadiene	97	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	101	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1504358-08BB

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042404**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/24/15 08:27 AM**	

Compound	%Recovery	Method Limits
Freon 12	106	70-130
Freon 114	111	70-130
Chloromethane	91	70-130
Vinyl Chloride	94	70-130
1,3-Butadiene	93	70-130
Bromomethane	90	70-130
Chloroethane	86	70-130
Freon 11	100	70-130
Ethanol	87	70-130
Freon 113	91	70-130
1,1-Dichloroethene	94	70-130
Acetone	76	70-130
2-Propanol	98	70-130
Carbon Disulfide	73	70-130
3-Chloropropene	87	70-130
Methylene Chloride	87	70-130
Methyl tert-butyl ether	96	70-130
trans-1,2-Dichloroethene	86	70-130
Hexane	106	70-130
1,1-Dichloroethane	98	70-130
2-Butanone (Methyl Ethyl Ketone)	93	70-130
cis-1,2-Dichloroethene	110	70-130
Tetrahydrofuran	96	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	109	70-130
Cyclohexane	98	70-130
Carbon Tetrachloride	107	70-130
2,2,4-Trimethylpentane	93	70-130
Benzene	94	70-130
1,2-Dichloroethane	111	70-130
Heptane	101	70-130
Trichloroethene	105	70-130
1,2-Dichloropropane	88	70-130
1,4-Dioxane	101	70-130
Bromodichloromethane	105	70-130
cis-1,3-Dichloropropene	87	70-130
4-Methyl-2-pentanone	94	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	96	70-130
1,1,2-Trichloroethane	94	70-130
Tetrachloroethene	104	70-130
2-Hexanone	101	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1504358-08BB

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**e042404**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/24/15 08:27 AM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	108	70-130
1,2-Dibromoethane (EDB)	105	70-130
Chlorobenzene	93	70-130
Ethyl Benzene	99	70-130
m,p-Xylene	102	70-130
o-Xylene	105	70-130
Styrene	112	70-130
Bromoform	104	70-130
Cumene	106	70-130
1,1,2,2-Tetrachloroethane	91	70-130
Propylbenzene	102	70-130
4-Ethyltoluene	115	70-130
1,3,5-Trimethylbenzene	110	70-130
1,2,4-Trimethylbenzene	104	70-130
1,3-Dichlorobenzene	106	70-130
1,4-Dichlorobenzene	105	70-130
alpha-Chlorotoluene	110	70-130
1,2-Dichlorobenzene	106	70-130
1,2,4-Trichlorobenzene	108	70-130
Hexachlorobutadiene	92	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	100	70-130

PEMCO Eastlake

Cleanup Action Report—
1992 Fuel Line Release

Appendix B
Laboratory Reports

3600 Fremont Ave. N.
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Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 508368
Lab ID: 1508281

September 01, 2015

Attention Michael Erdahl:

Fremont Analytical, Inc. received 2 sample(s) on 8/25/2015 for the analyses presented in the following report.

Extractable Petroleum Hydrocarbons by NWEPH
Sample Moisture (Percent Moisture)
Volatile Petroleum Hydrocarbons by NWVPH

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,

Mike Ridgeway
President

Fremont Analytical

Date: *09/02/2015*

CLIENT: Friedman & Bruya
Project: 508368
Lab Order: 1508281

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1508281-001	SB3-4-4.5	08/20/2015 9:40 AM	08/25/2015 4:15 PM
1508281-002	SB8-4.5-5	08/20/2015 12:33 PM	08/25/2015 4:15 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1508281**
Date: **9/1/2015**

CLIENT: Friedman & Bruya
Project: 508368

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 LOQ
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

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

Client: Friedman & Bruya
Collection Date: 8/20/2015 9:40:00 AM
Project: 508368
Lab ID: 1508281-001
Matrix: Soil
Client Sample ID: SB3-4-4.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 11689		Analyst: EC
Aliphatic Hydrocarbon (C8-C10)	7.33	5.66		mg/Kg-dry	1	8/26/2015 11:06:00 PM
Aliphatic Hydrocarbon (C10-C12)	22.0	5.66		mg/Kg-dry	1	8/26/2015 11:06:00 PM
Aliphatic Hydrocarbon (C12-C16)	107	5.66		mg/Kg-dry	1	8/26/2015 11:06:00 PM
Aliphatic Hydrocarbon (C16-C21)	85.9	5.66		mg/Kg-dry	1	8/26/2015 11:06:00 PM
Aliphatic Hydrocarbon (C21-C34)	18.4	5.66		mg/Kg-dry	1	8/26/2015 11:06:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	5.66		mg/Kg-dry	1	8/27/2015 8:44:00 AM
Aromatic Hydrocarbon (C10-C12)	ND	5.66		mg/Kg-dry	1	8/27/2015 8:44:00 AM
Aromatic Hydrocarbon (C12-C16)	18.3	5.66		mg/Kg-dry	1	8/27/2015 8:44:00 AM
Aromatic Hydrocarbon (C16-C21)	52.4	5.66		mg/Kg-dry	1	8/27/2015 8:44:00 AM
Aromatic Hydrocarbon (C21-C34)	12.3	5.66		mg/Kg-dry	1	8/27/2015 8:44:00 AM
Surr: 1-Chlorooctadecane	89.0	65-140		%REC	1	8/26/2015 11:06:00 PM
Surr: o-Terphenyl	85.4	65-140		%REC	1	8/27/2015 8:44:00 AM
Volatile Petroleum Hydrocarbons by NWVPH				Batch ID: 11702		Analyst: BC
Aliphatic Hydrocarbon (C5-C6)	ND	1.41		mg/Kg-dry	1	8/26/2015 10:09:00 PM
Aliphatic Hydrocarbon (C6-C8)	2.30	1.41		mg/Kg-dry	1	8/26/2015 10:09:00 PM
Aliphatic Hydrocarbon (C8-C10)	ND	1.41		mg/Kg-dry	1	8/26/2015 10:09:00 PM
Aliphatic Hydrocarbon (C10-C12)	12.3	1.41		mg/Kg-dry	1	8/26/2015 10:09:00 PM
Aromatic Hydrocarbon (C8-C10)	7.19	1.41		mg/Kg-dry	1	8/26/2015 10:09:00 PM
Aromatic Hydrocarbon (C10-C12)	28.6	1.41		mg/Kg-dry	1	8/26/2015 10:09:00 PM
Aromatic Hydrocarbon (C12-C13)	152	14.1	D	mg/Kg-dry	10	9/1/2015 3:15:00 AM
Benzene	ND	0.354		mg/Kg-dry	1	8/26/2015 10:09:00 PM
Toluene	ND	0.354		mg/Kg-dry	1	8/26/2015 10:09:00 PM
Ethylbenzene	ND	0.354		mg/Kg-dry	1	8/26/2015 10:09:00 PM
m,p-Xylene	ND	0.354		mg/Kg-dry	1	8/26/2015 10:09:00 PM
o-Xylene	ND	0.354		mg/Kg-dry	1	8/26/2015 10:09:00 PM
Naphthalene	0.457	0.354		mg/Kg-dry	1	8/26/2015 10:09:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.354		mg/Kg-dry	1	8/26/2015 10:09:00 PM
Surr: 1,4-Difluorobenzene	74.8	65-140		%REC	1	8/26/2015 10:09:00 PM
Surr: Bromofluorobenzene	89.4	65-140		%REC	1	8/26/2015 10:09:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R24599		Analyst: CG
Percent Moisture	13.2	0.500		wt%	1	8/31/2015 11:03:46 AM

Fremont Analytical

Analytical Report

WO#: **1508281**
Date Reported: **9/1/2015**

Client: Friedman & Bruya
Collection Date: 8/20/2015 12:33:00 PM
Project: 508368
Lab ID: 1508281-002
Matrix: Soil
Client Sample ID: SB8-4.5-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 11689		Analyst: EC
Aliphatic Hydrocarbon (C8-C10)	48.5	5.58		mg/Kg-dry	1	8/27/2015 12:36:00 AM
Aliphatic Hydrocarbon (C10-C12)	153	5.58		mg/Kg-dry	1	8/27/2015 12:36:00 AM
Aliphatic Hydrocarbon (C12-C16)	534	55.8	D	mg/Kg-dry	10	8/27/2015 1:21:00 AM
Aliphatic Hydrocarbon (C16-C21)	547	55.8	D	mg/Kg-dry	10	8/27/2015 1:21:00 AM
Aliphatic Hydrocarbon (C21-C34)	144	5.58		mg/Kg-dry	1	8/27/2015 12:36:00 AM
Aromatic Hydrocarbon (C8-C10)	ND	5.58		mg/Kg-dry	1	8/27/2015 10:14:00 AM
Aromatic Hydrocarbon (C10-C12)	37.2	5.58		mg/Kg-dry	1	8/27/2015 10:14:00 AM
Aromatic Hydrocarbon (C12-C16)	311	55.8	D	mg/Kg-dry	10	8/27/2015 10:59:00 AM
Aromatic Hydrocarbon (C16-C21)	470	55.8	D	mg/Kg-dry	10	8/27/2015 10:59:00 AM
Aromatic Hydrocarbon (C21-C34)	174	5.58		mg/Kg-dry	1	8/27/2015 10:14:00 AM
Surr: 1-Chlorooctadecane	89.1	65-140		%REC	1	8/27/2015 12:36:00 AM
Surr: o-Terphenyl	88.0	65-140		%REC	1	8/27/2015 10:14:00 AM
Volatile Petroleum Hydrocarbons by NWVPH				Batch ID: 11702		Analyst: BC
Aliphatic Hydrocarbon (C5-C6)	ND	1.47		mg/Kg-dry	1	8/26/2015 11:17:00 PM
Aliphatic Hydrocarbon (C6-C8)	3.84	1.47		mg/Kg-dry	1	8/26/2015 11:17:00 PM
Aliphatic Hydrocarbon (C8-C10)	9.62	1.47		mg/Kg-dry	1	8/26/2015 11:17:00 PM
Aliphatic Hydrocarbon (C10-C12)	62.9	14.7	D	mg/Kg-dry	10	9/1/2015 3:50:00 AM
Aromatic Hydrocarbon (C8-C10)	22.1	1.47		mg/Kg-dry	1	8/26/2015 11:17:00 PM
Aromatic Hydrocarbon (C10-C12)	83.0	14.7	D	mg/Kg-dry	10	9/1/2015 3:50:00 AM
Aromatic Hydrocarbon (C12-C13)	189	14.7	D	mg/Kg-dry	10	9/1/2015 3:50:00 AM
Benzene	ND	0.368		mg/Kg-dry	1	8/26/2015 11:17:00 PM
Toluene	ND	0.368		mg/Kg-dry	1	8/26/2015 11:17:00 PM
Ethylbenzene	ND	0.368		mg/Kg-dry	1	8/26/2015 11:17:00 PM
m,p-Xylene	ND	0.368		mg/Kg-dry	1	8/26/2015 11:17:00 PM
o-Xylene	ND	0.368		mg/Kg-dry	1	8/26/2015 11:17:00 PM
Naphthalene	2.15	0.368		mg/Kg-dry	1	8/26/2015 11:17:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.368		mg/Kg-dry	1	8/26/2015 11:17:00 PM
Surr: 1,4-Difluorobenzene	87.0	65-140		%REC	1	8/26/2015 11:17:00 PM
Surr: Bromofluorobenzene	106	65-140		%REC	1	8/26/2015 11:17:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R24599		Analyst: CG
Percent Moisture	14.3	0.500		wt%	1	8/31/2015 11:03:46 AM

Work Order: 1508281
CLIENT: Friedman & Bruya
Project: 508368

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: MB-11689	SampType: MBLK			Units: mg/Kg		Prep Date: 8/25/2015		RunNo: 24531		
Client ID: MBLKS	Batch ID: 11689					Analysis Date: 8/26/2015		SeqNo: 462515		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	5.00									
Aliphatic Hydrocarbon (C10-C12)	ND	5.00									
Aliphatic Hydrocarbon (C12-C16)	ND	5.00									
Aliphatic Hydrocarbon (C16-C21)	ND	5.00									
Aliphatic Hydrocarbon (C21-C34)	ND	5.00									
Surr: 1-Chlorooctadecane	2.97		4.000		74.2	65	140				

Sample ID: LCS-11689	SampType: LCS			Units: mg/Kg		Prep Date: 8/25/2015		RunNo: 24531		
Client ID: LCSS	Batch ID: 11689					Analysis Date: 8/26/2015		SeqNo: 462514		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	19.8	5.00	20.00	0	98.8	70	130				
Aliphatic Hydrocarbon (C10-C12)	11.5	5.00	10.00	0	115	70	130				
Aliphatic Hydrocarbon (C12-C16)	10.0	5.00	10.00	0	100	70	130				
Aliphatic Hydrocarbon (C16-C21)	11.4	5.00	10.00	0	114	70	130				
Aliphatic Hydrocarbon (C21-C34)	10.7	5.00	10.00	0	107	70	130				
Surr: 1-Chlorooctadecane	3.39		4.000		84.7	65	140				

Sample ID: LCSD-11689	SampType: LCSD			Units: mg/Kg		Prep Date: 8/25/2015		RunNo: 24531			
Client ID: LCSS02	Batch ID: 11689					Analysis Date: 8/26/2015		SeqNo: 462513			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	21.5	5.00	20.00	0	107	70	130	19.76	8.32	20	
Aliphatic Hydrocarbon (C10-C12)	10.7	5.00	10.00	0	107	70	130	11.50	7.52	20	
Aliphatic Hydrocarbon (C12-C16)	10.1	5.00	10.00	0	101	70	130	10.01	1.34	20	
Aliphatic Hydrocarbon (C16-C21)	10.4	5.00	10.00	0	104	70	130	11.43	9.53	20	
Aliphatic Hydrocarbon (C21-C34)	10.8	5.00	10.00	0	108	70	130	10.66	0.853	20	
Surr: 1-Chlorooctadecane	3.36		4.000		84.0	65	140		0		

Work Order: 1508281
CLIENT: Friedman & Bruya
Project: 508368

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: MB-11689	SampType: MBLK			Units: mg/Kg		Prep Date: 8/25/2015		RunNo: 24531		
Client ID: MBLKS	Batch ID: 11689					Analysis Date: 8/27/2015		SeqNo: 462532		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	5.00									
Aromatic Hydrocarbon (C10-C12)	ND	5.00									
Aromatic Hydrocarbon (C12-C16)	ND	5.00									
Aromatic Hydrocarbon (C16-C21)	ND	5.00									
Aromatic Hydrocarbon (C21-C34)	ND	5.00									
Surr: o-Terphenyl	3.39		4.000		84.9	65	140				

Sample ID: LCS-11689	SampType: LCS			Units: mg/Kg		Prep Date: 8/25/2015		RunNo: 24531		
Client ID: LCSS	Batch ID: 11689					Analysis Date: 8/27/2015		SeqNo: 462531		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	9.73	5.00	10.00	0	97.3	70	130				
Aromatic Hydrocarbon (C10-C12)	9.97	5.00	10.00	0	99.7	70	130				
Aromatic Hydrocarbon (C12-C16)	11.3	5.00	10.00	0	113	70	130				
Aromatic Hydrocarbon (C16-C21)	10.3	5.00	10.00	0	103	70	130				
Aromatic Hydrocarbon (C21-C34)	9.89	5.00	10.00	0	98.9	70	130				
Surr: o-Terphenyl	3.03		4.000		75.6	65	140				

Sample ID: LCSD-11689	SampType: LCSD			Units: mg/Kg		Prep Date: 8/25/2015		RunNo: 24531		
Client ID: LCSS02	Batch ID: 11689					Analysis Date: 8/27/2015		SeqNo: 462530		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	9.93	5.00	10.00	0	99.3	70	130	9.727	2.09	20	
Aromatic Hydrocarbon (C10-C12)	10.0	5.00	10.00	0	100	70	130	9.968	0.341	20	
Aromatic Hydrocarbon (C12-C16)	11.2	5.00	10.00	0	112	70	130	11.27	0.260	20	
Aromatic Hydrocarbon (C16-C21)	10.8	5.00	10.00	0	108	70	130	10.34	4.48	20	
Aromatic Hydrocarbon (C21-C34)	10.7	5.00	10.00	0	107	70	130	9.895	7.66	20	
Surr: o-Terphenyl	3.42		4.000		85.6	65	140		0		

Work Order: 1508281
CLIENT: Friedman & Bruya
Project: 508368

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: LCS-11702	SampType: LCS			Units: mg/Kg		Prep Date: 8/26/2015		RunNo: 24571			
Client ID: LCSS	Batch ID: 11702					Analysis Date: 8/26/2015		SeqNo: 463133			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	25.1	2.00	30.00	0	83.8	70	130				
Aliphatic Hydrocarbon (C6-C8)	11.2	2.00	10.00	0	112	70	130				
Aliphatic Hydrocarbon (C8-C10)	8.33	2.00	10.00	0	83.3	70	130				
Aliphatic Hydrocarbon (C10-C12)	9.66	2.00	10.00	0	96.6	70	130				
Aromatic Hydrocarbon (C8-C10)	39.5	2.00	40.00	0	98.7	70	130				
Aromatic Hydrocarbon (C10-C12)	10.5	2.00	10.00	0	105	70	130				
Aromatic Hydrocarbon (C12-C13)	10.0	2.00	10.00	0	100	70	130				
Benzene	7.81	0.500	10.00	0	78.1	70	130				
Toluene	7.86	0.500	10.00	0	78.6	70	130				
Ethylbenzene	8.28	0.500	10.00	0	82.8	70	130				
m,p-Xylene	17.1	0.500	20.00	0	85.3	70	130				
o-Xylene	9.44	0.500	10.00	0	94.4	70	130				
Naphthalene	8.68	0.500	10.00	0	86.8	70	130				
Methyl tert-butyl ether (MTBE)	7.86	0.500	10.00	0	78.6	70	130				
Surr: 1,4-Difluorobenzene	2.03		2.500		81.2	65	140				
Surr: Bromofluorobenzene	2.49		2.500		99.5	65	140				

Sample ID: MB-11702	SampType: MBLK			Units: mg/Kg		Prep Date: 8/26/2015		RunNo: 24571			
Client ID: MBLKS	Batch ID: 11702					Analysis Date: 8/26/2015		SeqNo: 463134			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	2.00		0	0						
Aliphatic Hydrocarbon (C6-C8)	ND	2.00		0	0						
Aliphatic Hydrocarbon (C8-C10)	ND	2.00		0	0						
Aliphatic Hydrocarbon (C10-C12)	ND	2.00		0	0						
Aromatic Hydrocarbon (C8-C10)	ND	2.00		0	0						
Aromatic Hydrocarbon (C10-C12)	ND	2.00		0	0						
Aromatic Hydrocarbon (C12-C13)	ND	2.00		0	0						
Benzene	ND	0.500		0	0						
Toluene	ND	0.500		0	0						
Ethylbenzene	ND	0.500		0	0						

Work Order: 1508281
CLIENT: Friedman & Bruya
Project: 508368

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: MB-11702	SampType: MBLK			Units: mg/Kg		Prep Date: 8/26/2015		RunNo: 24571			
Client ID: MBLKS	Batch ID: 11702					Analysis Date: 8/26/2015		SeqNo: 463134			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	ND	0.500		0	0						
o-Xylene	ND	0.500		0	0						
Naphthalene	ND	0.500		0	0						
Methyl tert-butyl ether (MTBE)	ND	0.500		0	0						
Surr: 1,4-Difluorobenzene	2.62		2.500		105	65	140				
Surr: Bromofluorobenzene	2.12		2.500		84.6	65	140				

Sample ID: 1508281-001BDUP	SampType: DUP			Units: mg/Kg-dry		Prep Date: 8/26/2015		RunNo: 24571			
Client ID: SB3-4-4.5	Batch ID: 11702					Analysis Date: 8/26/2015		SeqNo: 463129			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	1.41		0	0			0		25	
Aliphatic Hydrocarbon (C6-C8)	1.92	1.41		0	0			2.297	17.7	25	
Aliphatic Hydrocarbon (C8-C10)	2.12	1.41		0	0			0.7858	91.7	25	
Aliphatic Hydrocarbon (C10-C12)	14.0	1.41		0	0			12.33	12.4	25	
Aromatic Hydrocarbon (C8-C10)	6.39	1.41		0	0			7.186	11.7	25	
Aromatic Hydrocarbon (C10-C12)	29.4	1.41		0	0			28.63	2.65	25	
Aromatic Hydrocarbon (C12-C13)	80.1	1.41		0	0			72.88	9.43	25	E
Benzene	ND	0.354		0	0			0		25	
Toluene	ND	0.354		0	0			0		25	
Ethylbenzene	ND	0.354		0	0			0		25	
m,p-Xylene	ND	0.354		0	0			0		25	
o-Xylene	ND	0.354		0	0			0		25	
Naphthalene	0.897	0.354		0	0			0.4568	65.1	25	R
Methyl tert-butyl ether (MTBE)	ND	0.354		0	0			0		25	
Surr: 1,4-Difluorobenzene	1.22		1.769		68.9	65	140		0		
Surr: Bromofluorobenzene	1.51		1.769		85.5	65	140		0	0	

NOTES:
R - High RPD due to low analyte concentration. In this range, high RPD's may be expected.

Work Order: 1508281
CLIENT: Friedman & Bruya
Project: 508368

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: **1508281-002BMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/26/2015**		RunNo: **24571**			
Client ID: **SB8-4.5-5**	Batch ID: **11702**					Analysis Date: **8/26/2015**		SeqNo: **463130**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	30.7	1.47	22.06	0	139	70	130				S
Aliphatic Hydrocarbon (C6-C8)	18.1	1.47	7.352	3.840	194	70	130				S
Aliphatic Hydrocarbon (C8-C10)	9.06	1.47	7.352	9.620	-7.60	70	130				S
Aliphatic Hydrocarbon (C10-C12)	44.3	1.47	7.352	42.26	27.8	70	130				SE
Aromatic Hydrocarbon (C8-C10)	56.5	1.47	29.41	22.09	117	70	130				
Aromatic Hydrocarbon (C10-C12)	72.9	1.47	7.352	70.02	38.7	70	130				SE
Aromatic Hydrocarbon (C12-C13)	94.6	1.47	7.352	108.7	-192	70	130				SE
Benzene	6.61	0.368	7.352	0	90.0	70	130				
Toluene	6.92	0.368	7.352	0.09312	92.9	70	130				
Ethylbenzene	7.59	0.368	7.352	0	103	70	130				
m,p-Xylene	14.6	0.368	14.70	0	99.6	70	130				
o-Xylene	7.96	0.368	7.352	0.2735	104	70	130				
Naphthalene	10.2	0.368	7.352	2.153	109	70	130				
Methyl tert-butyl ether (MTBE)	5.69	0.368	7.352	0	77.3	70	130				
Surr: 1,4-Difluorobenzene	1.92		1.838		104	65	140				
Surr: Bromofluorobenzene	1.98		1.838		108	65	140				

NOTES:
S - Outlying QC recoveries were associated with this sample. The method is in control as indicated by the LCS.

Work Order: 1508281
CLIENT: Friedman & Bruya
Project: 508368

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID: 1508281-001ADUP	SampType: DUP			Units: wt%		Prep Date: 8/31/2015		RunNo: 24599		
Client ID: SB3-4-4.5	Batch ID: R24599					Analysis Date: 8/31/2015		SeqNo: 463603		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	13.4	0.500						13.18	1.74	20	

Sample ID: 1508298-009ADUP	SampType: DUP			Units: wt%		Prep Date: 8/31/2015		RunNo: 24599		
Client ID: BATCH	Batch ID: R24599					Analysis Date: 8/31/2015		SeqNo: 463614		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	24.2	0.500						23.59	2.66	20	

Sample ID: 1508312-001ADUP	SampType: DUP			Units: wt%		Prep Date: 8/31/2015		RunNo: 24599		
Client ID: BATCH	Batch ID: R24599					Analysis Date: 8/31/2015		SeqNo: 463627		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	3.12	0.500						3.039	2.62	20	

Fremont Analytical

Sample Log-In Check List

Client Name:	**FB**	Work Order Number:	**1508281**
Logged by:	**Erica Silva**	Date Received:	**8/25/2015 4:15:00 PM**

Chain of Custody

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

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 ☐
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:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	5.8
Sample	4.9

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

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

1508281

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER

PROJECT NAME/NO. 508368

PO # P632

REMARKS

Please Email Results

Page # _____ of _____

TURNAROUND TIME

☑ Standard (2 Weeks)

☐ RUSH _____

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Dioxins and Furans by 8290	EPH	VPH	Nitrate	Sulfate	Alkalinity					Notes
SB3-4-4.5		8/20	9:40	S	2		✓	✓								
SB8-4.5-5		8/20	12:35	S	2		✓	✓								

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Michael Erdahl	Friedman & Bruya	8/25	1540
Received by:	Samantha Beerman	FAT	08/25/15	4:15PM
Relinquished by:				
Received by:				

508368

SAMPLE CHAIN OF CUSTODY

ME 08-20-15

CI3 / VI / VS3

Page # 1 of 2

Send Report To Gabriel Cisneros

Company Floyd | Snider

Address 601 Union Street, Suite 600

City, State, ZIP Seattle, WA 98101

Phone # 206-292-2078 Fax #

SAMPLERS (signature) [signature]

PROJECT NAME/NO. Pemco

PO#

REMARKS 8260 short list to include, BTEX, MTBE, hexane, EDC. 8270 to include Naph, 1-methylNaph, 2-methylNaph & cPAHS. Run archive samples if SB4-4.5-5 has detections above cleanup levels

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	Short List VOCs by 8260	SIM SVOCs by 8270	HFS	6020 Total Lead	VPH/EPH	EDB by 8011	Naph, cPAHs, 1-Methyl Naph, 2-Methyl Naph by 8270		Archive	Notes
~~SB1-4-4.5~~ SB1-4.5-5	01 A-E	8/20	0850	Soil	5	/	/	/										
SB2-4-4.5	02	↓	0910	↓	5	/	/	/										
SB3-4-4.5	03 A-H		0940		8	/	/		/	/		/	/	/	/			
SB3-5.5-6.0	04 A-D		0950		4	/	/	/									Ø	Analyze per GC 8/31/15
SB4-4.5-5.0	05 A-E		1005		5	/	/	/										
SB4-6-6.5	06 A-D		1015		4	Ø	Ø	Ø									~~/~~	~~Archive~~ Run only if SB4-4.5 has TPH det
SB5-4-4.5	07 A-E		1045		5	Ø	Ø	Ø									~~/~~	~~Archive~~
SB6-4-4.5	08		1115		5	/	/	/										
SB7-4-4.5	09		1140		5	/	/	/										Samples received at 3 °C
SB8-4.5-5	10 A-H	↓	1238	↓	8	/	/		/	/		/	/	/	/			

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	Gabriel Cisneros	Floyd Snider	8/20	1430
Received by:	[signature]	Dovo	FBI	"	14:30
Relinquished by:					
Received by:					

508368

SAMPLE CHAIN OF CUSTODY

ME 08-20-15 CE 3/11/V83

Page # 2 of 2

Send Report To Gabriel Cisneros

Company Floyd|Snider

Address 601 Union Street Suite 600

City, State, ZIP Seattle, WA 98101

Phone #206-292-2078 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Pemco

PO#

REMARKS 8260 Short List to include BTEX, MTBE hexane, & EDC/EDB. 8270 to include Naphth, cPAHs, 1-methylnaphth & 2-methylnaphth.

TURNAROUND TIME
- ☑ Standard (2 Weeks)
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	Short List VOCs by 8260	SVOCs by 8270	HFS	Total Lead 6020	VPH/EPH	Naph, cPAHs, 2-methylnaph, 1-Methylnaph 8270				Notes
SB8-6-6.5	11A-E	8/20/15	1250	Soil	4	/	/	/										
SB9-4.5-5	12T	8/20/15	1315	Soil	4	/	/	/										
~~Trip Blank~~	13A-B																	added in lab

Samples received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Gabriel Cisneros	Floyd|Snider	8/20/15	1430
Received by:	d d vo	FBZ	11	14:30
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FOR C\C C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

September 3, 2015

Gabriel Cisneros, Project Manager
Floyd-Snider
Two Union Square, Suite 600
601 Union St
Seattle, WA 98101

Dear Mr. Cisneros:

Included are the results from the testing of material submitted on August 20, 2015 from the Pemco, F&BI 508368 project. There are 28 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
FDS0903R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 20, 2015 by Friedman & Bruya, Inc. from the Floyd-Snider Pemco, F&BI 508368 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Floyd-Snider
508368 -01	SB1-4.5-5
508368 -02	SB2-4-4.5
508368 -03	SB3-4.4.5
508368 -04	SB3-5.5-6.0
508368 -05	SB4-4.5-5.0
508368 -06	SB4-6-6.5
508368 -07	SB5-4-4.5
508368 -08	SB6-4-4.5
508368 -09	SB7-4-4.5
508368 -10	SB8-4.5-5
508368 -11	SB8-6-6.5
508368 -12	SB9-4.5-5
508368 -13	Trip Blank

Samples SB-3-4-4.5 and SB8-4.5-5 were sent to Fremont Analytical for EPH and VPH analyses. The report is enclosed.

Hexane failed below the acceptance criteria in the 8260C matrix spike sample. The laboratory control samples met the acceptance criteria, therefore the data were likely due to sample matrix effect.

All other quality control requirements were acceptable.

Date of Report: 09/03/15
Date Received: 08/20/15
Project: Pemco, F&BI 508368
Date Extracted: 08/24/15
Date Analyzed: 08/24/15 and 08/25/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 58-139)
SB3-4.4.5 508368-03	17	94
SB8-4.5-5 508368-10	140	ip
Method Blank 05-1643 MB	<2	108

Date of Report: 09/03/15
Date Received: 08/20/15
Project: Pemco, F&BI 508368
Date Extracted: 08/24/15 and 09/02/15
Date Analyzed: 08/24/15 and 09/02/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
SB1-4.5-5 508368-01	<0.02	0.021	<0.02	0.079	2.7	95
SB2-4-4.5 508368-02	<0.02	<0.02	<0.02	<0.06	<2	95
SB3-5.5-6.0 508368-04	<0.02	<0.02	<0.02	<0.06	<2	93
SB4-4.5-5.0 508368-05	<0.02	<0.02	<0.02	<0.06	<2	96
SB4-6-6.5 508368-06	<0.02	<0.02	<0.02	<0.06	<2	74
SB5-4-4.5 508368-07	<0.02	<0.02	<0.02	<0.06	<2	72
SB6-4-4.5 508368-08	<0.02	<0.02	<0.02	<0.06	<2	90
SB7-4-4.5 508368-09	<0.02	<0.02	0.031	0.089	28	93
SB8-6-6.5 508368-11	<0.02	<0.02	<0.02	<0.06	<2	95

Date of Report: 09/03/15
Date Received: 08/20/15
Project: Pemco, F&BI 508368
Date Extracted: 08/24/15 and 09/02/15
Date Analyzed: 08/24/15 and 09/02/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
SB9-4.5-5 508368-12	<0.02	<0.02	<0.02	<0.06	<2	92
Method Blank 05-1643 MB	<0.02	<0.02	<0.02	<0.06	<2	106
Method Blank 05-1752 MB	<0.02	<0.02	<0.02	<0.06	<2	74

Date of Report: 09/03/15
Date Received: 08/20/15
Project: Pemco, F&BI 508368
Date Extracted: 08/24/15 and 08/31/15
Date Analyzed: 08/24/15 and 08/31/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
SB1-4.5-5 508368-01	<50	690	104
SB2-4-4.5 508368-02	<50	380	110
SB3-4.4.5 508368-03	370	<250	109
SB3-5.5-6.0 508368-04	<50	<250	109
SB4-4.5-5.0 508368-05	78	<250	110
SB4-6-6.5 508368-06	<50	<250	105
SB5-4-4.5 508368-07	<50	<250	100
SB6-4-4.5 508368-08	<50	<250	109
SB7-4-4.5 508368-09	85	<250	99
SB8-4.5-5 508368-10	3,100	<250	116

Date of Report: 09/03/15
Date Received: 08/20/15
Project: Pemco, F&BI 508368
Date Extracted: 08/24/15 and 08/31/15
Date Analyzed: 08/24/15 and 08/31/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
SB8-6-6.5 508368-11	<50	<250	110
SB9-4.5-5 508368-12	<50	<250	113
Method Blank 05-1724 MB	<50	<250	110
Method Blank 05-1791 MB	<50	<250	98

Analysis For Total Metals By EPA Method 6020

Client ID:	SB3-4.4.5	Client:	Floyd-Snider
Date Received:	08/20/15	Project:	Pemco, F&BI 508368
Date Extracted:	08/25/15	Lab ID:	508368-03
Date Analyzed:	08/26/15	Data File:	508368-03.023
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	4.92

Analysis For Total Metals By EPA Method 6020

Client ID:	SB8-4.5-5	Client:	Floyd-Snider
Date Received:	08/20/15	Project:	Pemco, F&BI 508368
Date Extracted:	08/25/15	Lab ID:	508368-10
Date Analyzed:	08/26/15	Data File:	508368-10.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	94	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	2.20

Analysis For Total Metals By EPA Method 6020

Client ID:	Method Blank	Client:	Floyd-Snider
Date Received:	NA	Project:	Pemco, F&BI 508368
Date Extracted:	08/25/15	Lab ID:	I5-471 mb
Date Analyzed:	08/26/15	Data File:	I5-471 mb.017
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	SB3-4.4.5	Client:	Floyd-Snider
Date Received:	08/20/15	Project:	Pemco, F&BI 508368
Date Extracted:	08/24/15	Lab ID:	508368-03
Date Analyzed:	08/24/15	Data File:	082416.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	113	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	118	50	150

Compounds:	Concentration mg/kg (ppm)
1,2-Dibromoethane (EDB)	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	SB8-4.5-5	Client:	Floyd-Snider
Date Received:	08/20/15	Project:	Pemco, F&BI 508368
Date Extracted:	08/24/15	Lab ID:	508368-10
Date Analyzed:	08/24/15	Data File:	082418.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	116	50	150
Toluene-d8	95	50	150
4-Bromofluorobenzene	88 J	50	150

Compounds:	Concentration mg/kg (ppm)
1,2-Dibromoethane (EDB)	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	Pemco, F&BI 508368
Date Extracted:	08/24/15	Lab ID:	05-1687 mb
Date Analyzed:	08/24/15	Data File:	082408.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration mg/kg (ppm)
1,2-Dibromoethane (EDB)	<0.005

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB3-4.4.5	Client:	Floyd-Snider
Date Received:	08/20/15	Project:	Pemco, F&BI 508368
Date Extracted:	08/24/15	Lab ID:	508368-03
Date Analyzed:	08/24/15	Data File:	082434.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	89	113
Toluene-d8	98	64	137
4-Bromofluorobenzene	97	81	119

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05
Hexane	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SB8-4.5-5	Client:	Floyd-Snider
Date Received:	08/20/15	Project:	Pemco, F&BI 508368
Date Extracted:	08/24/15	Lab ID:	508368-10
Date Analyzed:	08/24/15	Data File:	082435.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	89	113
Toluene-d8	98	64	137
4-Bromofluorobenzene	98	81	119

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05
Hexane	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	Pemco, F&BI 508368
Date Extracted:	08/24/15	Lab ID:	05-1689 mb
Date Analyzed:	08/24/15	Data File:	082425.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	89	113
Toluene-d8	99	64	137
4-Bromofluorobenzene	99	81	119

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
1,2-Dichloroethane (EDC)	<0.05
Hexane	<0.25

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SB3-4.4.5	Client:	Floyd-Snider
Date Received:	08/20/15	Project:	Pemco, F&BI 508368
Date Extracted:	08/24/15	Lab ID:	508368-03 1/5
Date Analyzed:	08/24/15	Data File:	082414.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	113	31	163
Benzo(a)anthracene-d12	118	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
2-Methylnaphthalene	<0.01
1-Methylnaphthalene	0.026
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SB8-4.5-5	Client:	Floyd-Snider
Date Received:	08/20/15	Project:	Pemco, F&BI 508368
Date Extracted:	08/24/15	Lab ID:	508368-10 1/5
Date Analyzed:	08/24/15	Data File:	082415.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	101	31	163
Benzo(a)anthracene-d12	122	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
2-Methylnaphthalene	2.4 ve
1-Methylnaphthalene	2.2 ve
Benz(a)anthracene	<0.01
Chrysene	0.013
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	SB8-4.5-5	Client:	Floyd-Snider
Date Received:	08/20/15	Project:	Pemco, F&BI 508368
Date Extracted:	08/24/15	Lab ID:	508368-10 1/50
Date Analyzed:	08/25/15	Data File:	082506.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	116 d	31	163
Benzo(a)anthracene-d12	118 d	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.1
2-Methylnaphthalene	2.8
1-Methylnaphthalene	2.9
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	Pemco, F&BI 508368
Date Extracted:	08/24/15	Lab ID:	05-1722 mb 1/5
Date Analyzed:	08/24/15	Data File:	082405.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	102	31	163
Benzo(a)anthracene-d12	112	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
2-Methylnaphthalene	<0.01
1-Methylnaphthalene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01

Date of Report: 09/03/15
Date Received: 08/20/15
Project: Pemco, F&BI 508368

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING METHOD 8021B AND NWTPH-Gx

Laboratory Code: 508400-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	82	69-120
Toluene	mg/kg (ppm)	0.5	83	70-117
Ethylbenzene	mg/kg (ppm)	0.5	81	65-123
Xylenes	mg/kg (ppm)	1.5	82	66-120
Gasoline	mg/kg (ppm)	20	85	71-131

Date of Report: 09/03/15
Date Received: 08/20/15
Project: Pemco, F&BI 508368

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 508368-06 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	85	69-120
Toluene	mg/kg (ppm)	0.5	96	70-117
Ethylbenzene	mg/kg (ppm)	0.5	98	65-123
Xylenes	mg/kg (ppm)	1.5	94	66-120
Gasoline	mg/kg (ppm)	20	90	71-131

Date of Report: 09/03/15
Date Received: 08/20/15
Project: Pemco, F&BI 508368

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 508368-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	440	119	122	73-135	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	122	74-139

Date of Report: 09/03/15
Date Received: 08/20/15
Project: Pemco, F&BI 508368

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 508557-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	1,300	116	120	64-133	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	124	58-147

Date of Report: 09/03/15
Date Received: 08/20/15
Project: Pemco, F&BI 508368

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020

Laboratory Code: 508397-68 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	16.8	103	102	59-148	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	106	80-120

Date of Report: 09/03/15
Date Received: 08/20/15
Project: Pemco, F&BI 508368

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C DIRECT SPARGE

Laboratory Code: 508308-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
1,2-Dibromoethane (EDB)	mg/kg (ppm)	<0.005	<0.005	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dibromoethane (EDB)	mg/kg (ppm)	0.05	95	97	70-130	2

Date of Report: 09/03/15
Date Received: 08/20/15
Project: Pemco, F&BI 508368

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 508382-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Hexane	mg/kg (ppm)	2.5	<0.25	9 vo	10	10-95	11
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	61	61	17-134	0
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	55	58	22-124	5
Benzene	mg/kg (ppm)	2.5	<0.03	51	52	26-114	2
Toluene	mg/kg (ppm)	2.5	<0.05	49	52	34-112	6
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	46	51	34-115	10
m,p-Xylene	mg/kg (ppm)	5	<0.1	45	50	25-125	11
o-Xylene	mg/kg (ppm)	2.5	0.044	47	53	27-126	12

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Hexane	mg/kg (ppm)	2.5	91	55-107
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	101	72-122
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	96	73-111
Benzene	mg/kg (ppm)	2.5	96	72-106
Toluene	mg/kg (ppm)	2.5	96	74-111
Ethylbenzene	mg/kg (ppm)	2.5	100	75-112
m,p-Xylene	mg/kg (ppm)	5	100	77-115
o-Xylene	mg/kg (ppm)	2.5	103	76-115

Date of Report: 09/03/15
Date Received: 08/20/15
Project: Pemco, F&BI 508368

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: 508386-01 1/25 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	0.59	200 b	44-129
2-Methylnaphthalene	mg/kg (ppm)	0.17	2.5	176 b	45-135
1-Methylnaphthalene	mg/kg (ppm)	0.17	0.71	105 b	40-141
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.05	100	23-144
Chrysene	mg/kg (ppm)	0.17	<0.05	91	32-149
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.05	82	23-176
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.05	81	42-139
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.05	84	21-163
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.05	91	23-170
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.05	92	31-146

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	82	84	58-121	2
2-Methylnaphthalene	mg/kg (ppm)	0.17	82	84	58-123	2
1-Methylnaphthalene	mg/kg (ppm)	0.17	82	83	60-124	1
Benz(a)anthracene	mg/kg (ppm)	0.17	96	97	51-115	1
Chrysene	mg/kg (ppm)	0.17	95	95	55-129	0
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	83	87	56-123	5
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	81	79	54-131	2
Benzo(a)pyrene	mg/kg (ppm)	0.17	79	80	51-118	1
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	96	97	49-148	1
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	95	94	50-141	1

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

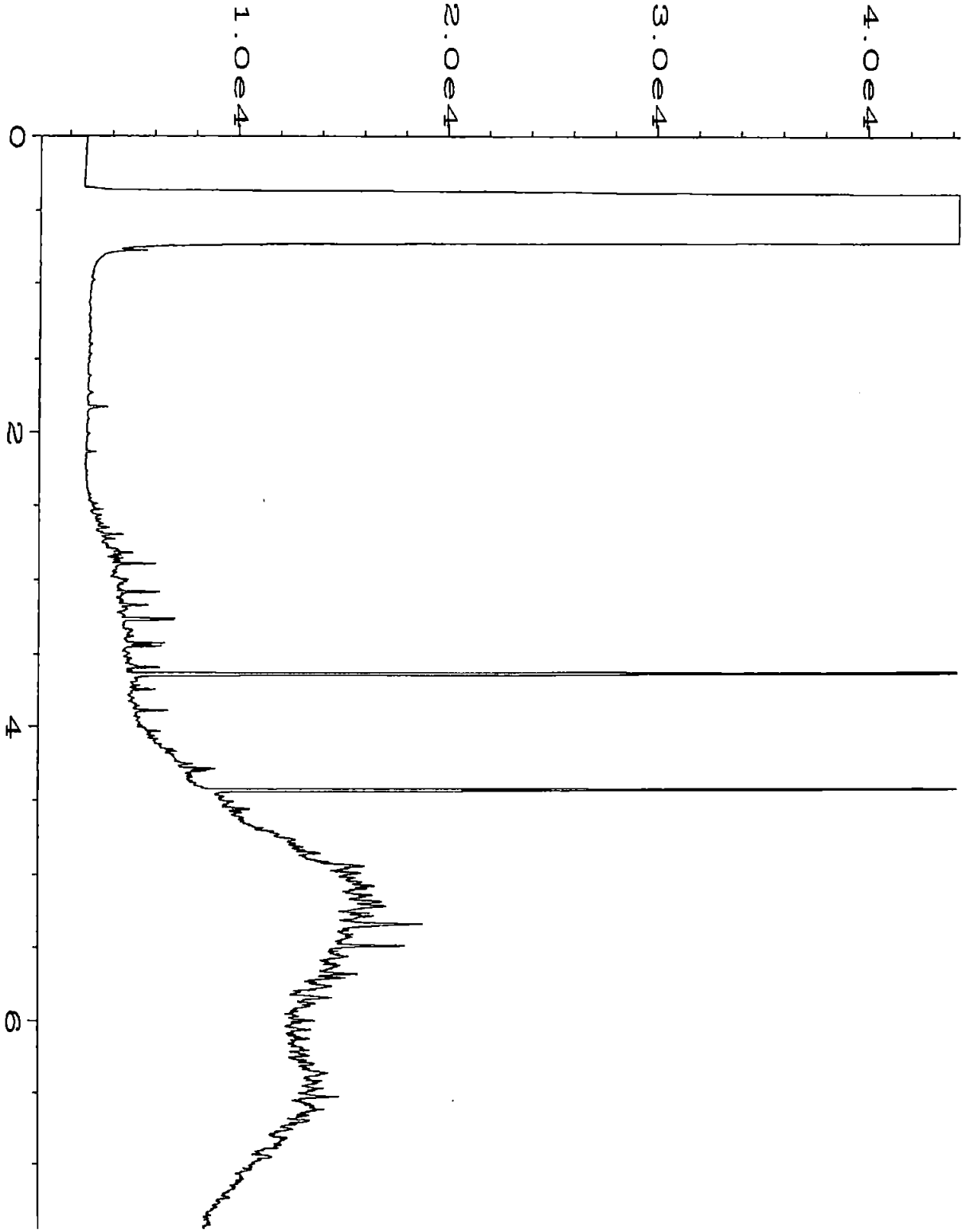
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



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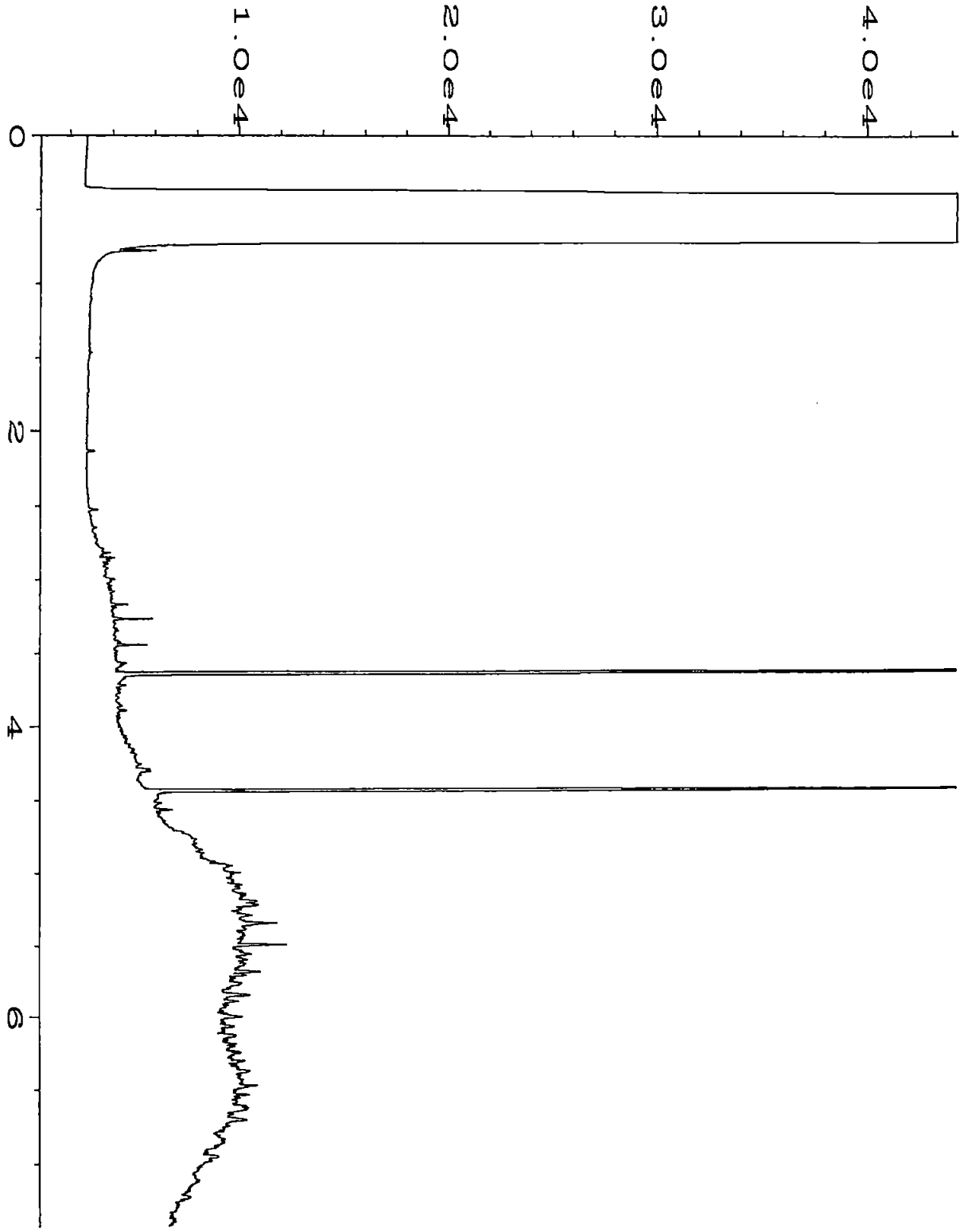
Report Created on	: 25 Aug 15 09:16 AM	Analysis Method	: END.MTH



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Sample Name	: 508368-02	Injection Number	: 1
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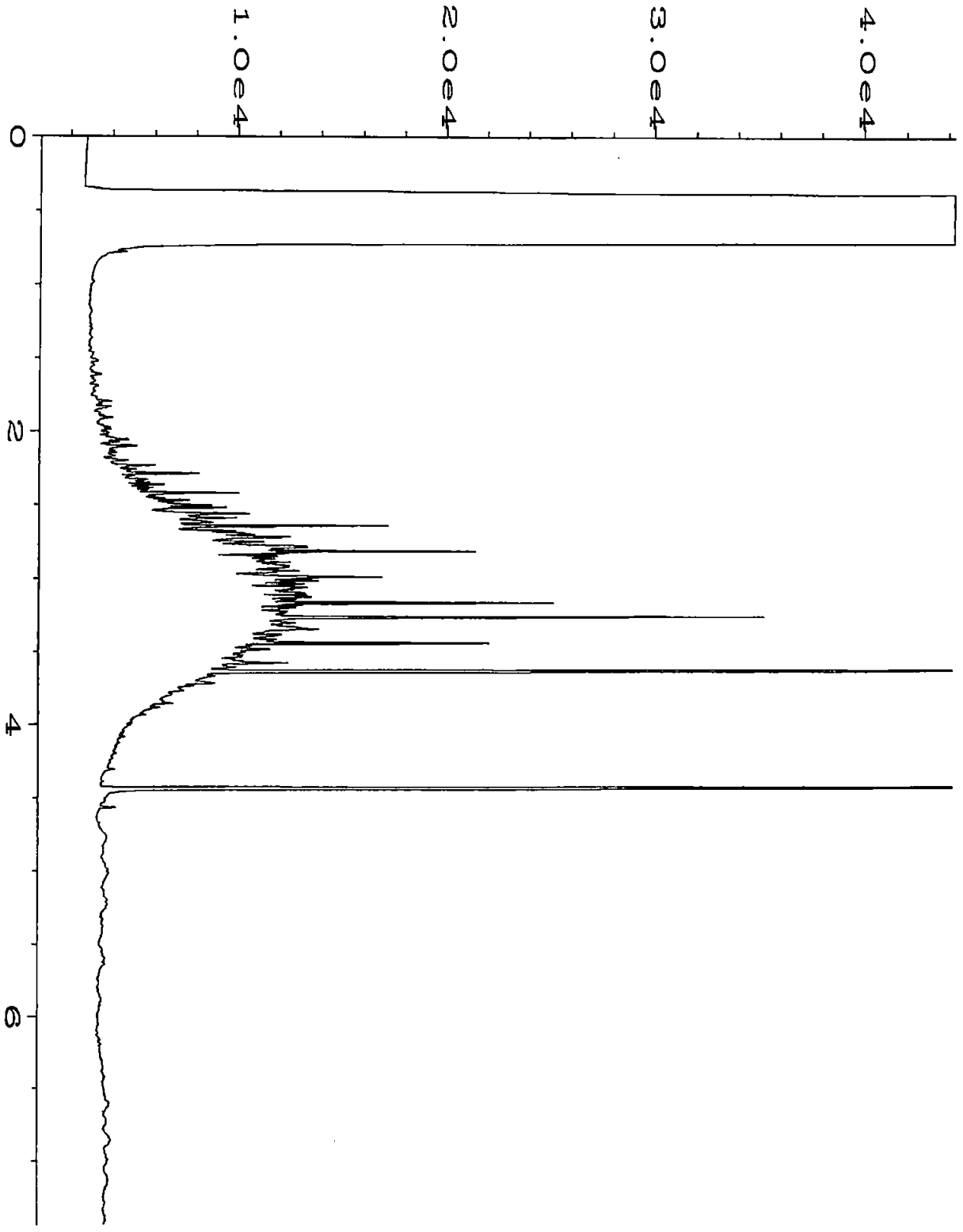

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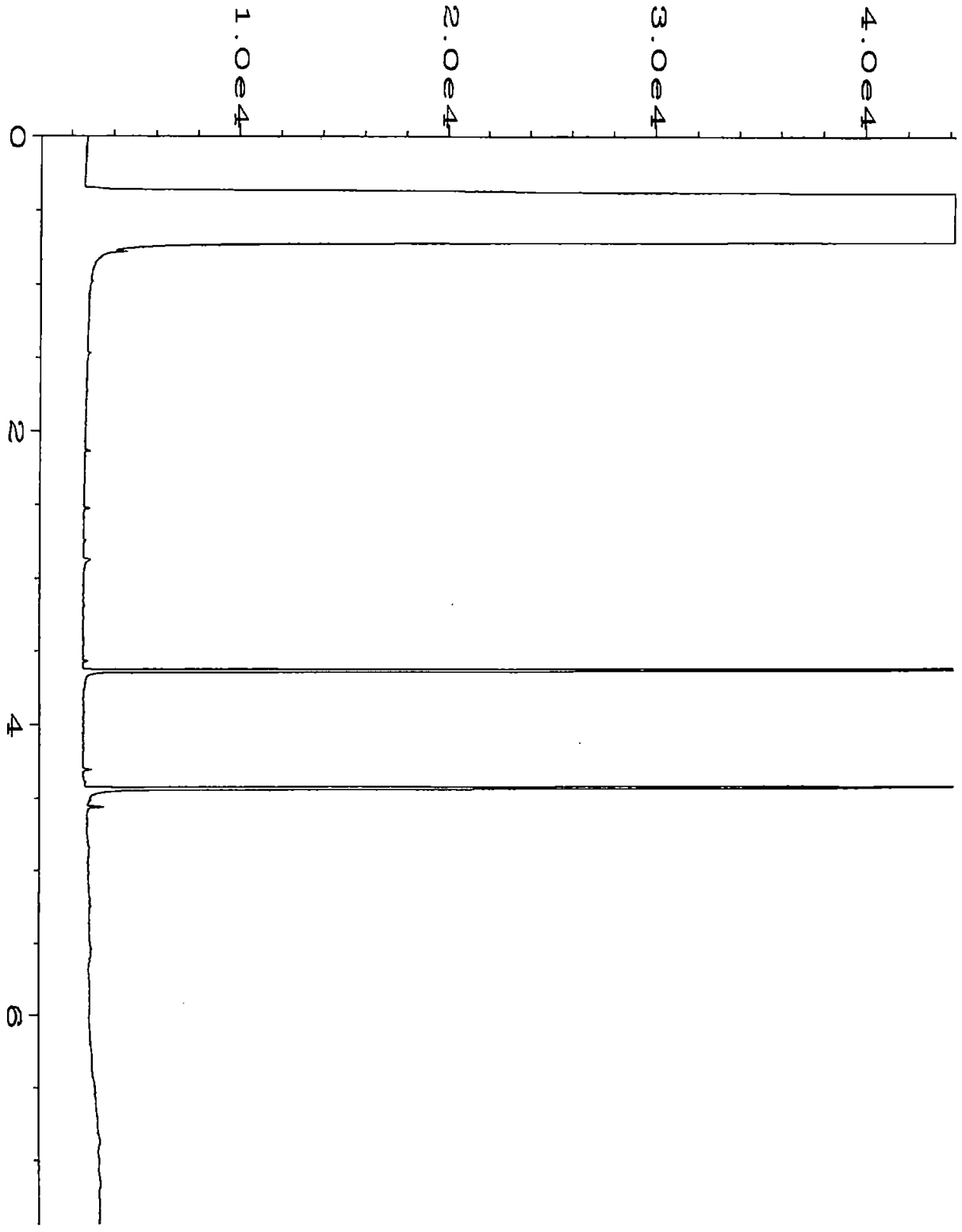
Instrument	: GC#4	Vial Number	: 24
Sample Name	: 508368-03	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 24 Aug 15 01:22 PM	Instrument Method	: DX.MTH
Report Created on	: 25 Aug 15 09:17 AM	Analysis Method	: END.MTH



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Operator	: mwdl	Page Number	: 1
Instrument	: GC#4	Vial Number	: 25
Sample Name	: 508368-04	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
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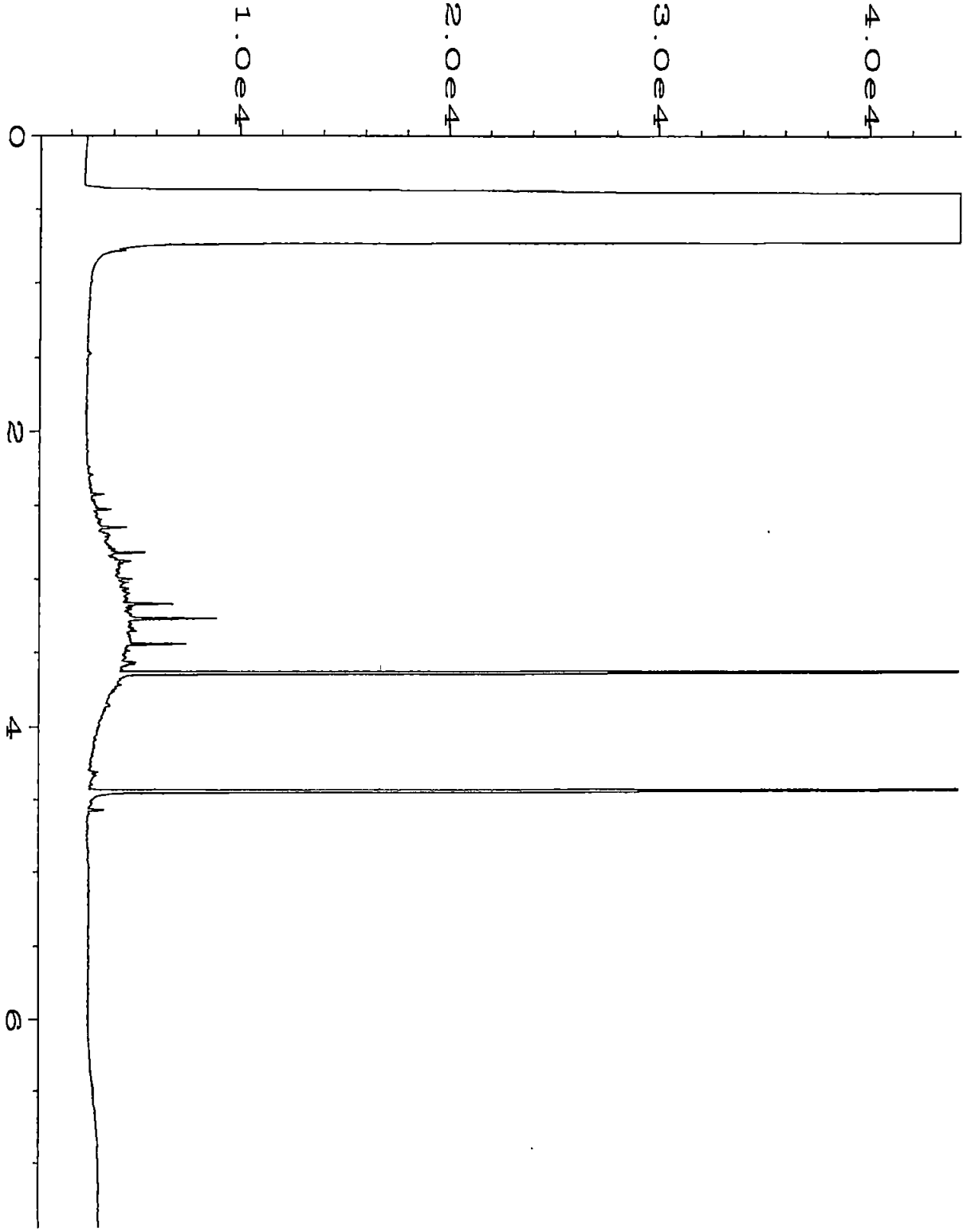
Report Created on	: 25 Aug 15 09:17 AM	Analysis Method	: END.MTH



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Operator : mwdl
Instrument : GC#4
Sample Name : 508368-05
Run Time Bar Code:
Acquired on : 24 Aug 15 01:46 PM
Report Created on: 25 Aug 15 09:17 AM

Page Number : 1
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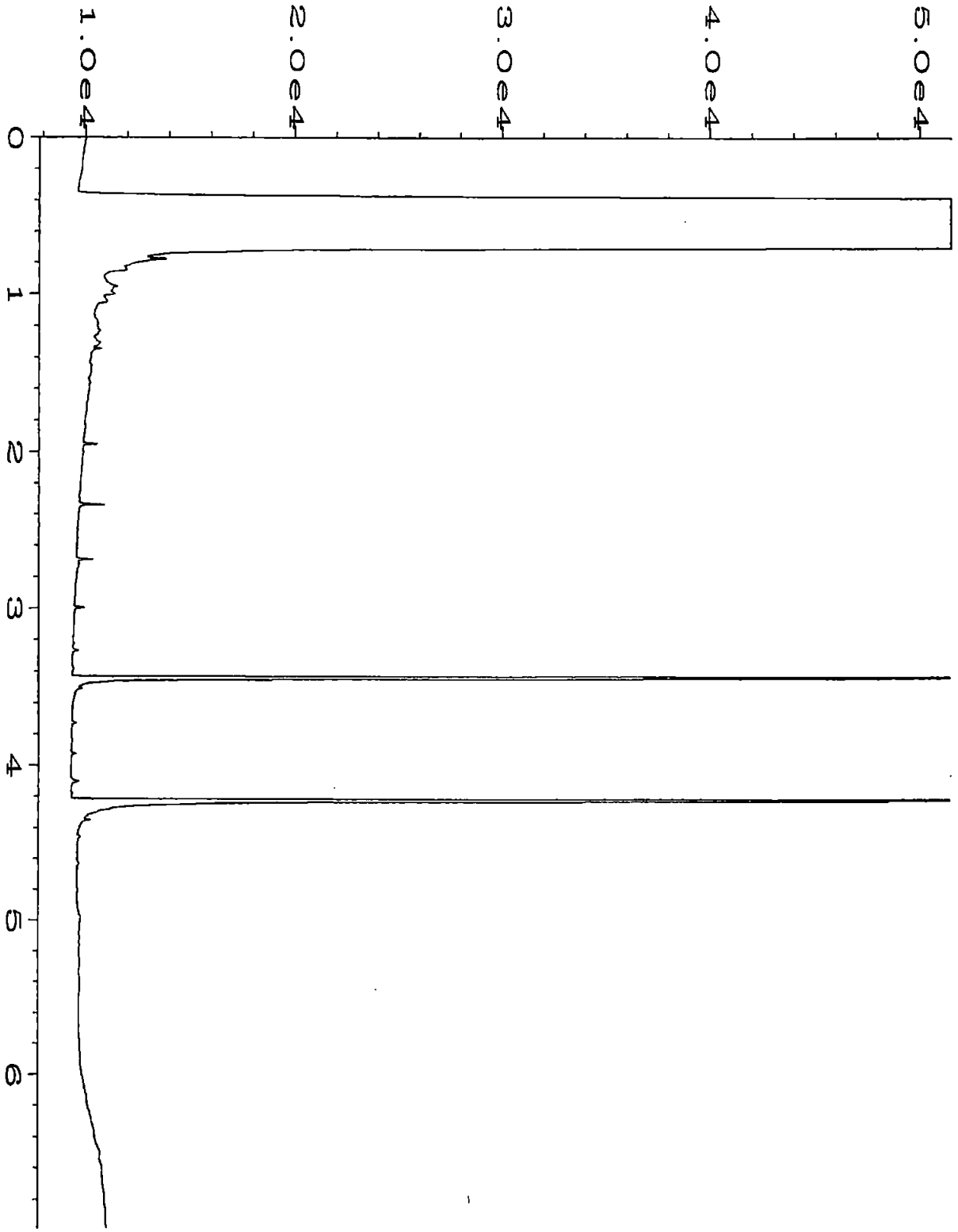
Analysis Method : END.MTH



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Instrument	: GC #6	Vial Number	: 16
Sample Name	: 508368-06	Injection Number	: 1
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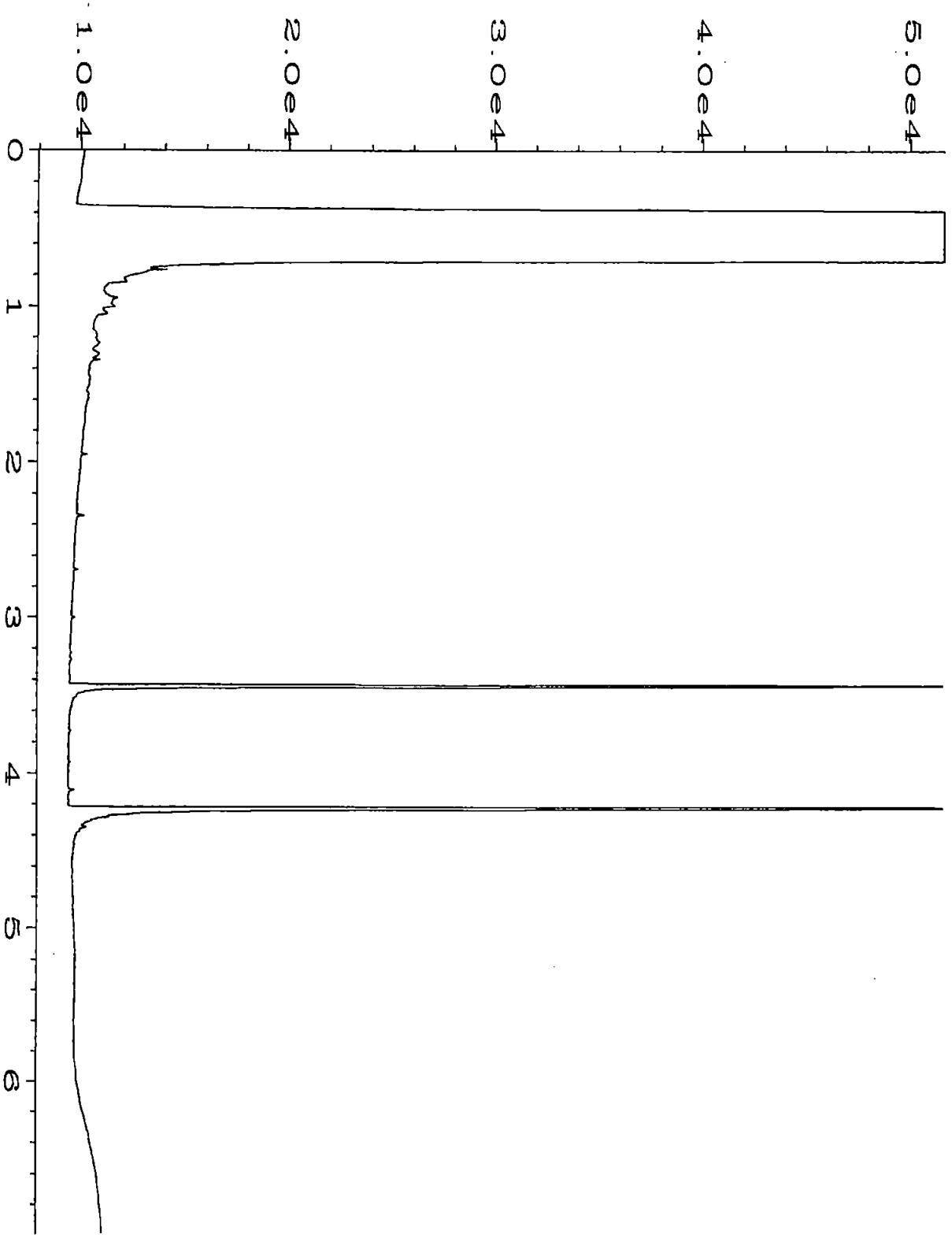
Report Created on	: 01 Sep 15 08:47 AM	Analysis Method	: END.MTH



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Operator : mwdl
Instrument : GC #6
Sample Name : 508368-07
Run Time Bar Code:
Acquired on : 31 Aug 15 05:57 PM
Report Created on: 01 Sep 15 08:47 AM

Page Number : 1
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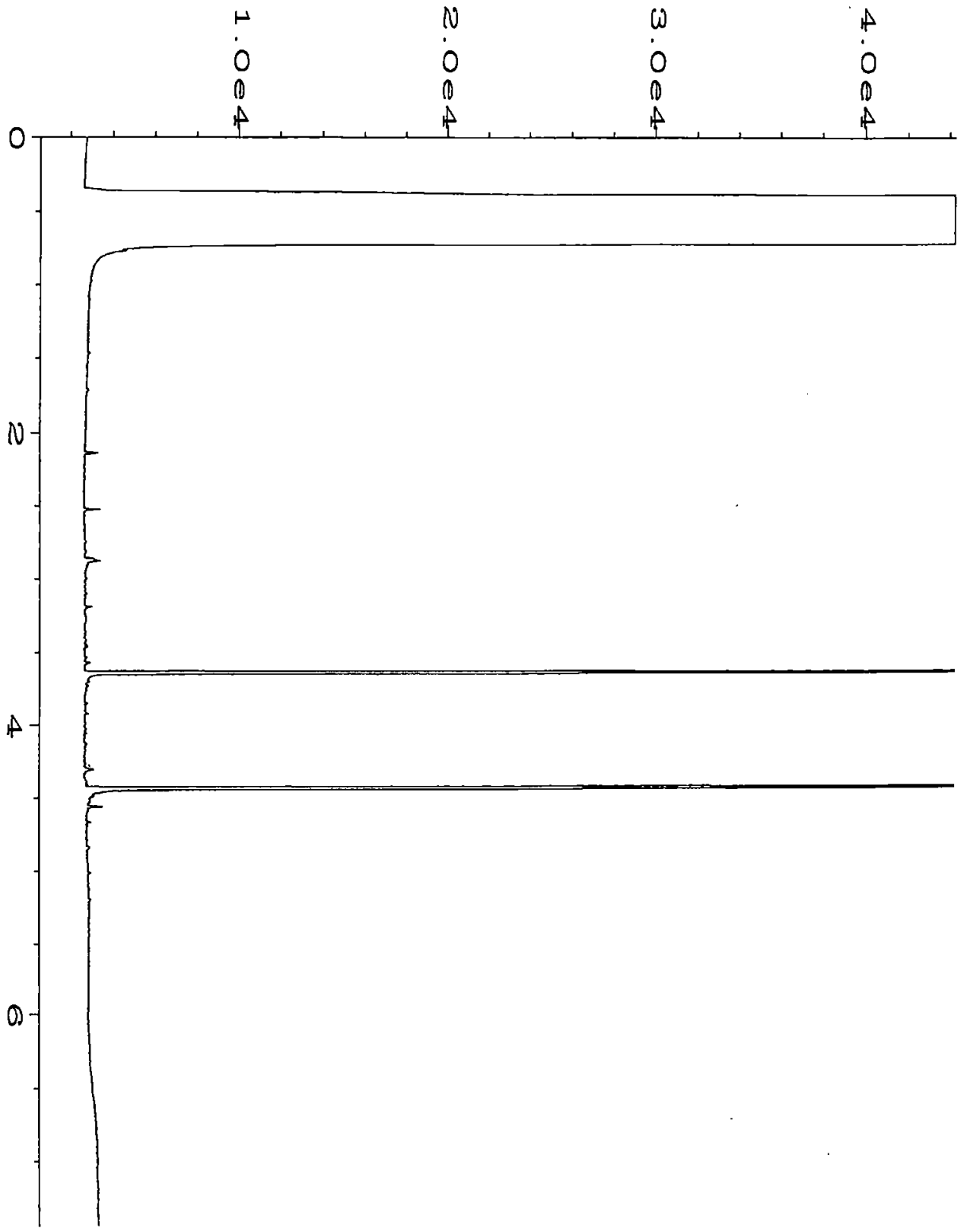
Injection Number : 1
Sequence Line : 5
Instrument Method: DX.MTH
Analysis Method : END.MTH



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Instrument : GC#4
Sample Name : 508368-08
Run Time Bar Code:
Acquired on : 24 Aug 15 01:58 PM
Report Created on: 25 Aug 15 09:17 AM

Page Number : 1
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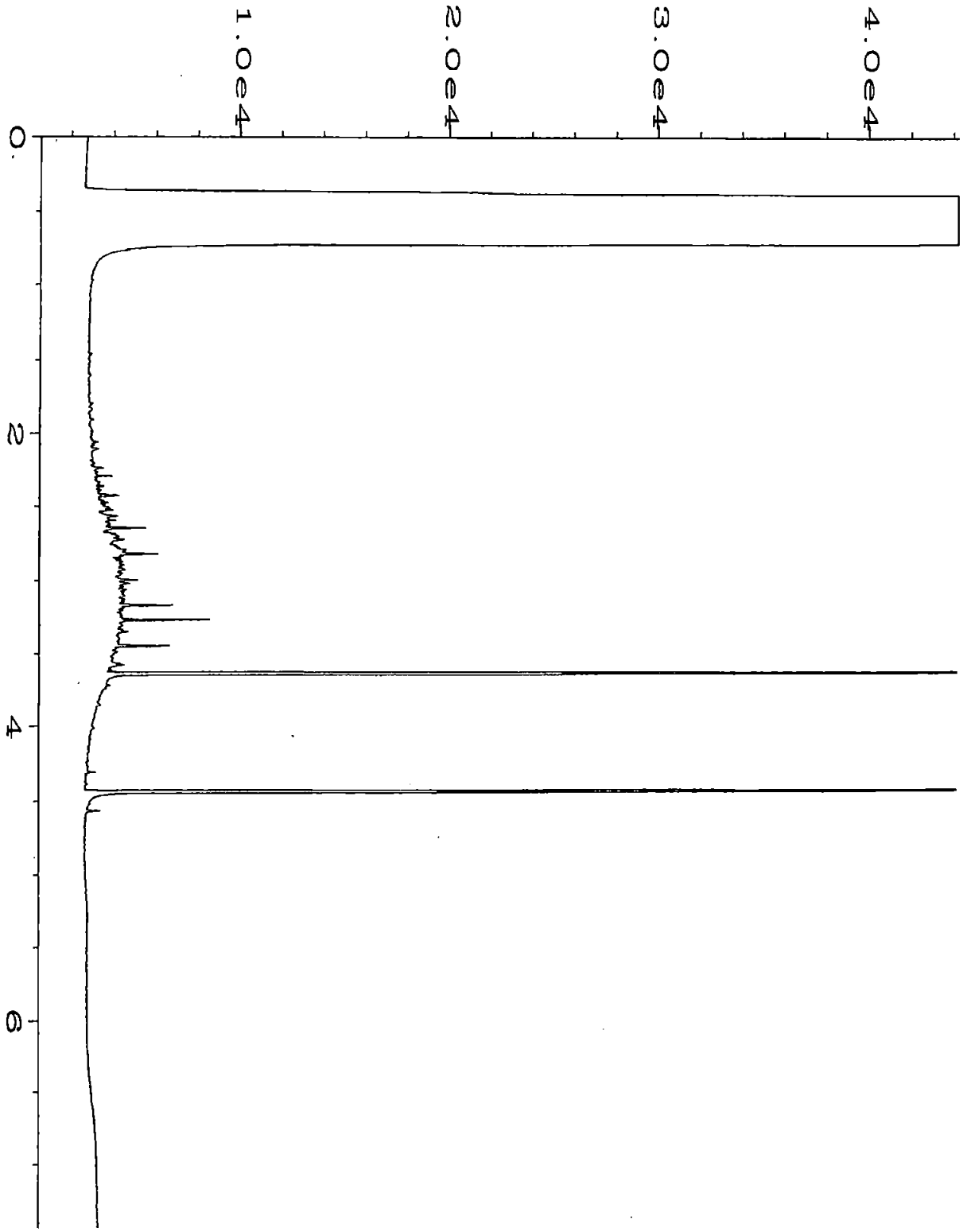
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : END.MTH



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ample Name	: 508368-09	Injection Number	: 1
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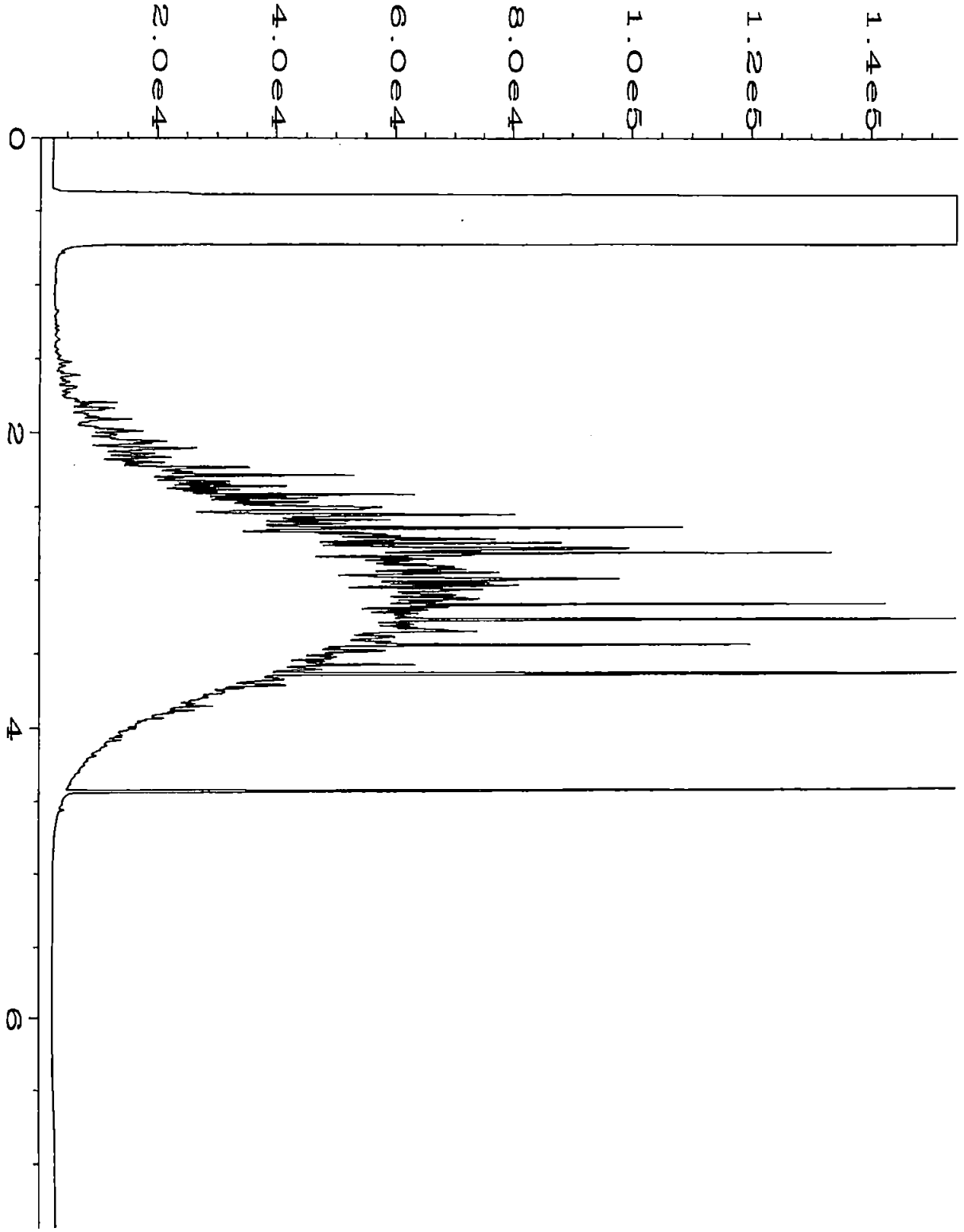

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Instrument	: GC#4	Vial Number	: 29
Sample Name	: 508368-10	Injection Number	: 1
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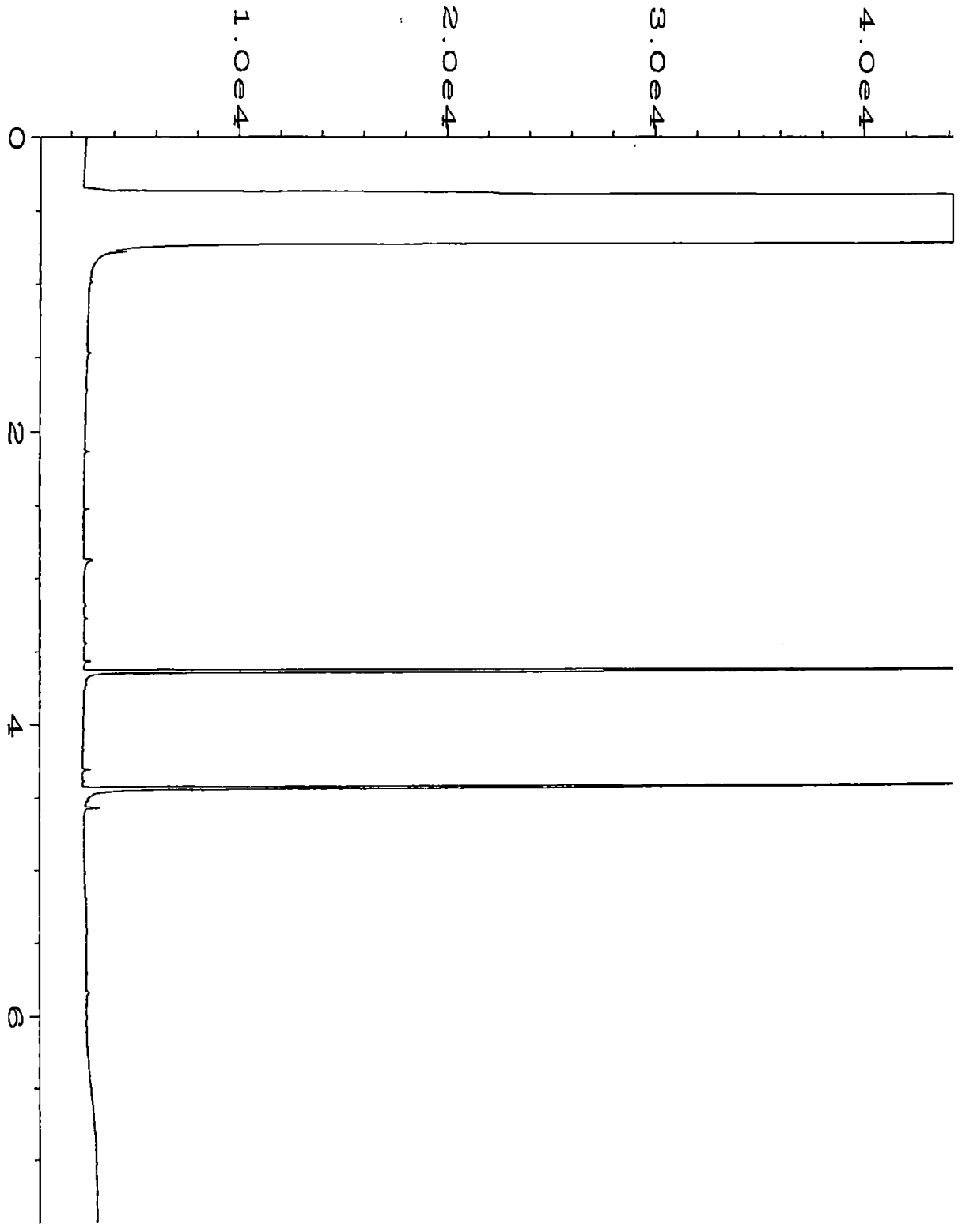
Report Created on	: 25 Aug 15 09:17 AM	Analysis Method	: END.MTH



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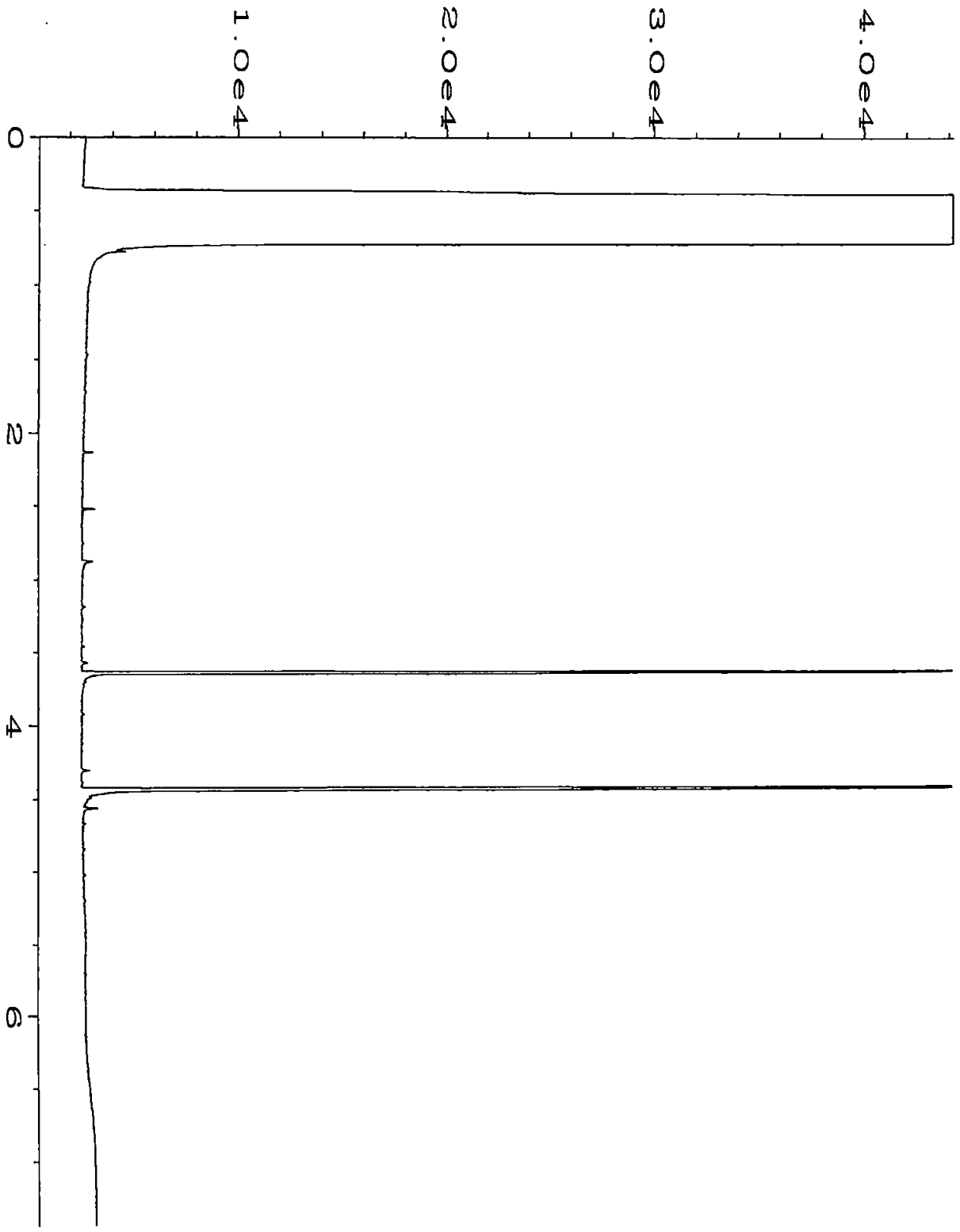
Operator : mwdl
nstrument : GC#4
ample Name : 508368-11
Run Time Bar Code:
cquired on : 24 Aug 15 02:33 PM
eport Created on: 25 Aug 15 09:17 AM

Page Number : 1
Vial Number : 30
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : END.MTH



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Instrument	: GC#4	Vial Number	: 31
Sample Name	: 508368-12	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
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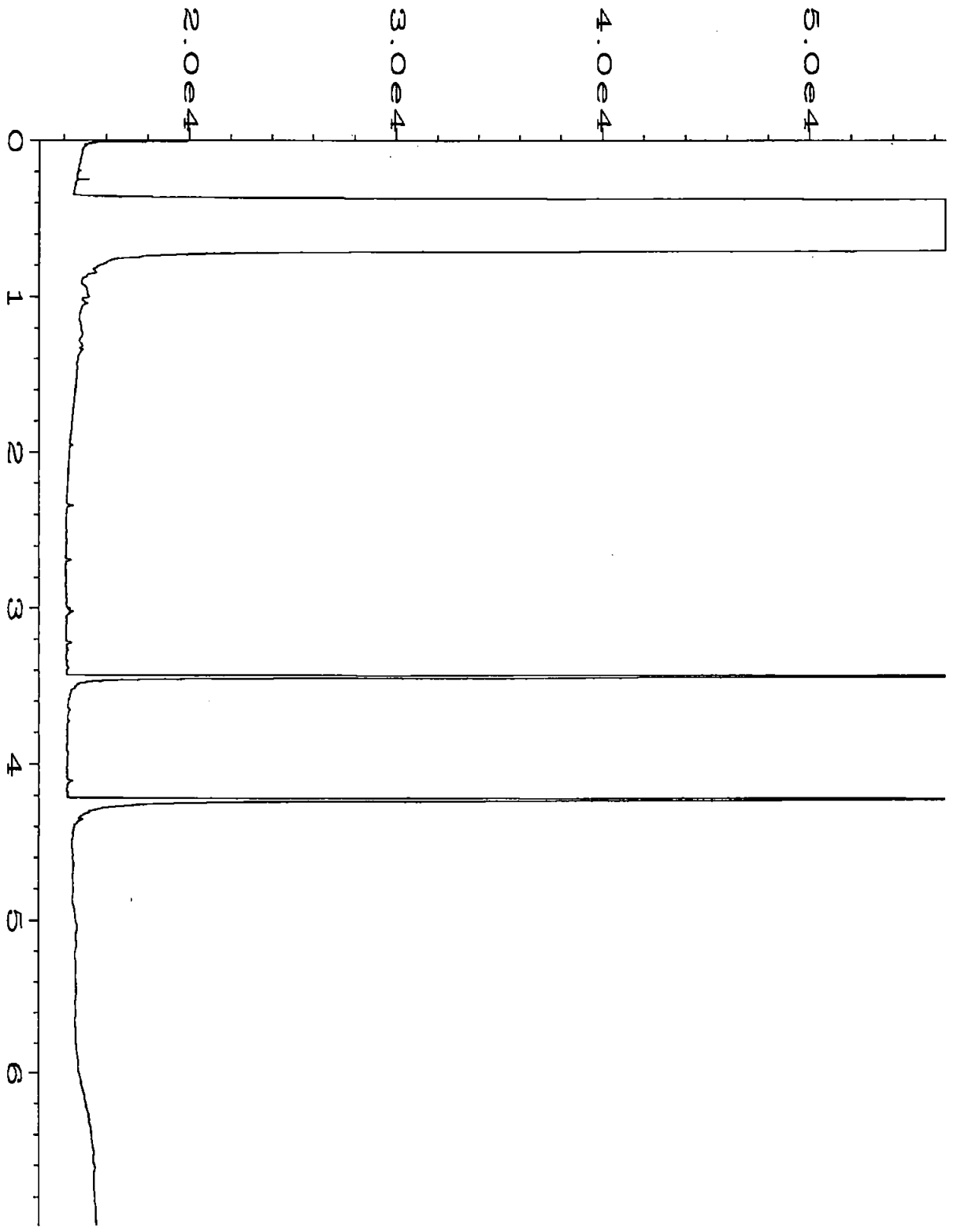
Report Created on	: 25 Aug 15 09:17 AM	Analysis Method	: END.MTH



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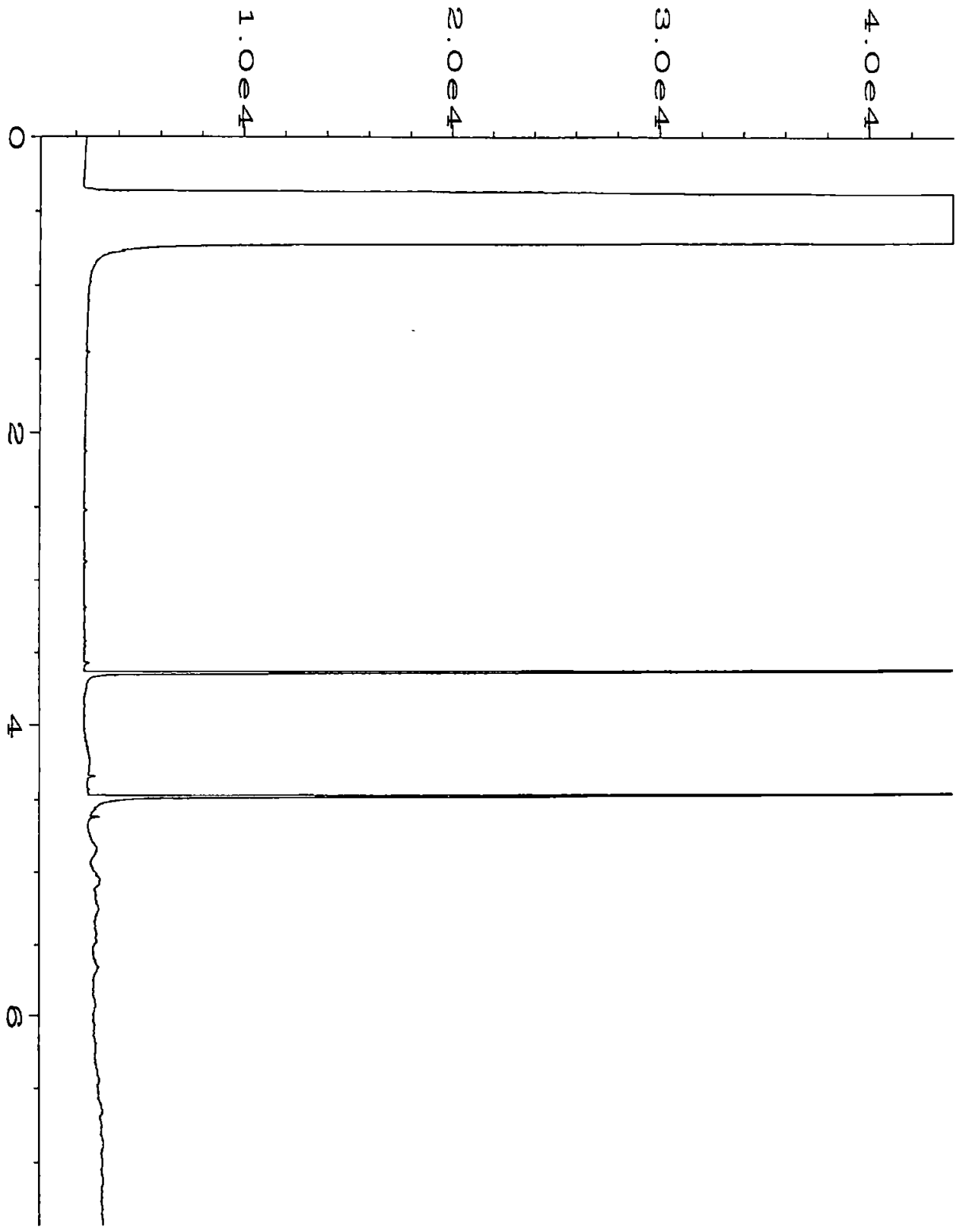
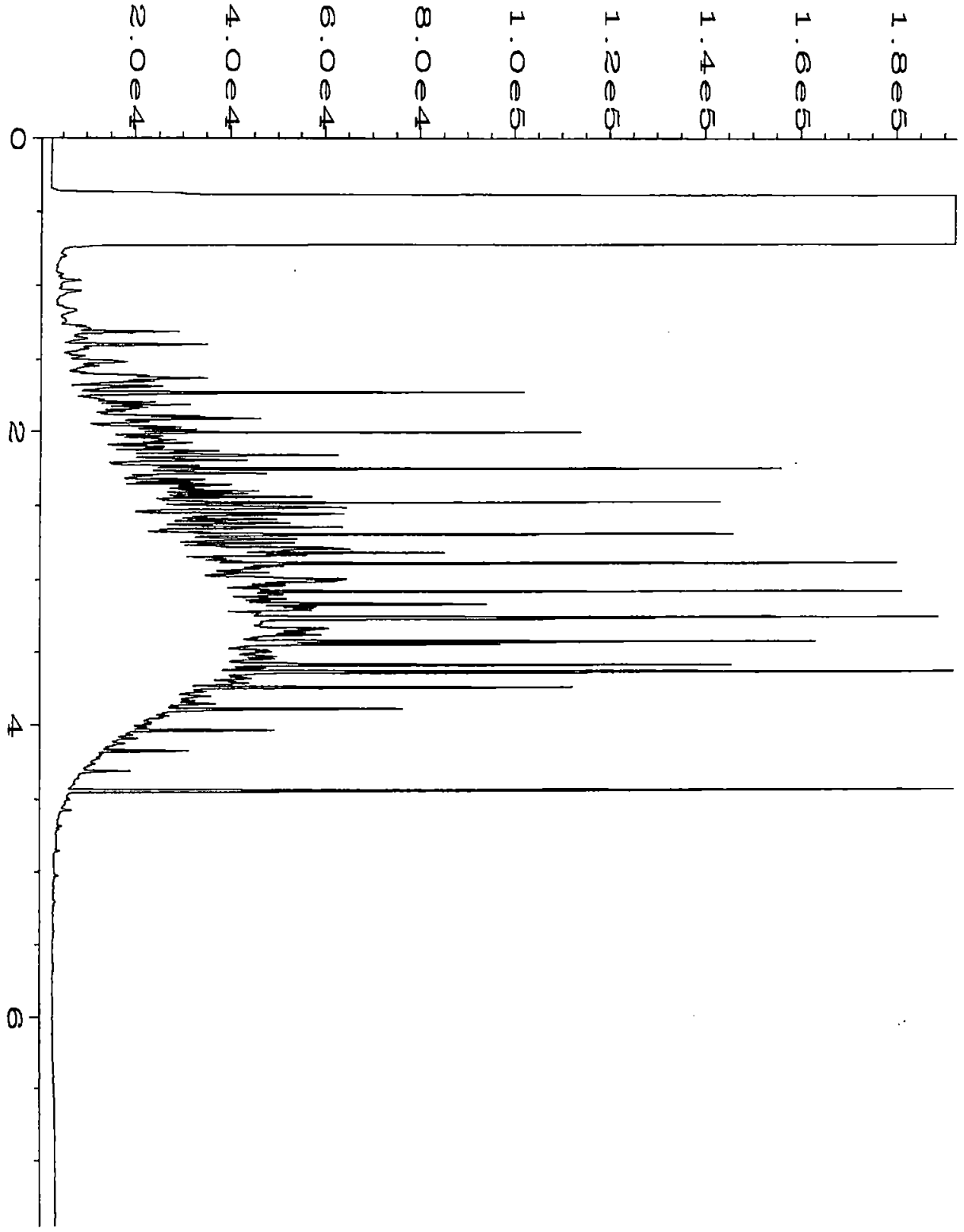
Operator : mwdl
Instrument : GC #6
Sample Name : 05-1791 mb
Run Time Bar Code:
Acquired on : 31 Aug 15 03:37 PM
Report Created on: 01 Sep 15 08:47 AM

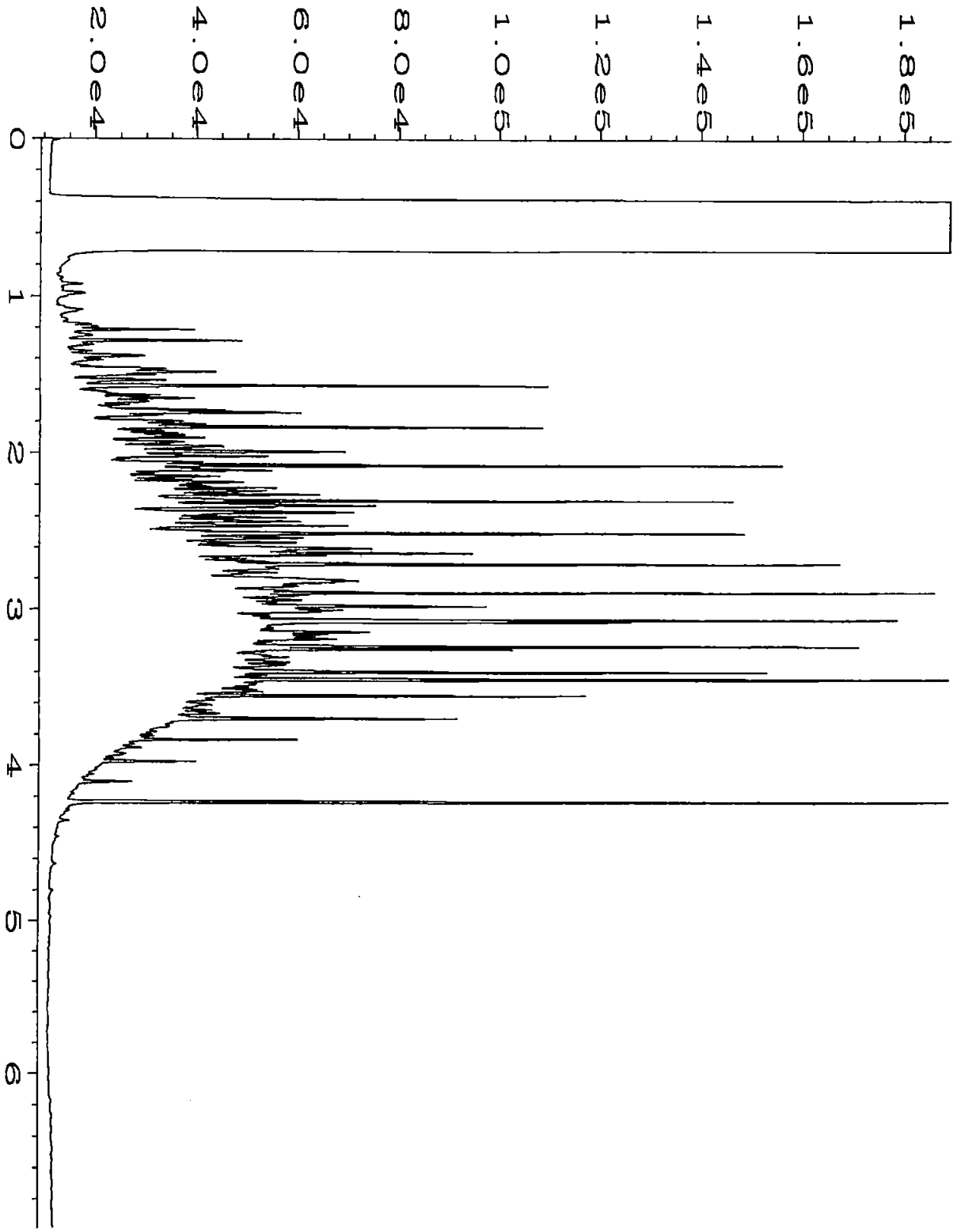
Page Number : 1
Vial Number : 6
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : END.MTH



Data File Name	: C:\HPCHEM\4\DATA\08-24-15\018F0301.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC#4	Vial Number	: 18
Sample Name	: 05-1724 mb	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 24 Aug 15 12:14 PM	Instrument Method	: DX.MTH
Report Created on	: 25 Aug 15 09:18 AM	Analysis Method	: END.MTH



ata File Name	: C:\HPCHEM\4\DATA\08-24-15\003F0201.D		
Operator	: mwdl	Page Number	: 1
nstrument	: GC#4	Vial Number	: 3
ample Name	: 500 Dx 44-94C	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
cquired on	: 24 Aug 15 08:56 AM	Instrument Method	: DX.MTH
eport Created on	: 25 Aug 15 09:18 AM	Analysis Method	: END.MTH



Data File Name	: C:\HPCHEM\6\DATA\08-31-15\003F0201.D		
Operator	: mwdl	Page Number	: 1
Instrument	: GC #6	Vial Number	: 3
Sample Name	: 500 Dx 44-94C	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 31 Aug 15 09:20 AM	Instrument Method	: DX.MTH
Report Created on	: 01 Sep 15 08:48 AM	Analysis Method	: END.MTH

DRAFT

Date of Report: 12/21/15
Date Received: 12/17/15
Project: Pemco, F&BI 512302
Date Extracted: 12/18/15
Date Analyzed: 12/18/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID
Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID Laboratory ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery) (Limit 53-144)
SB-10-4.5-5.0 512302-01	ND	ND	ND	93
SB-11-4.5-5.0 512302-02	ND	ND	ND	92
SB-12-4.5-5.0 512302-03	ND	ND	ND	90
SB-13-4.5-5.0 512302-04	ND	ND	ND	89
Method Blank 05-2577 MB	ND	ND	ND	102

ND - Material not detected at or above 20 mg/kg gas, 50 mg/kg diesel and 250 mg/kg heavy oil.

512302

SAMPLE CHAIN OF CUSTODY

ME 12-17-15

D01 / VS1/V

Page #: _____ of _____

Send Report To Gabriel Cisneros

Company Floyd|Snider

Address 601 Union Street Ste 600

City, State, ZIP Seattle, WA 98101

Phone # 206-292-2078 Fax # _____

SAMPLERS *(signature)*

PROJECT NAME/NO. Pemco

PO#

REMARKS Run HCID first. If there are any detections then run appropriate analysis & Method

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH _____
- Rush charges authorized by _____

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	HCID	Notes
					DV								
SB-10-4.5-5.0	01A-E	12/17	0840	Soil	5 4	/	/	/				/	
SB-11-4.5-5.0	02	"	0915	Soil	4	/	/	/				/	
SB-12-4.5-5.0	03	"	1605	Soil	4	/	/	/				/	
SB-13 4.5-5.0	04	↓	1030	Soil	4	/	/	/				/	
Trip Blank	05A-B			Water									added in Lab
													Samples received at 3 °C

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Gabriel Cisneros	Floyd/Snider	12/17/15	1210
Received by:		DO VO	FoBr	12-17-15	12:10
Relinquished by:					
Received by:					

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

December 22, 2015

Gabriel Cisneros, Project Manager
Floyd-Snider
Two Union Square, Suite 600
601 Union St
Seattle, WA 98101

Dear Mr. Cisneros:

Included are the results from the testing of material submitted on December 17, 2015 from the Pemco, F&BI 512302 project. There are 3 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
FDS1222R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 17, 2015 by Friedman & Bruya, Inc. from the Floyd-Snider Pemco, F&BI 512302 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Floyd-Snider
512302 -01	SB-10-4.5-5.0
512302 -02	SB-11-4.5-5.0
512302 -03	SB-12-4.5-5.0
512302 -04	SB-13-4.5-5.0

All quality control requirements were acceptable.

Date of Report: 12/22/15
Date Received: 12/17/15
Project: Pemco, F&BI 512302
Date Extracted: 12/18/15
Date Analyzed: 12/18/15

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID
Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID Laboratory ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery) (Limit 53-144)
SB-10-4.5-5.0 512302-01	ND	ND	ND	93
SB-11-4.5-5.0 512302-02	ND	ND	ND	92
SB-12-4.5-5.0 512302-03	ND	ND	ND	90
SB-13-4.5-5.0 512302-04	ND	ND	ND	89
Method Blank 05-2577 MB	ND	ND	ND	102

ND - Material not detected at or above 20 mg/kg gas, 50 mg/kg diesel and 250 mg/kg heavy oil.

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

512302

SAMPLE CHAIN OF CUSTODY

ME 12-17-15 DOI/VSI/V

Page #:_____ of_____

Send Report To Gabriel Cisneros
Company Floyd|Snider
Address 601 Union Street Ste. 600
City, State, ZIP Seattle, WA 98101
Phone # 206-292-2078 Fax #_____

SAMPLERS *(signature)*

PROJECT NAME/NO.: Pemco | PO#:

REMARKS Run HCID first. If there are any detections then run appropriate analysis & Method

TURNAROUND TIME
☒ Standard (2 Weeks)
☐ RUSH_____
Rush charges authorized by_____

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS	HCID						Notes
SB-10-4.5-5.0	01A-B	12/17	0840	Soil	5 4	/	/	/				/						
SB-11-4.5-5.0	02		0915	Soil	1 4	/	/	/				/						
SB-12-4.5-5.0	03		1605	Soil	4	/	/	/				/						
SB-13 4.5-5.0	04		1030	Soil	4	/	/	/				/						
Triplicate	05 A B			Water														added in lab

Samples received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Gabriel Cisneros	Floyd/Snider	12/17/15	1210
Received by:	DO VO	FoBr	12-17-15	12:10
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 14, 2016

Gabriel Cisneros, Project Manager
Floyd-Snider
Two Union Square, Suite 600
601 Union St
Seattle, WA 98101

Dear Mr. Cisneros:

Included are the results from the testing of material submitted on April 14, 2016 from the Pemco, F&BI 604249 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
FDS0414R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 14, 2016 by Friedman & Bruya, Inc. from the Floyd-Snider Pemco, F&BI 604249 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Floyd-Snider
604249 -01	EX-5-5.0-5.5'

All quality control requirements were acceptable.

Date of Report: 04/14/16
Date Received: 04/14/16
Project: Pemco, F&BI 604249
Date Extracted: 04/14/16
Date Analyzed: 04/14/16

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
EX-5-5.0-5.5' 604249-01	<0.02	<0.02	<0.02	<0.06	3.0	88
Method Blank 06-733 MB2	<0.02	<0.02	<0.02	<0.06	<2	88

Date of Report: 04/14/16
Date Received: 04/14/16
Project: Pemco, F&BI 604249
Date Extracted: 04/14/16
Date Analyzed: 04/14/16

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
EX-5-5.0-5.5' 604249-01	<50	<250	90
Method Blank 06-750 MB2	<50	<250	93

Date of Report: 04/14/16
Date Received: 04/14/16
Project: Pemco, F&BI 604249

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 604212-04 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	83	69-120
Toluene	mg/kg (ppm)	0.5	86	70-117
Ethylbenzene	mg/kg (ppm)	0.5	87	65-123
Xylenes	mg/kg (ppm)	1.5	86	66-120
Gasoline	mg/kg (ppm)	20	90	71-131

Date of Report: 04/14/16
Date Received: 04/14/16
Project: Pemco, F&BI 604249

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 604231-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	101	104	63-146	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	109	79-144

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

604249

SAMPLE CHAIN OF CUSTODY

ME 04/14/16 VSI / AOI

Page # 1 of 1

Send Report To Gabe Cisneros

Company Floyd | Snider

Address 601 Union Street Ste. 600

City, State, ZIP Seattle, WA 98101

Phone # 206-292-2078 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Renco

PO#

REMARKS

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH ASAP 90 min

Rush charges authorized by

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by8260	SVOCs by 8270	HFS							Notes
EX-5-5.0-5.5'	AE	4/14/16	0810	Soil	5	X	X	X										

Samples received at 6 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Gabriel Cisneros	Floyd|Snider	4/14/16	0815
Received by:	James Bruya	FRB	4/14	0815
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 18, 2016

Gabriel Cisneros, Project Manager
Floyd-Snider
Two Union Square, Suite 600
601 Union St
Seattle, WA 98101

Dear Mr. Cisneros:

Included are the results from the testing of material submitted on April 13, 2016 from the Pemco, F&BI 604231 project. There are 18 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
FDS0418R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 13, 2016 by Friedman & Bruya, Inc. from the Floyd-Snider Pemco, F&BI 604231 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Floyd-Snider
604231 -01	EX-1-4.5'-5.0'
604231 -02	EX-1-4.5'-5.0' Dup
604231 -03	EX-2-4.5'-5.0'
604231 -04	EX-3-7.5'-8.0'
604231 -05	EX-4-4.5'-5.0'

All quality control requirements were acceptable.

Date of Report: 04/18/16
Date Received: 04/13/16
Project: Pemco, F&BI 604231
Date Extracted: 04/13/16
Date Analyzed: 04/13/16

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-132)
EX-1-4.5'-5.0' 604231-01	<0.02	<0.02	<0.02	<0.06	11	83
EX-1-4.5'-5.0' Dup 604231-02	<0.02	<0.02	<0.02	<0.06	18	88
EX-2-4.5'-5.0' 604231-03	<0.02	<0.02	<0.02	<0.06	<2	85
EX-3-7.5'-8.0' 604231-04	<0.02	<0.02	<0.02	<0.06	<2	84
EX-4-4.5'-5.0' 604231-05	<0.02	<0.02	0.028	<0.06	23	86
Method Blank 06-735 MB	<0.02	<0.02	<0.02	<0.06	<2	89

Date of Report: 04/18/16
Date Received: 04/13/16
Project: Pemco, F&BI 604231
Date Extracted: 04/13/16
Date Analyzed: 04/13/16

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
EX-1-4.5'-5.0' 604231-01	88	<250	87
EX-1-4.5'-5.0' Dup 604231-02	120	<250	80
EX-2-4.5'-5.0' 604231-03	<50	<250	87
EX-3-7.5'-8.0' 604231-04	<50	<250	90
EX-4-4.5'-5.0' 604231-05	120	<250	89
Method Blank 06-750 MB	<50	<250	88

Analysis For Total Metals By EPA Method 6020A

Client ID:	EX-4-4.5'-5.0'	Client:	Floyd-Snider
Date Received:	04/13/16	Project:	Pemco, F&BI 604231
Date Extracted:	04/14/16	Lab ID:	604231-05
Date Analyzed:	04/14/16	Data File:	604231-05.041
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	2.60

Analysis For Total Metals By EPA Method 6020A

Client ID:	Method Blank	Client:	Floyd-Snider
Date Received:	NA	Project:	Pemco, F&BI 604231
Date Extracted:	04/14/16	Lab ID:	I6-208 mb2
Date Analyzed:	04/14/16	Data File:	I6-208 mb2.040
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	EX-4-4.5'-5.0'	Client:	Floyd-Snider
Date Received:	04/13/16	Project:	Pemco, F&BI 604231
Date Extracted:	04/14/16	Lab ID:	604231-05
Date Analyzed:	04/14/16	Data File:	041413.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	101	55	145
4-Bromofluorobenzene	97	65	139

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.25
Methyl t-butyl ether (MTBE)	<0.05
1,2-Dichloroethane (EDC)	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	Pemco, F&BI 604231
Date Extracted:	04/13/16	Lab ID:	06-0719 mb2
Date Analyzed:	04/14/16	Data File:	041405.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	102	55	145
4-Bromofluorobenzene	98	65	139

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.25
Methyl t-butyl ether (MTBE)	<0.05
1,2-Dichloroethane (EDC)	<0.05
Naphthalene	<0.05

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	EX-4-4.5'-5.0'	Client:	Floyd-Snider
Date Received:	04/13/16	Project:	Pemco, F&BI 604231
Date Extracted:	04/15/16	Lab ID:	604231-05
Date Analyzed:	04/15/16	Data File:	041526.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration mg/kg (ppm)
1,2-Dibromoethane (EDB)	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	Pemco, F&BI 604231
Date Extracted:	04/15/16	Lab ID:	06-0724 mb
Date Analyzed:	04/15/16	Data File:	041525.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	104	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration mg/kg (ppm)
1,2-Dibromoethane (EDB)	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	EX-4-4.5'-5.0'	Client:	Floyd-Snider
Date Received:	04/13/16	Project:	Pemco, F&BI 604231
Date Extracted:	04/14/16	Lab ID:	604231-05 1/5
Date Analyzed:	04/14/16	Data File:	041407.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	31	163
Benzo(a)anthracene-d12	98	24	168

Compounds:	Concentration mg/kg (ppm)
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	Pemco, F&BI 604231
Date Extracted:	04/14/16	Lab ID:	06-747 mb2 1/5
Date Analyzed:	04/14/16	Data File:	041403.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	85	31	163
Benzo(a)anthracene-d12	91	24	168

Compounds:	Concentration mg/kg (ppm)
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01

Date of Report: 04/18/16
Date Received: 04/13/16
Project: Pemco, F&BI 604231

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 604231-04 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	79	66-121
Toluene	mg/kg (ppm)	0.5	77	72-128
Ethylbenzene	mg/kg (ppm)	0.5	81	69-132
Xylenes	mg/kg (ppm)	1.5	80	69-131
Gasoline	mg/kg (ppm)	20	95	61-153

Date of Report: 04/18/16
Date Received: 04/13/16
Project: Pemco, F&BI 604231

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 604231-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	101	104	63-146	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	109	79-144

Date of Report: 04/18/16
Date Received: 04/13/16
Project: Pemco, F&BI 604231

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020A

Laboratory Code: 604144-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	50.0	84 b	73 b	75-125	14 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	103	80-120

Date of Report: 04/18/16
Date Received: 04/13/16
Project: Pemco, F&BI 604231

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 604212-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Hexane	mg/kg (ppm)	2.5	<0.25	60	62	10-137	3
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	91	94	21-145	3
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	105	107	12-160	2
Naphthalene	mg/kg (ppm)	2.5	<0.05	83	86	14-157	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Hexane	mg/kg (ppm)	2.5	88	43-142
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	106	60-123
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	119	56-135
Naphthalene	mg/kg (ppm)	2.5	96	63-140

Date of Report: 04/18/16
Date Received: 04/13/16
Project: Pemco, F&BI 604231

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C DIRECT SPARGE

Laboratory Code: 604231-05 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
1,2-Dibromoethane (EDB)	mg/kg (ppm)	<0.005	<0.005	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dibromoethane (EDB)	mg/kg (ppm)	0.05	106	108	70-130	2

Date of Report: 04/18/16
Date Received: 04/13/16
Project: Pemco, F&BI 604231

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR PAHS BY EPA METHOD 8270D SIM

Laboratory Code: 604212-09 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Benz(a)anthracene	mg/kg (ppm)	0.17	0.017	86	23-144
Chrysene	mg/kg (ppm)	0.17	0.020	84	32-149
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	0.019	86	23-176
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	86	42-139
Benzo(a)pyrene	mg/kg (ppm)	0.17	0.017	83	21-163
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	0.013	102	23-170
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	103	31-146

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benz(a)anthracene	mg/kg (ppm)	0.17	89	92	51-115	3
Chrysene	mg/kg (ppm)	0.17	94	94	55-129	0
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	89	86	56-123	3
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	89	92	54-131	3
Benzo(a)pyrene	mg/kg (ppm)	0.17	84	82	51-118	2
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	99	101	49-148	2
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	101	102	50-141	1

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

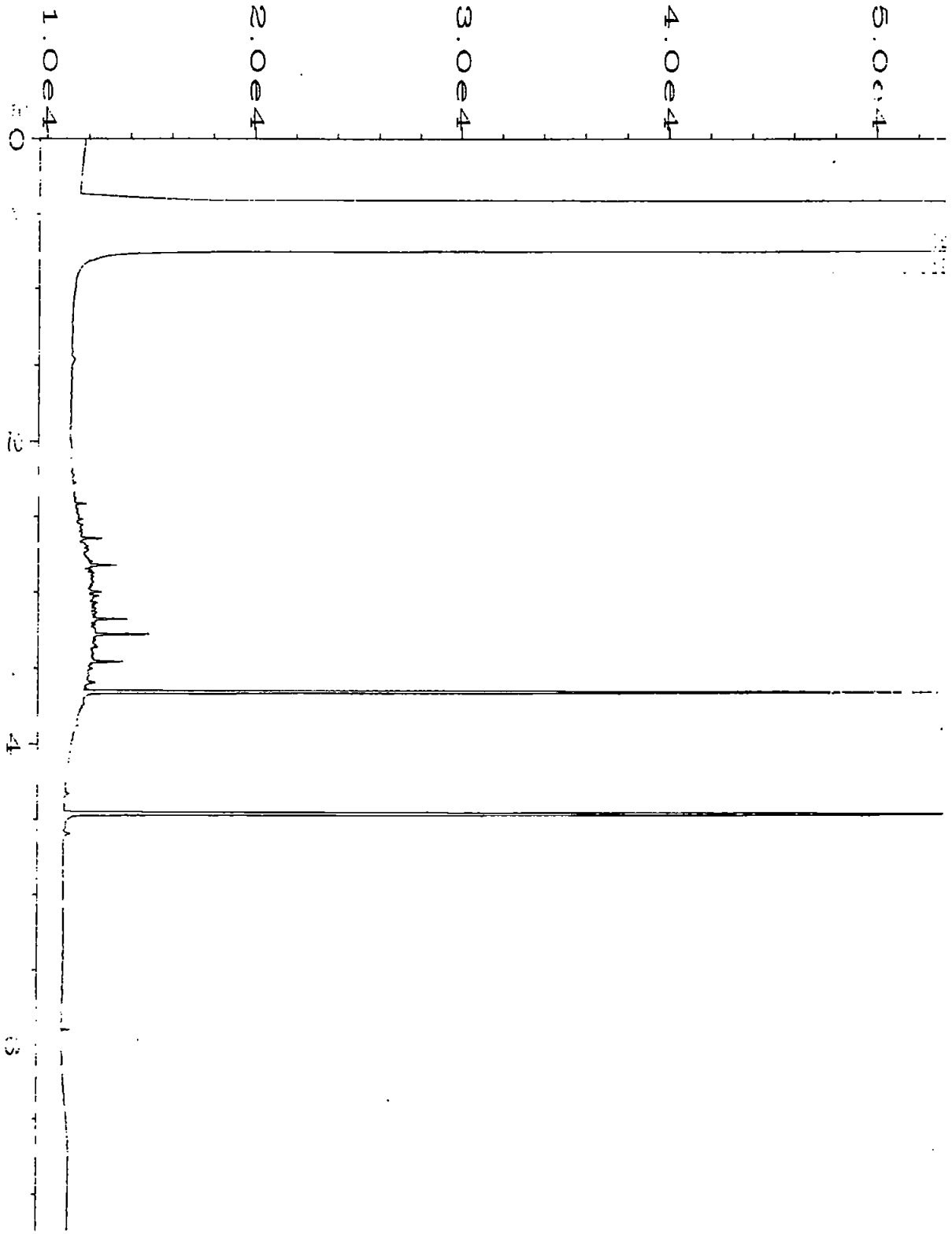
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

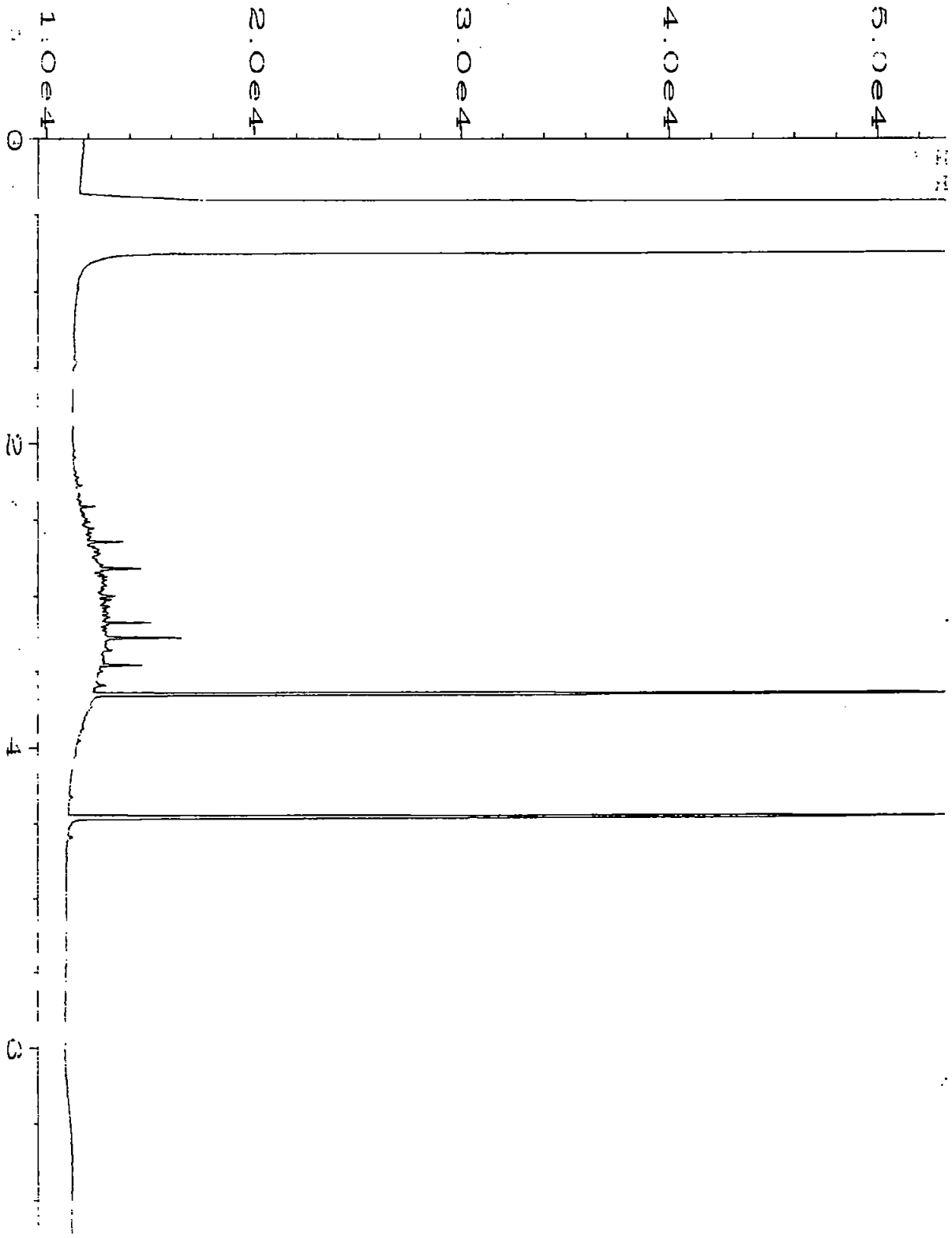
vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



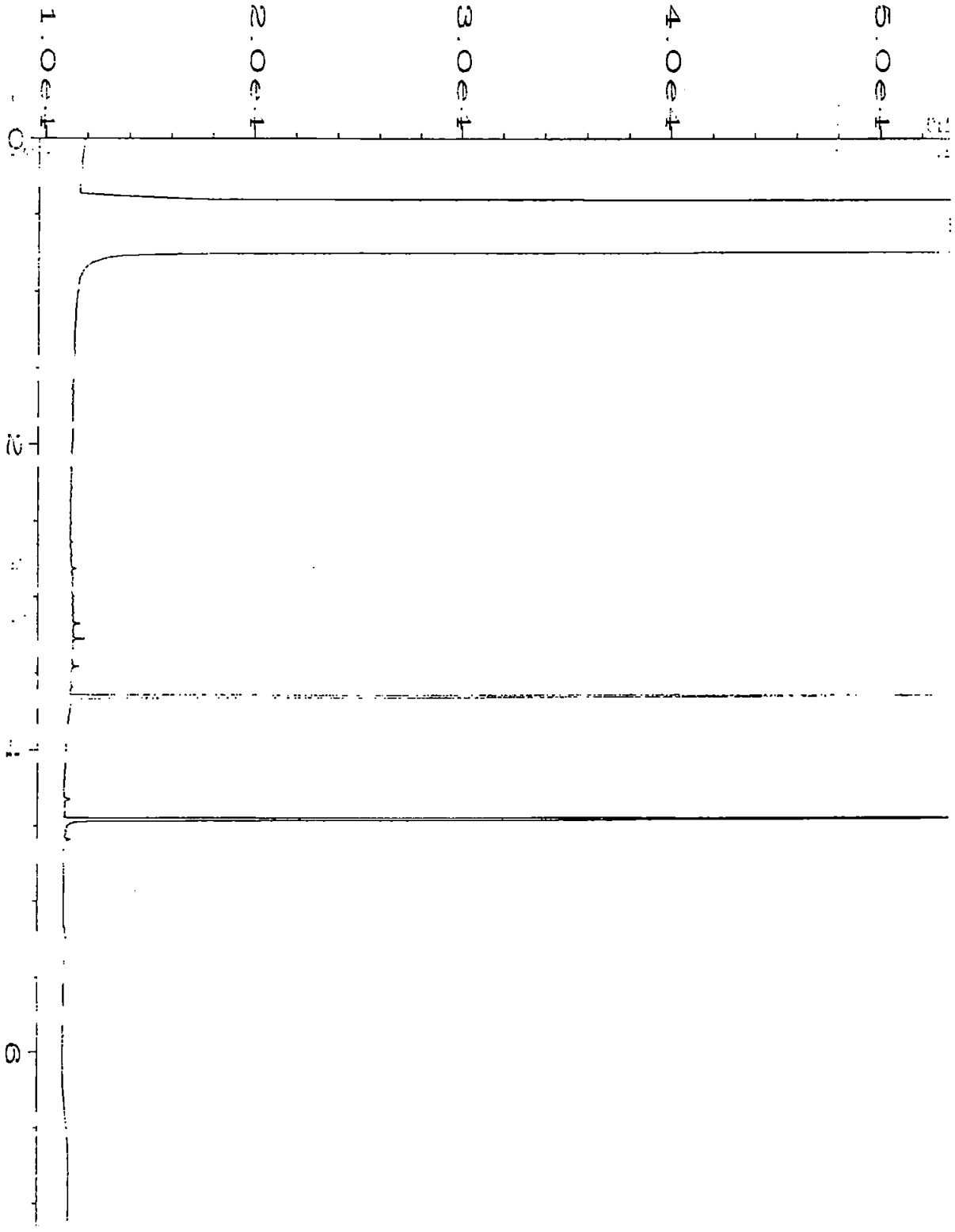
Data File Name : C:\HPCHEM\1\DATA\04-13-16\037F0701.D
Operator : mwdl
Instrument : GC1
Sample Name : 604231-01
Run Time Bar Code:
Acquired on : 13 Apr 16 04:39 PM
Report Created on: 14 Apr 16 09:41 AM

Page Number : 1
Vial Number : 37
Injection Number : 1
Sequence Line : 7
Instrument Method: DX.MTH
Analysis Method : DX.MTH



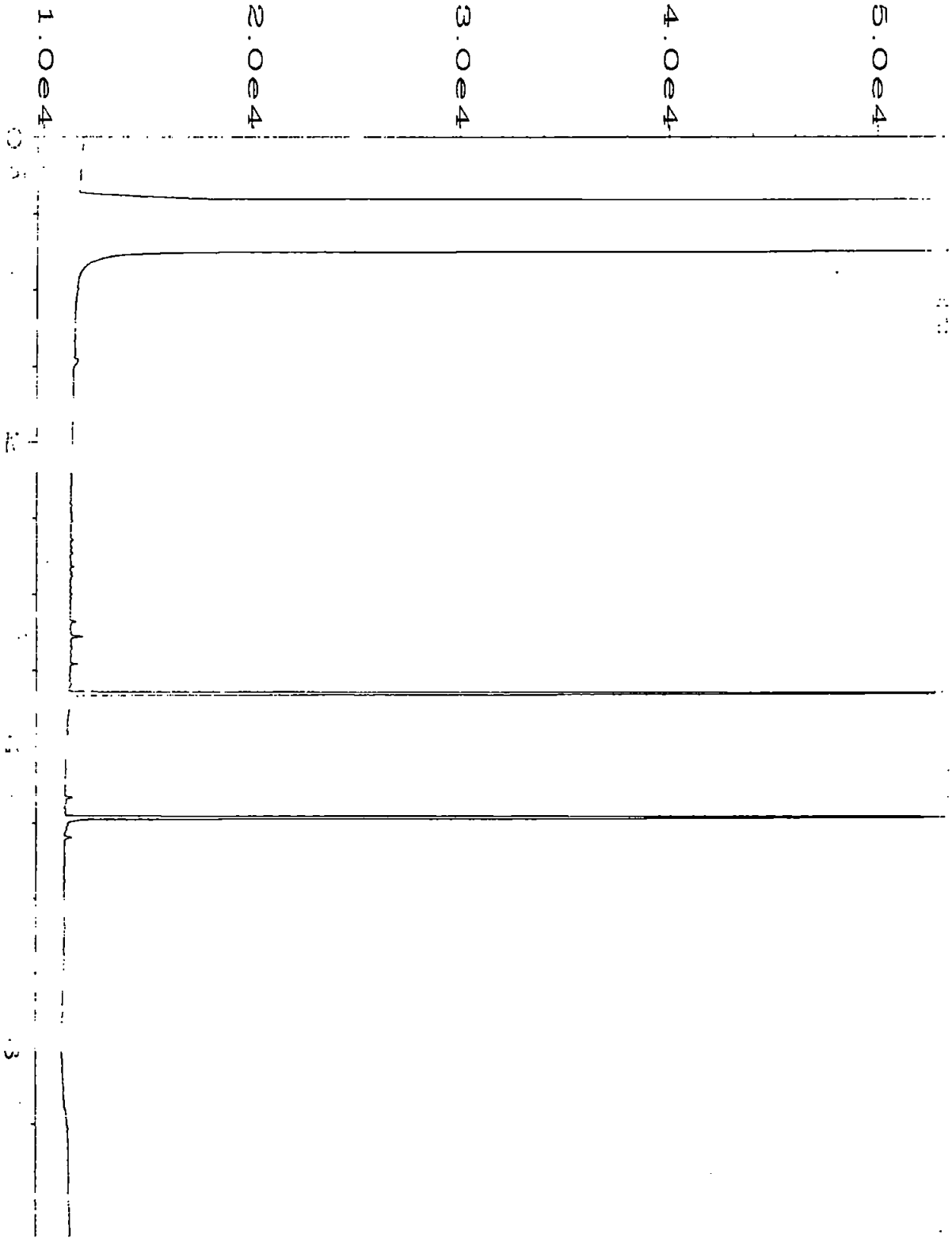
Data File Name : C:\HPCHEM\1\DATA\04-13-16\038F0701.D
Operator : mwdl
Instrument : GC1
Sample Name : 604231-02
Run Time Bar Code:
Acquired on : 13 Apr 16 04:50 PM
Report Created on: 14 Apr 16 09:42 AM

Page Number : 1
Vial Number : 38
Injection Number : 1
Sequence Line : 7
Instrument Method: DX.MTH
Analysis Method : DX.MTH



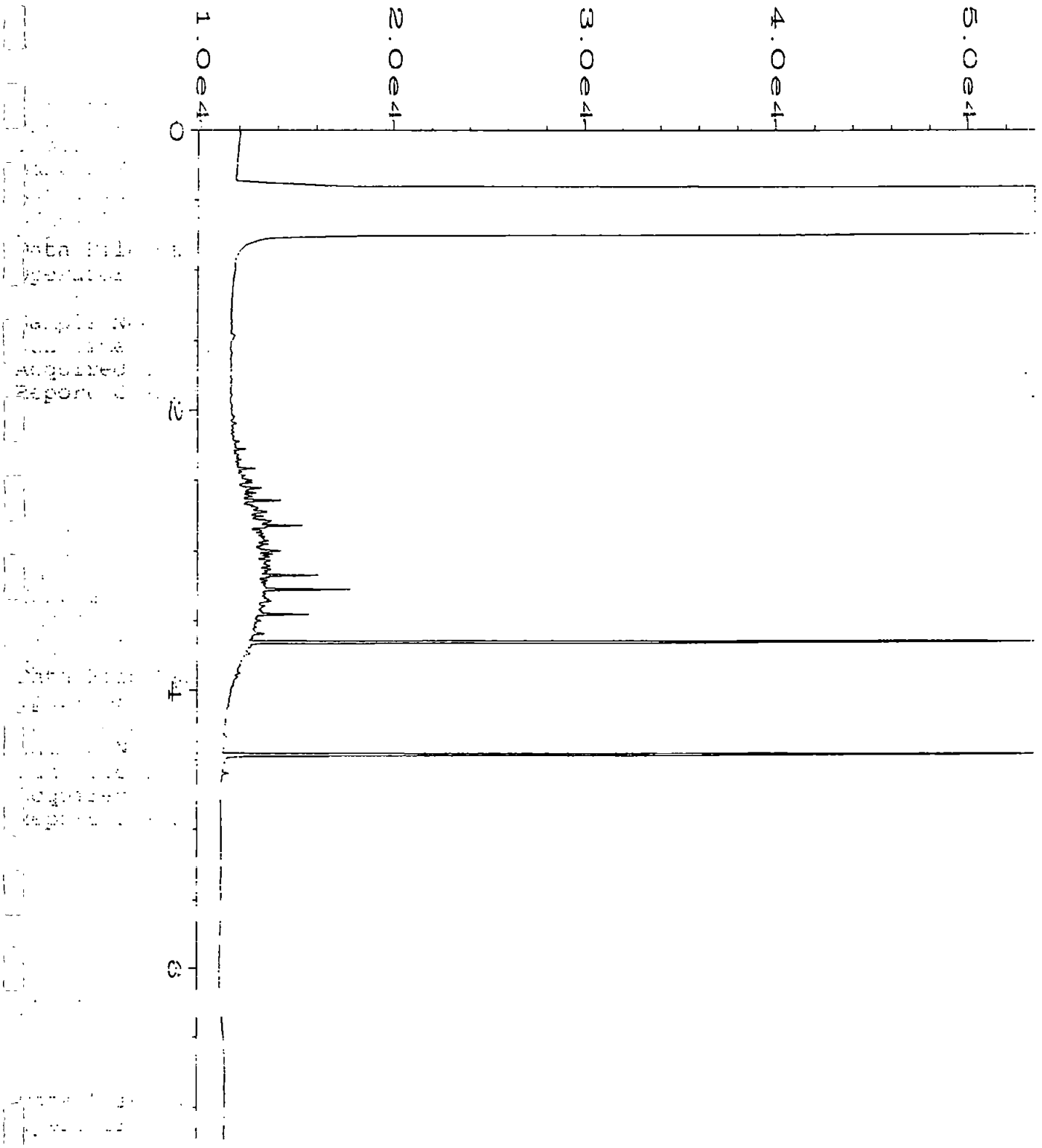
Data File Name : C:\HPCHEM\1\DATA\04-13-16\039F0701.D
Operator : mwdl
Instrument : GC1
Sample Name : 604231-03
Run Time Bar Code:
Acquired on : 13 Apr 16 05:01 PM
Report Created on: 14 Apr 16 09:42 AM

Page Number : 1
Vial Number : 39
Injection Number : 1
Sequence Line : 7
Instrument Method: DX.MTH
Analysis Method : DX.MTH



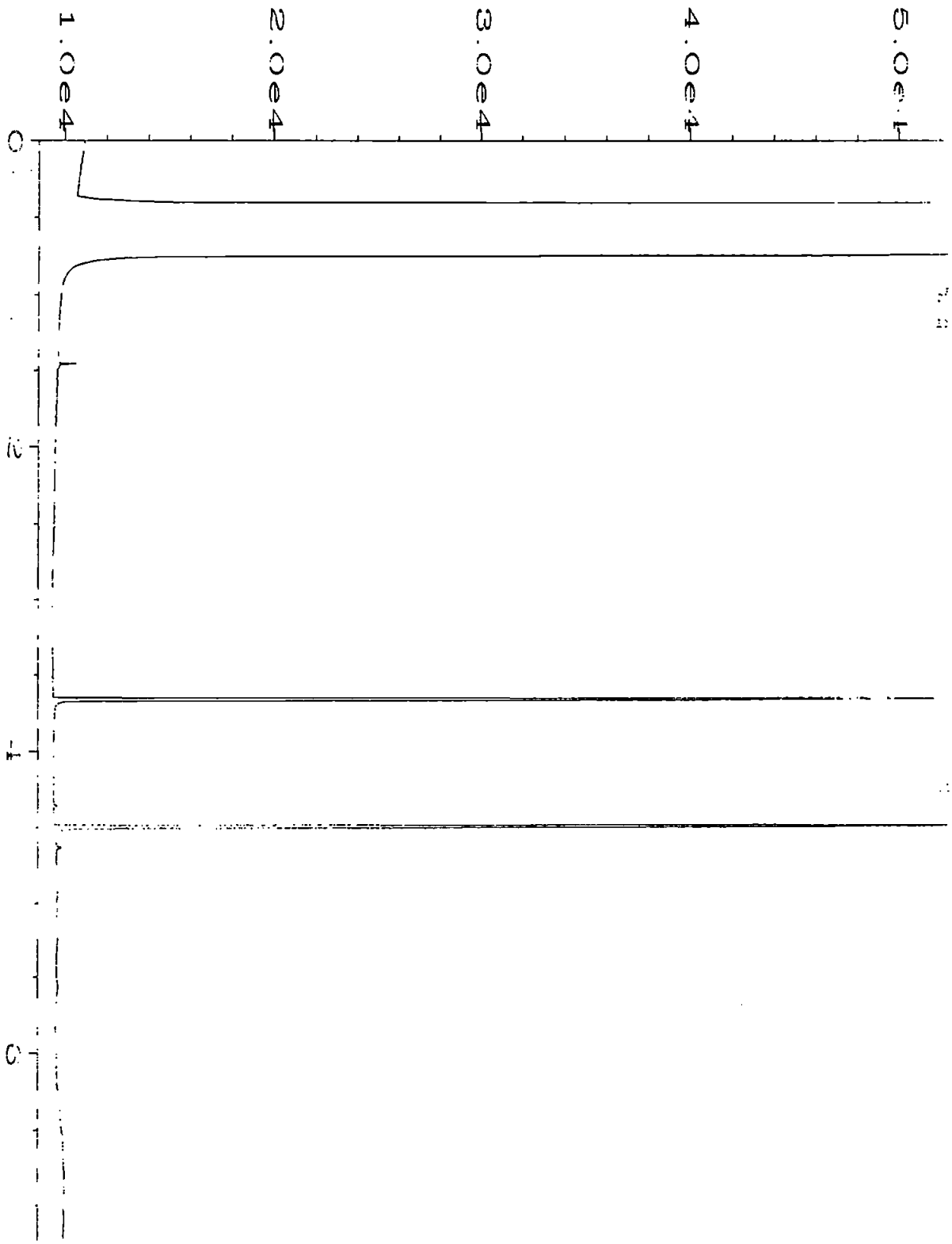
Data File Name : C:\HPCHEM\1\DATA\04-13-16\040F0701.D
Operator : mwdl
Instrument : GC1
Sample Name : 604231-04
Run Time Bar Code:
Acquired on : 13 Apr 16 05:12 PM
Report Created on: 14 Apr 16 09:42 AM

Page Number : 1
Vial Number : 40
Injection Number : 1
Sequence Line : 7
Instrument Method: DX.MTH
Analysis Method : DX.MTH



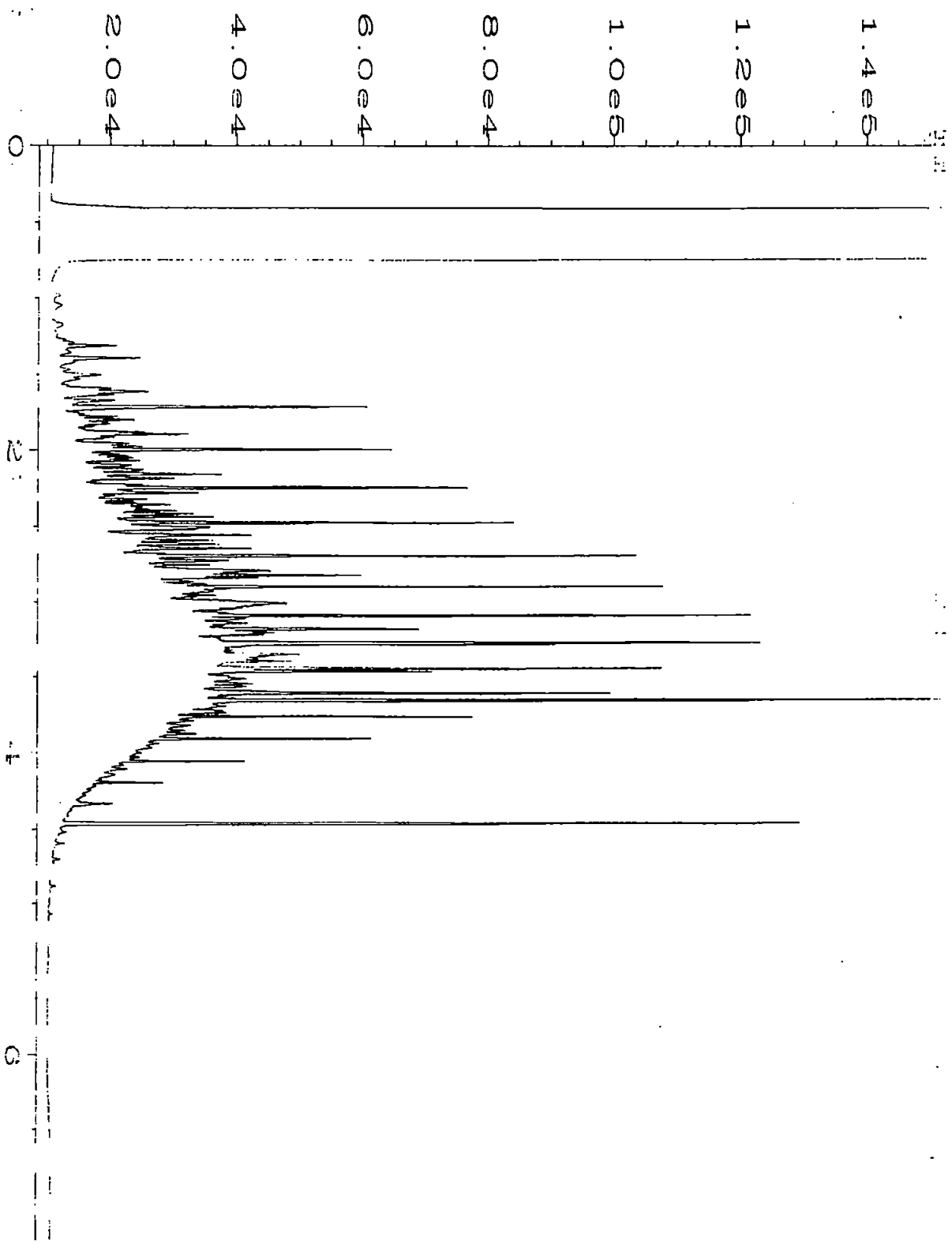
Data File Name : C:\HPCHEM\1\DATA\04-13-16\041F0701.D
Operator : mwdl
Instrument : GC1
Sample Name : 604231-05
Run Time Bar Code:
Acquired on : 13 Apr 16 05:23 PM
Report Created on: 14 Apr 16 09:42 AM

Page Number : 1
Vial Number : 41
Injection Number : 1
Sequence Line : 7
Instrument Method: DX.MTH
Analysis Method : DX.MTH



Data File Name : C:\HPCHEM\1\DATA\04-13-16\033F0701.D
Operator : mwdl
Instrument : GC1
Sample Name : 06-750 mb
Run Time Bar Code:
Acquired on : 13 Apr 16 03:57 PM
Report Created on: 14 Apr 16 09:42 AM

Page Number : 1
Vial Number : 33
Injection Number : 1
Sequence Line : 7
Instrument Method: DX.MTH
Analysis Method : DX.MTH



Data File Name : C:\HPCHEM\1\DATA\04-13-16\003F0201.D
Operator : mwdl
Instrument : GC1
Sample Name : 500 Dx 45-182D
Run Time Bar Code:
Acquired on : 13 Apr 16 06:41 AM
Report Created on: 14 Apr 16 09:43 AM

Page Number : 1
Vial Number : 3
Injection Number : 1
Sequence Line : 2
Instrument Method: DX.MTH
Analysis Method : DX.MTH

604231

SAMPLE CHAIN OF CUSTODY

ME 4/13/16 VS1/A02

Page # 1 of 1

Send Report To Gabe Cisneros
Company Floyd|Snider
Address 601 Union St Ste. 600
City, State, ZIP Seattle, WA 98101
Phone # 206-292-2078 Fax #

SAMPLERS (signature)

PROJECT NAME/NO. Pemco

PO#

REMARKS 8260 VOCs include: MTBE, Naphthalene, n-hexane, & EDC

TURNAROUND TIME
☐ Standard (2 Weeks)
☒ RUSH ASAP
Rush charges authorized by

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Total Lead by 6020	EDB by 8260 SIM	cPAHs 8270				Notes
EX-1-4.5'-5.0'	01A	4/13/16	1240	Soil	5	X	X	X										
EX-1-4.5'-5.0' Dup	02		1245		5	X	X	X	X	X								No VOCs by 8260
EX-2-4.5'-5.0'	03		1310		5	X	X	*	X			X	X	X				* cancel
EX-3-7.5'-8.0'	04		1330		5	X	X	X										
EX-4-4.5'-5.0'	05		1410		5	X	X	X	*			*	*	*				* - analyze per GR 4/14/16 mg

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Gabe Cisneros	Floyd/Snider	4/13/16	1430
Received by:	James Broyles	FEB	4/13	1430
Relinquished by:				
Received by:		Samples received at 2 °C		

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

PEMCO Eastlake

Cleanup Action Report—
1992 Fuel Line Release

Appendix C
Trucking Weight Ticket

1876086604

Weighed At: Soil Remediation
6300 Glenwood Ave
Everett, WA 98213

CEMEX

Location: 1876

Order: 41059661 Dispatch: 0 Date: 04/13/2016

Ship To: 30638 / 1 - CLEARCREEK CONTRACTORS INC
P: FLOYD SNYDER-PSMCO
75 325 EASTLAKE AVE EAST
SEATTLE WA 98102

Instruct: CLASS 3 TO EVERETT SOIL REMEDIATION

Job #: FLOYD SNYDER -FE PO: 215135

Product: 1192508 - CLASS 3 SOIL DUMPED BY TON

Carrier: -

Vehicle: 2212771 - CC443 CLEARCREEK CONTRACTORS

Tractor / Trailer1 / Trailer 2 - - -

Qty: 16.49 ton

-- DRIVER ON AT TARE & GROSS --

	lb	ton	tne
Gross:	60,500	30.25	27.44
Tare:	27,520	13.76	12.48
Net:	32,980	16.49	14.96

Weighmaster:
CEMEX

Deputy Weighmaster:
Gregory W Smith

Scale: 1
In: 2:32 pm
Out: 2:41 pm

Today Loads: 1
Today Qty: -16.49 ton
0.00

CEMEX'S STANDARD TERMS AND CONDITIONS INCORPORATED HEREIN

0.00

Driver

Signature of Receiving Agent

METRIC CONVERSION FORMULA: [illegible]

SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION