

# COMPLETION REPORT

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PACIFIC PRIDE WOODINVILLE CARDLOCK  
ECOLOGY SPILL SITE #668855  
REMEDIAL ACTION—SOIL REMOVAL



*Prepared for*  
**PETROCARD, INC.**  
*January 4, 2017*  
*Project No. 0228.21.03*

*Prepared by*  
*Maul Foster & Alongi, Inc.*  
*2815 2nd Avenue, Suite 540, Seattle, WA 98121*

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ECOLOGY SPILL SITE #668855  
REMEDIAL ACTION—SOIL REMOVAL  
*The material and data in this report were prepared  
under the supervision and direction of the undersigned.*

MAUL FOSTER & ALONGI, INC.



This digital seal certifies the signatory  
and document content. 1/4/17

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*Levi Fernandes, PE  
Senior Engineer*

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*Yen-Vy Van, LHG  
Senior Hydrogeologist*

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## ACRONYMS AND ABBREVIATIONS

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bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and total xylenes
CEMEX	CEMEX USA
Client	PetroCard, Inc.
COI	chemical of interest
CUL	cleanup level
cy	cubic yard
DRO	diesel-range organic
Ecology	Washington State Department of Ecology
ESA	environmental site assessment
GRO	gasoline-range organic
MFA	Maul Foster & Alongi, Inc.
MTCA	Model Toxics Control Act
NWTPH	Northwest Total Petroleum Hydrocarbons
PCS	petroleum contaminated soil
PNE	PNE Corporation
Property	Pacific Pride Woodinville cardlock facility located at 24019 Snohomish Woodinville Road, Woodinville, Washington
TPH	total petroleum hydrocarbons
USEPA	U.S. Environmental Protection Agency

# 1 INTRODUCTION

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On behalf of PetroCard, Inc. (the Client), Maul Foster & Alongi, Inc. (MFA) has prepared this report describing completion of the soil remedial action at the Pacific Pride Woodinville cardlock facility located at 24019 Snohomish Woodinville Road in Woodinville, Washington (the Property) (see Figure 1). The Pacific Pride Woodinville cardlock operation consists of diesel and gasoline underground storage tanks, pump islands, and an oil/water separator. Environmental upgrades were completed at the Property in October/November 2016 that consisted of the following:

- Installation/construction of eight dispenser sumps and associated product piping, five catch basins, one 50-gallon spill control manhole, one three-chambered oil/water separator, one service connection to existing sanitary sewer, and electrical conduit.

PNE Corporation (PNE) of Longview, Washington was the lead contractor for the construction and upgrade activities, including excavation, trenching, and surface restoration. On November 8, 2016 PNE encountered petroleum contaminated soil (PCS) during construction activities at dispenser island numbers 9/10 (the farthest eastern pump islands at the Property – see Figure 2). PCS was observed along the east-west product piping alignment prompting an environmental investigation and remedial action involving characterization and confirmation soil sampling, expedited laboratory analysis of soil samples to evaluate the extent of PCS impact, and subsequent PCS excavation and removal. The Client notified the Washington State Department of Ecology (Ecology) on November 8, 2016 of the discovery of PCS. The Property was assigned Ecology Spill Site # 668855.

The soil remedial action consisted of excavation of PCS, on-site soil management, off-site disposal of PCS, and placement of clean, imported backfill. In addition, accumulated material within the stormwater system catch basins was removed for off-site disposal. MFA provided soil remedial action oversight to PNE for PCS excavation and removal on November 8, 9, and 14, 2016.

## 2 BACKGROUND

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### 2.1 Site Location and Background

The approximate 1.99-acre Property is located at 24019 Snohomish Woodinville Road, Woodinville, Washington, in section 34, township 27 north, range 5 east, of the Willamette Meridian, on Snohomish County parcel number 27053400403100 (see Figure 2). The Property is bordered to the north by the Burlington Northern railroad, to the west by 144<sup>th</sup> Avenue NE, and to the east and south by other light industrial properties. The western half of the Property is currently used as a Pacific Pride cardlock fueling facility. With exception to the Rockin' Shots Espresso stand located along the northern

property line, the eastern half of the Property was occupied by West Coast Construction until January 2016 and is currently vacant.

## 2.2 Site History

In April and May 2016, MFA completed a Phase I environment site assessment (ESA) for the Property (MFA, 2016a). Concurrently with the Phase I ESA, MFA also completed a Phase II ESA (MFA, 2016b) on the eastern half of the Property and concluded that soil and groundwater have likely not been impacted from past activities by West Coast Construction or from historical operations to the east-northeast of the Property.

## 2.3 Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

In general, the Property and surrounding area slope to the north-northwest toward Bear Creek, located approximately 0.20 mile from the Property. The primary lithology in the area has been mapped as Quaternary glacial outwash deposits, consisting of unconsolidated sands with cobbles and pebbles, and locally silty areas.<sup>1</sup> A review of boring logs for the West Coast Construction portion of the Property and facilities in the vicinity indicates that silty sand, sand, and gravel are the predominant soils encountered in the area to approximate depths ranging from 25 to 35 feet below ground surface (bgs). The approximate depth to groundwater ranges from approximately 18 to 20 feet bgs.

The inferred direction of groundwater flow, based on topography and regional discharge, is generally north-northwest.

# 3 SOIL REMEDIAL ACTION

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This section summarizes soil remedial action activities that included excavation and removal of PCS characterized in excess of the Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A cleanup levels (CULs), backfilling the excavation pit, and transporting the PCS off-site to a regulated landfill for disposal and treatment. The remediation activities also included the removal of accumulated material within the stormwater catch basins for off-site disposal. Photographs showing remediation activities are presented in Attachment A.

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<sup>1</sup> Minard, J. P. Geologic map of the Bothell quadrangle, Snohomish and King Counties, Washington: U.S. Geological Survey, Miscellaneous Field Studies Map MF-1741, scale 1:24,000. 1985.

## 3.1 Preliminary Activities

### 3.1.1 Utility Locating

Prior to initiation of soil remediation activities, the excavation area was cleared by public (i.e., Underground Utility Notification Center) and private utility locators.

## 3.2 PCS Excavation (Dispenser Island Numbers 9/10)

On November 8, 2016, PCS was encountered along the east-west product piping alignment located immediately south of dispenser island numbers 9/10. Four soil characterization samples were collected along the east-west piping alignment and submitted to Friedman & Bruya, Inc. in Seattle, Washington for rushed 24-hour turn-around-time analysis to evaluate whether or not PCS is present at concentrations above MTCA Method A CULs. Selected soil samples were analyzed for the following chemicals of interest (COIs) and their associated laboratory methods:

- Gasoline-range organics (GROs) by the Northwest Total Petroleum Hydrocarbons (NWTPH)-Gx method
- Diesel-range organics (DROs) by the NWTPH-Dx method
- Petroleum fuels associated volatile organic compound (VOC), specifically benzene, toluene, ethylbenzene, and xylenes (BTEX) by U.S. Environmental Protection Agency (USEPA) Method 8021B
- Total lead by USEPA Method 200.8
- Polychlorinated biphenyls by USEPA Method 8082
- Polycyclic aromatic hydrocarbons by USEPA Method 8270D Selective Ion Monitoring

A rapid turnaround was required for characterization, confirmation and stockpile soil samples. Laboratory analytical results (see Attachment B) were required to evaluate the extent of PCS impact and to characterize the stockpiled soil for reuse or off-site disposal.

Analytical data and the laboratory's internal quality assurance and quality control data were reviewed to assess whether they met data quality objectives, consistent with USEPA procedures for evaluating laboratory analytical data (USEPA, 2004, 2008). A memorandum summarizing data validation procedures, data usability, and deviations from specific field and/or laboratory methods is included in Attachment C. The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

Characterization soil samples collected on November 8, 2016 from the product piping area exhibited concentrations of DROs above the MTCA A CULs (see Table 1 and Figure 3). Stockpile soil samples also exhibited DROs concentrations above Ecology reuse guidance (Ecology, 2016) and were disposed of as PCS at CEMEX USA (CEMEX) located in Everett, Washington. Analytical results for



the stockpile soil samples are summarized in Table 2. Documentation certifying disposal of PCS at CEMEX is provided in Attachment D.

GROs were also detected in characterization and stockpile soil samples (see Tables 1 and 2, respectively). However, total petroleum hydrocarbon (TPH) as gas chromatograms indicate GRO-reported concentrations are due to overlap with elevated DROs and not indicative of presence of GROs (see Attachment B).

On November 9, 2016, over-excavation of PCS began on the west side of dispenser island numbers 9/10 (including removal of a catch basin) and progressed towards the south and east. Over-excavation of PCS continued until visual/olfactory observations and field screening via a photoionization detector suggested PCS had been removed. Confirmation soil samples were collected and submitted for DROs and BTEX per MTCA Cleanup Regulation Table 830-1, Required Testing for Petroleum Releases (see Table 1).

Given the observed presence of PCS beneath the dispenser island numbers 9/10, the Client elected to remove the canopy, fuel island, and associated concrete footing. On November 14, 2016, additional over-excavation of PCS was performed with a second round of confirmation soil samples collected from the sidewalls and base of the excavation pit at depths ranging approximately from 12.5 to 14.0 feet bgs. Soil samples were submitted for the COIs. All confirmation soil samples were non-detect or reported below the associated MTCA Method A CULs (see Table 1). Figure 3 shows the locations of the sidewall and bottom confirmation soil samples relative to the excavation.

In general, over-excavation was completed to a depth of approximately 14 feet bgs. Groundwater was not observed throughout the excavation activities nor encountered at the maximum excavation depth.

Laboratory analytical results for characterization and confirmation soil samples are summarized in Table 1. Attachments B and C contain the laboratory analytical reports and the data validation memorandum, respectively.

### 3.3 Stockpiling

PCS was excavated and placed in a designated stockpile area for waste characterization and profiling. PCS was placed on and covered with plastic sheeting and managed in approximately 20 cubic yard (cy) units. From each of the first three 20-cy units (samples Stockpile 1, Stockpile 2, and Stockpile 3), a six-point composite sample was collected and submitted for analysis for DROs, BTEX, and total lead (see Table 2). One composite sample (Stockpile 1) was also submitted for analysis for GROs and toxic characteristic leaching procedure lead using USEPA Method 1311 and Method 6020A. Based on the analytical results, the contaminated soil was designated as a non-hazardous waste.

Attachments B and C contain the laboratory analytical reports and the data validation memorandum, respectively.

### 3.4 Backfilling

Backfill was conducted concurrently with excavation following over-excavation activities and to maintain safety and operations at the site. PNE provided oversight for all backfilling activities. The excavation pit was backfilled using imported soil. Imported backfill was placed in the excavated areas and compacted in accordance with PNE's project specifications.

### 3.5 Disposal

#### 3.5.1 Impacted Soil

Approximately 252.61 tons of excavated PCS was transported off-site for disposal as a non-hazardous waste at CEMEX. Attachment D includes documentation of PCS disposed of at CEMEX.

#### 3.5.2 Catch Basin Material

A sample of material from a west fueling system stormwater catch basin (CB-1) and from an east fueling system catch basin (CB-2) were collected and submitted for analysis for GRO, DRO, BTEX, and total metals for waste characterization and profiling. Laboratory analytical results for the catch basin samples are summarized in Table 3. Attachments B contains the laboratory reports and the data validation memorandum. Note: GROs were exhibited in catch basin material samples; however, TPH as gas chromatograms indicate GRO-reported concentrations are due to overlap with elevated DROs and not indicative of presence of GROs (see Attachment B).

Approximately 6.07 tons of material accumulated in the stormwater catch basins were removed using a vacuum truck and disposed of at CEMEX.

## 4 CONCLUSIONS

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Approximately 253 tons of PCS was removed at the east fueling system, dispenser island numbers 9/10 as part of the environmental upgrade and soil remedial action activities. All confirmation soil samples were non-detect or reported below MTCA Method A CULs. Based on the laboratory analytical results, it appears that PCS exceeding MTCA Method A CULs associated with dispenser island numbers 9/10 was successfully removed.

## LIMITATIONS

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The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

## REFERENCES

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# TABLES



**Table 1**  
**Summary of Soil Analytical Results**  
**Pacific Pride**  
**Woodinville Cardlock**  
**Woodinville, Washington**

Location:		WS1-Base	WS2-SideW-W	WS3-Base	WS4-SideW-N	WS5-Base
Location Type:		Base	West Sidewall	Base	North Sidewall	Base
Sample Type:		Characterization	Characterization	Characterization	Characterization	Confirmation
Sample Name:		WS1-B-9.0	WS2-SW-4.0	WS3-B-7.0	WS4-SW-3.0	WS5-B-9.5
Collection Date:		11/8/2016	11/8/2016	11/8/2016	11/8/2016	11/9/2016
Collection Depth (ft bgs):		9.0	4.0	7.0	3.0	9.5
MTCA A CUL						
<b>TPH (mg/kg)</b>						
Diesel Range Hydrocarbons	2000	1200	3300	50 U	17000	50 U
Gasoline Range Hydrocarbons	100	270 <sup>a</sup>	560 <sup>a</sup>	2 U	880 <sup>a</sup>	--
Motor Oil Range Hydrocarbons	2000	250 U	250 U	250 U	1200	250 U
<b>Total Metals (mg/kg)</b>						
Lead	250	--	--	--	3.14	--
<b>VOCs (mg/kg)</b>						
Benzene	0.03	0.02 UJ	0.02 UJ	0.02 U	0.02 UJ	0.02 U
Ethylbenzene	6	0.15	0.29	0.02 U	0.18	0.02 U
Total Xylenes	9	0.51	1.6	0.06 U	1	0.06 U
Toluene	7	0.1 U	0.1 U	0.02 U	0.1 U	0.02 U
<b>PCBs (mg/kg)</b>						
Aroclor 1016	NV	--	--	--	0.2 U	--
Aroclor 1221	NV	--	--	--	0.2 U	--
Aroclor 1232	NV	--	--	--	0.2 U	--
Aroclor 1242	NV	--	--	--	0.2 U	--
Aroclor 1248	NV	--	--	--	0.2 U	--
Aroclor 1254	NV	--	--	--	0.2 U	--
Aroclor 1260	NV	--	--	--	0.2 U	--
Aroclor 1262	NV	--	--	--	0.2 U	--
Aroclor 1268	NV	--	--	--	0.2 U	--
Total PCBs	1	--	--	--	0.2 U	--
<b>PAHs (mg/kg)</b>						
Benz(a)anthracene	NV	--	--	--	0.01 U	--
Benzo(a)pyrene	0.1	--	--	--	0.01 U	--
Benzo(b)fluoranthene	NV	--	--	--	0.01 U	--
Benzo(k)fluoranthene	NV	--	--	--	0.01 U	--
Chrysene	NV	--	--	--	0.031	--
Dibenzo(a,h)anthracene	NV	--	--	--	0.01 U	--

**Table 1**  
**Summary of Soil Analytical Results**  
**Pacific Pride**  
**Woodinville Cardlock**  
**Woodinville, Washington**

Location:		WS1-Base	WS2-SideW-W	WS3-Base	WS4-SideW-N	WS5-Base
Location Type:		Base	West Sidewall	Base	North Sidewall	Base
Sample Type:		Characterization	Characterization	Characterization	Characterization	Confirmation
Sample Name:		WS1-B-9.0	WS2-SW-4.0	WS3-B-7.0	WS4-SW-3.0	WS5-B-9.5
Collection Date:		11/8/2016	11/8/2016	11/8/2016	11/8/2016	11/9/2016
Collection Depth (ft bgs):		9.0	4.0	7.0	3.0	9.5
Indeno(1,2,3-cd)pyrene	NV	--	--	--	0.01 U	--
Total cPAHs (TEQ)	0.1	--	--	--	<b>0.01531</b>	--
NOTES: Detected result values are in <b>bold</b> font. Result values above MTCA A CULs are shaded. -- = not analyzed. bgs = below ground surface. CUL = cleanup level. ft = feet. mg/kg = milligrams per kilogram. MTCA A = Washington State Model Toxics Control Act Method A, unrestricted land use. NV = no value. PAH = polycyclic aromatic hydrocarbons. TPH = total petroleum hydrocarbons. U = Result is non-detect. UJ = Result is estimated non-detect. <sup>a</sup> TPH-gas chromatograms indicate results are due to overlap from elevated diesel range TPH compounds and not indicative of presence of TPH-gas.						

**Table 1**  
**Summary of Soil Analytical Results**  
**Pacific Pride**  
**Woodinville Cardlock**  
**Woodinville, Washington**

Location:		WS6-SideW-N	WS7-Base	WS8-SideW-E	WS9-SideW-S	WS10-SideW-W
Location Type:		West Sidewall	Base	East Sidewall	South Sidewall	West Sidewall
Sample Type:		Confirmation	Confirmation	Confirmation	Confirmation	Confirmation
Sample Name:		WS6-SW-N-9.5	WS7-B-8.0	WS8-SW-E-5.0	WS9-SW-S-9.0	WS10-SW-W-7.0
Collection Date:		11/9/2016	11/9/2016	11/9/2016	11/9/2016	11/9/2016
Collection Depth (ft bgs):		9.5	8.0	5.0	9.0	7.0
MTCA A CUL						
<b>TPH (mg/kg)</b>						
Diesel Range Hydrocarbons	2000	50 U	50 U	50 U	50 U	420
Gasoline Range Hydrocarbons	100	--	--	--	--	--
Motor Oil Range Hydrocarbons	2000	250 U	250 U	250 U	250 U	250 U
<b>Total Metals (mg/kg)</b>						
Lead	250	--	--	--	--	--
<b>VOCs (mg/kg)</b>						
Benzene	0.03	0.02 U	0.02 U	0.02 U	0.02 U	0.02 UJ
Ethylbenzene	6	0.02 U	0.02 U	0.02 U	0.02 U	0.11
Total Xylenes	9	0.06 U	0.06 U	0.06 U	0.06 U	0.41
Toluene	7	0.02 U	0.02 U	0.02 U	0.02 U	0.1 U
<b>PCBs (mg/kg)</b>						
Aroclor 1016	NV	--	--	--	--	--
Aroclor 1221	NV	--	--	--	--	--
Aroclor 1232	NV	--	--	--	--	--
Aroclor 1242	NV	--	--	--	--	--
Aroclor 1248	NV	--	--	--	--	--
Aroclor 1254	NV	--	--	--	--	--
Aroclor 1260	NV	--	--	--	--	--
Aroclor 1262	NV	--	--	--	--	--
Aroclor 1268	NV	--	--	--	--	--
Total PCBs	1	--	--	--	--	--
<b>PAHs (mg/kg)</b>						
Benz(a)anthracene	NV	--	--	--	--	--
Benzo(a)pyrene	0.1	--	--	--	--	--
Benzo(b)fluoranthene	NV	--	--	--	--	--
Benzo(k)fluoranthene	NV	--	--	--	--	--
Chrysene	NV	--	--	--	--	--
Dibenzo(a,h)anthracene	NV	--	--	--	--	--



**Table 1**  
**Summary of Soil Analytical Results**  
**Pacific Pride**  
**Woodinville Cardlock**  
**Woodinville, Washington**

Location:		WS6-SideW-N	WS7-Base	WS8-SideW-E	WS9-SideW-S	WS10-SideW-W
Location Type:		West Sidewall	Base	East Sidewall	South Sidewall	West Sidewall
Sample Type:		Confirmation	Confirmation	Confirmation	Confirmation	Confirmation
Sample Name:		WS6-SW-N-9.5	WS7-B-8.0	WS8-SW-E-5.0	WS9-SW-S-9.0	WS10-SW-W-7.0
Collection Date:		11/9/2016	11/9/2016	11/9/2016	11/9/2016	11/9/2016
Collection Depth (ft bgs):		9.5	8.0	5.0	9.0	7.0
Indeno(1,2,3-cd)pyrene	NV	--	--	--	--	--
Total cPAHs (TEQ)	0.1	--	--	--	--	--
NOTES: Detected result values are in <b>bold</b> font. Result values above MTCA A CULs are shaded. -- = not analyzed. bgs = below ground surface. CUL = cleanup level. ft = feet. mg/kg = milligrams per kilogram. MTCA A = Washington State Model Toxics Control Act M NV = no value. PAH = polycyclic aromatic hydrocarbons. TPH = total petroleum hydrocarbons. U = Result is non-detect. UJ = Result is estimated non-detect. <sup>a</sup> TPH-gas chromatograms indicate results are due to ov						

**Table 1**  
**Summary of Soil Analytical Results**  
**Pacific Pride**  
**Woodinville Cardlock**  
**Woodinville, Washington**

Location:		WS11-SideW-N	WS12-SideW-E	WS13-SideW-W	WS14-Base_Exc
Location Type:		North Sidewall	East Sidewall	West Sidewall	Base Central
Sample Type:		Confirmation	Confirmation	Confirmation	Confirmation
Sample Name:		WS11-SW-N-13.5	WS12-SW-E-12.5	WS13-SW-W-13.5	WS14-B-C-14.0
Collection Date:		11/14/2016	11/14/2016	11/14/2016	11/14/2016
Collection Depth (ft bgs):		13.5	12.5	13.5	14.0
MTCA A CUL					
<b>TPH (mg/kg)</b>					
Diesel Range Hydrocarbons	2000	50 U	50 U	50 U	50 U
Gasoline Range Hydrocarbons	100	--	--	--	--
Motor Oil Range Hydrocarbons	2000	250 U	250 U	250 U	250 U
<b>Total Metals (mg/kg)</b>					
Lead	250	--	--	--	--
<b>VOCs (mg/kg)</b>					
Benzene	0.03	0.02 U	0.02 U	0.02 U	0.02 U
Ethylbenzene	6	0.02 U	0.02 U	0.02 U	0.02 U
Total Xylenes	9	0.06 U	0.06 U	0.06 U	0.06 U
Toluene	7	0.02 U	0.02 U	0.02 U	0.02 U
<b>PCBs (mg/kg)</b>					
Aroclor 1016	NV	--	--	--	--
Aroclor 1221	NV	--	--	--	--
Aroclor 1232	NV	--	--	--	--
Aroclor 1242	NV	--	--	--	--
Aroclor 1248	NV	--	--	--	--
Aroclor 1254	NV	--	--	--	--
Aroclor 1260	NV	--	--	--	--
Aroclor 1262	NV	--	--	--	--
Aroclor 1268	NV	--	--	--	--
Total PCBs	1	--	--	--	--
<b>PAHs (mg/kg)</b>					
Benz(a)anthracene	NV	--	--	--	--
Benzo(a)pyrene	0.1	--	--	--	--
Benzo(b)fluoranthene	NV	--	--	--	--
Benzo(k)fluoranthene	NV	--	--	--	--
Chrysene	NV	--	--	--	--
Dibenzo(a,h)anthracene	NV	--	--	--	--

**Table 1**  
**Summary of Soil Analytical Results**  
**Pacific Pride**  
**Woodinville Cardlock**  
**Woodinville, Washington**

Location:		WS11-SideW-N	WS12-SideW-E	WS13-SideW-W	WS14-Base_Exc
Location Type:		North Sidewall	East Sidewall	West Sidewall	Base Central
Sample Type:		Confirmation	Confirmation	Confirmation	Confirmation
Sample Name:		WS11-SW-N-13.5	WS12-SW-E-12.5	WS13-SW-W-13.5	WS14-B-C-14.0
Collection Date:		11/14/2016	11/14/2016	11/14/2016	11/14/2016
Collection Depth (ft bgs):		13.5	12.5	13.5	14.0
Indeno(1,2,3-cd)pyrene	NV	--	--	--	--
Total cPAHs (TEQ)	0.1	--	--	--	--
NOTES: Detected result values are in <b>bold</b> font. Result values above MTCA A CULs are shaded. -- = not analyzed. bgs = below ground surface. CUL = cleanup level. ft = feet. mg/kg = milligrams per kilogram. MTCA A = Washington State Model Toxics Control Act IV NV = no value. PAH = polycyclic aromatic hydrocarbons. TPH = total petroleum hydrocarbons. U = Result is non-detect. UJ = Result is estimated non-detect. <sup>a</sup> TPH-gas chromatograms indicate results are due to ov					

**Table 2**  
**Stockpile Analytical Results**  
**Pacific Pride**  
**Woodinville Cardlock**  
**Woodinville, Washington**

Location:		Stockpile 1	Stockpile 2	Stockpile 3
Sample Name:		ST1	ST-2	ST-3
Collection Date:		11/8/2016	11/9/2016	11/9/2016
	MTCA A CUL			
<b>TPH (mg/kg)</b>				
Diesel Range Hydrocarbons	2000	<b>3500</b>	<b>2800</b>	<b>2800</b>
Gasoline Range Hydrocarbons	100	520 <sup>a</sup>	--	--
Motor Oil Range Hydrocarbons	2000	250 U	250 U	250 U
<b>Total Metals (mg/kg)</b>				
Lead	250	<b>2.94</b>	<b>3.31</b>	<b>2.48</b>
<b>TCLP Metals (mg/L)</b>				
Lead	5 <sup>b</sup>	1 U	--	--
<b>VOCs (mg/kg)</b>				
Benzene	0.03	0.02 UJ	0.02 U	0.02 U
Ethylbenzene	6	<b>0.31</b>	<b>0.14</b>	<b>0.26</b>
Total Xylenes	9	<b>1.2</b>	<b>0.65</b>	<b>0.89</b>
Toluene	7	0.1 U	0.02 U	0.02 U
NOTES: Detected result values are in <b>bold</b> font. Result values above MTCA A CULs are shaded. -- = not analyzed. CUL = cleanup level. mg/kg = milligrams per kilogram. mg/L = milligrams per liter MTCA A = MTCA Method A, unrestricted land use. TCLP = Toxicity Characteristic Leaching Procedure. TPH = total petroleum hydrocarbons. U = Result is non-detect. UJ = Result is estimated non-detect. <sup>a</sup> TPH-gas chromatograms indicate results are due to overlap from elevated diesel range TPH compounds and not indicative of presence of TPH-gas. <sup>b</sup> Resource Conservation and Recovery Act Regulatory Level				

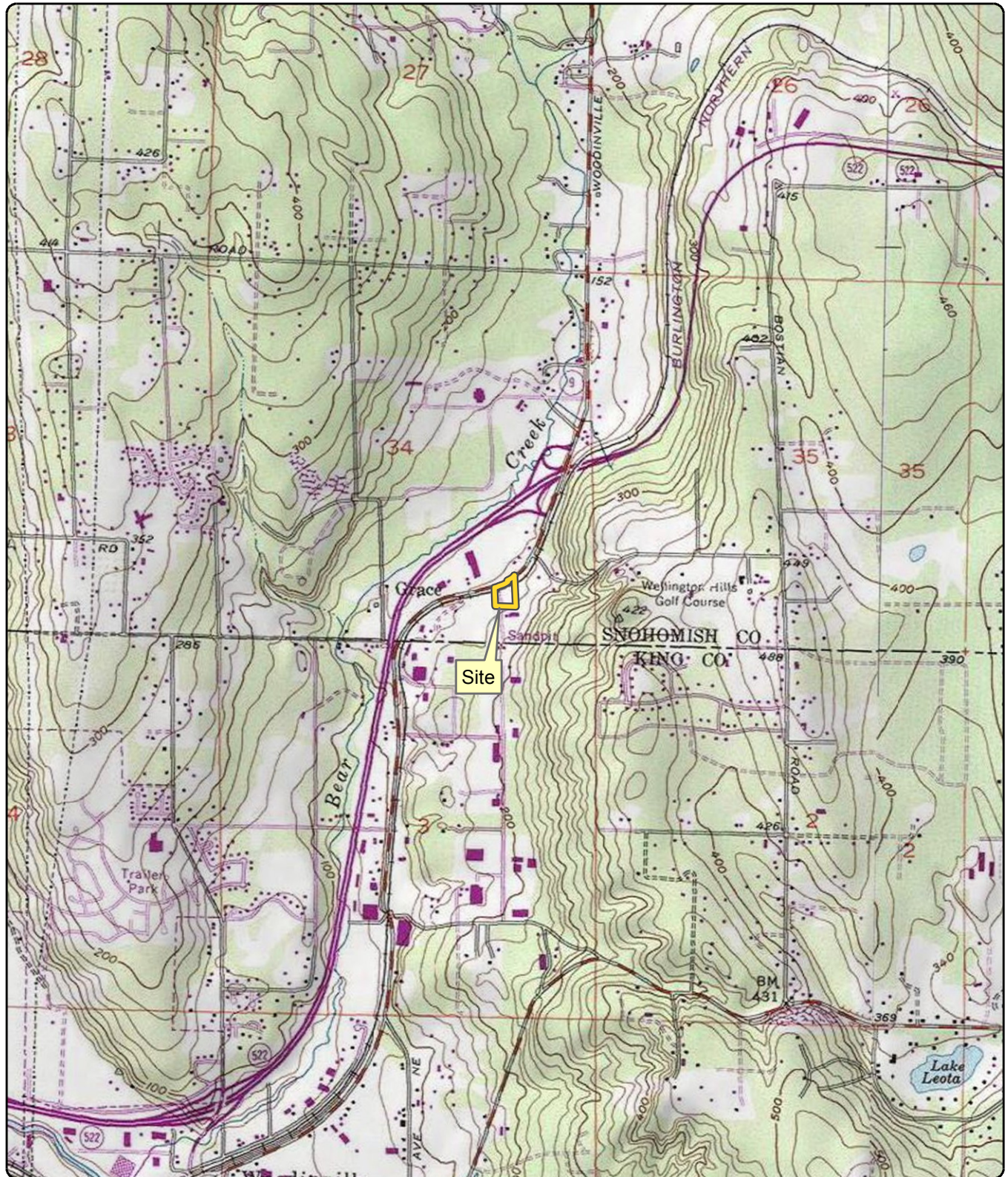
**Table 3**  
**Catch Basin Material Analytical Results**  
**Pacific Pride**  
**Woodinville Cardlock**  
**Woodinville, Washington**

Location: Sample Name: Collection Date:		Catch Basin 1	Catch Basin 2
		CB-1	CB-2
		11/9/2016	11/9/2016
	MTCA A CUL		
<b>TPH (mg/kg)</b>			
Diesel Range Hydrocarbons	2000	<b>61000</b>	<b>7600</b>
Gasoline Range Hydrocarbons	100	370 <sup>a</sup>	46 <sup>a</sup>
Motor Oil Range Hydrocarbons	2000	<b>11000</b>	<b>2100</b>
<b>VOCs (mg/kg)</b>			
Benzene	0.03	0.02 UJ	0.02 U
Ethylbenzene	6	<b>0.26</b>	<b>0.12</b>
Total Xylenes	9	<b>2.5</b>	<b>0.82</b>
Toluene	7	0.1 U	<b>0.063</b>
<b>Total Metals (mg/kg)</b>			
Arsenic	20	5 U	5 U
Barium	NV	<b>111</b>	<b>72.5</b>
Cadmium	2	1 U	<b>1.75</b>
Chromium	2000 <sup>b</sup>	<b>22.9</b>	<b>37.8</b>
Lead	250	<b>14.3</b>	<b>13.6</b>
Mercury	2	1 U	1 U
Selenium	NV	5 U	5 U
Silver	NV	1 U	1 U
NOTES: Detected result values are in <b>bold</b> font. Result values above MTCA A CULs are shaded. -- = not analyzed. CUL = cleanup level. mg/kg = milligrams per kilogram. MTCA A = MTCA Method A, unrestricted land use. TPH = total petroleum hydrocarbons. U = Result is non-detect. UJ = Result is estimated non-detect. <sup>a</sup> TPH-gas chromatograms indicate results are due to overlap from elevated diesel range TPH compounds and not indicative of presence of TPH-gas. <sup>b</sup> MTCA A CUL is for chromium III. MTCA A for Chromium VI = 19 mg/kg.			

# FIGURES







Site Address: 24019 Snohomish Woodinville Rd, Woodinville Washington  
 Source: US Geological Survey (1990) 7.5-minute  
 topographic quadrangle: Bothell  
 Section 34, Township 27 North, Range 5 East



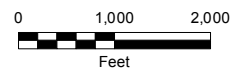
MAUL FOSTER ALONGI  
 p. 971 544 2139 | www.maulfooster.com

This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

**Legend**  
 Site Boundary

**Figure 1**  
**Site Location**

Pacific Pride Woodinville  
 24019 Snohomish Woodinville Rd.  
 Woodinville, Washington







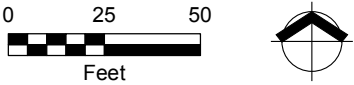


Source: Aerial photograph obtained from Esri ArcGIS Online

**Legend**

-  Site Boundary
-  Parcel Boundaries

**Figure 2**  
**Site Features**  
Pacific Pride Woodinville  
24019 Snohomish Woodinville Rd.  
Woodinville, Washington





# LEGEND

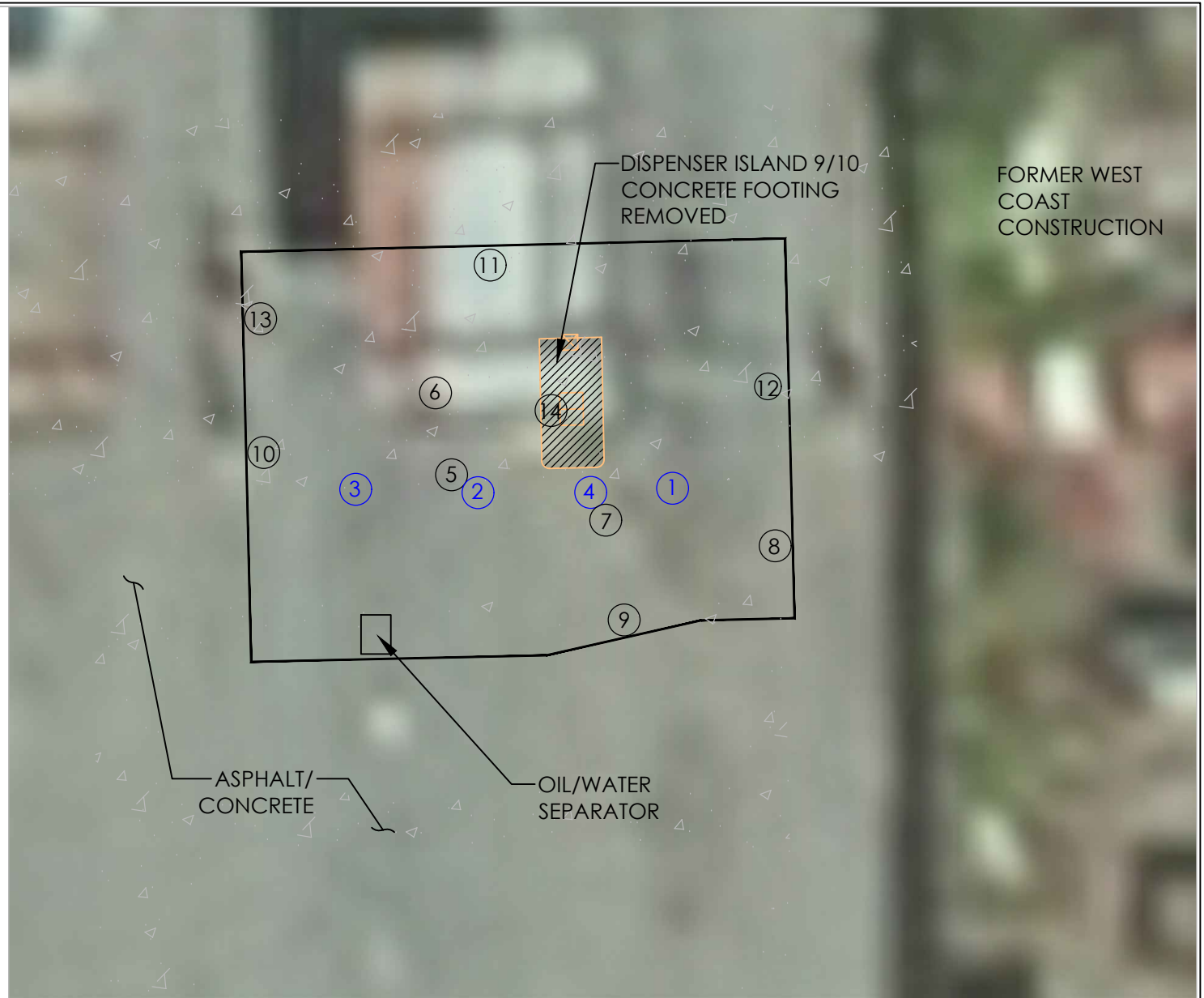
- # INITIAL CHARACTERIZATION SAMPLE
- # CONFIRMATION SOIL SAMPLE
- APPROXIMATE EXCAVATION EXTENT

## NOTES:

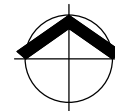
1. PCS = PETROLEUM CONTAMINATED SOIL
2. PCS EXCAVATION EXTENT AT DISPENSER ISLAND 9/10

## SAMPLE SAMPLE ID

<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">1</span>	WS1-B-9.0
<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">2</span>	WS2-SW-4.0
<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">3</span>	WS3-B-7.0
<span style="border: 1px solid blue; border-radius: 50%; padding: 2px;">4</span>	WS4-SW-3.0
<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">5</span>	WS5-B-9.5
<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">6</span>	WS6-SW-N-9.5
<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">7</span>	WS7-B-8.0
<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">8</span>	WS8-SW-E-5.0
<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">9</span>	WS9-SW-S-9.0
<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">10</span>	WS10-SW-W-7.0
<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">11</span>	WS11-SW-N-13.5
<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">12</span>	WS12-SW-E-12.5
<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">13</span>	WS13-SW-W-13.5
<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">14</span>	WS14-B-C-14.0



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NOTE: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY.

## Figure 3 PCS Excavation Extent and Soil Sample Locations

Pacific Pride Woodinville  
24019 Snohomish Woodinville Road  
Woodinville, Washington

This figure prepared as supplemental visual information only and should not be used for construction purposes. Only plan sheets approved, stamped and signed by a registered professional engineer in the state of governing jurisdiction shall be used for construction. Additionally, only plans approved by the applicable governing jurisdiction(s) shall be used for final construction unless otherwise expressly noted in writing by the engineer of record.

# ATTACHMENT A

## SITE PHOTOGRAPHS





Photo 1. Pacific Pride cardlock fueling station, looking south (prior to remediation activities).



Photo 2. Initial exposure and evaluation of product piping south of dispenser island numbers 9/10 (looking west).





Photo 3. Removal of catch basin directly west of dispenser island numbers 9/10 (looking south).



Photo 4. Petroleum contaminated soil excavation south of dispenser island numbers 9/10 (looking west).





Photo 5. Petroleum contaminated soil visually observed beneath dispenser island numbers 9/10's concrete footing (looking north).





Photo 6. Removal of dispenser island numbers 9/10's concrete footing (looking south). Note: dispenser islands already removed.



Photo 7. Over-excavation to remove additional petroleum contaminated soil associated with dispenser island numbers 9/10 and its concrete footing (looking southwest).



# ATTACHMENT B

## LABORATORY REPORTS



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 29, 2016

Yen-Vy Van, Project Manager  
Maul Foster Alongi  
2815 2<sup>nd</sup> Ave, Suite 540  
Seattle, WA 98121

Dear Ms Van:

Included is the amended report from the testing of material submitted on November 8, 2016 from the PCard Woodinville, F&BI 611139 project. Per your request, the NWTPH-Gx results were qualified to indicate that they are due to overlap from diesel range contamination.

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  
MFA1114R.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

November 14, 2016

Yen-Vy Van, Project Manager  
Maul Foster Alongi  
2815 2<sup>nd</sup> Ave, Suite 540  
Seattle, WA 98121

Dear Ms Van:

Included are the results from the testing of material submitted on November 8, 2016 from the PCard Woodinville, F&BI 611139 project. There are 19 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  
MFA1114R.DOC

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 8, 2016 by Friedman & Bruya, Inc. from the Maul Foster Alongi PCard Woodinville, F&BI 611139 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Maul Foster Alongi</u>
611139 -01	WS1-B-9.0
611139 -02	WS2-SW-4.0
611139 -03	WS3-B-7.0
611139 -04	WS4-SW-3.0
611139 -05	ST1

Sample WS4-SW-3.0 was extracted from a 4 ounce jar. The data were flagged accordingly.

The NWTPH-Dx chromatograms in the samples resembles a diesel fuel no.2 or heating oil.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/14/16  
 Date Received: 11/08/16  
 Project: PCard Woodinville, F&BI 611139  
 Date Extracted: 11/08/16  
 Date Analyzed: 11/08/16 and 11/09/16

**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)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
WS1-B-9.0 611139-01 1/5	<0.02 j	<0.1	0.15	0.51	270 x	85
WS2-SW-4.0 611139-02 1/5	<0.02 j	<0.1	0.29	1.6	560 x	88
WS3-B-7.0 611139-03	<0.02	<0.02	<0.02	<0.06	<2	85
WS4-SW-3.0 pc 611139-04 1/5	<0.02 j	<0.1	0.18	1.0	880 x	85
ST1 611139-05 1/5	<0.02 j	<0.1	0.31	1.2	520 x	86
Method Blank 06-2307 MB	<0.02	<0.02	<0.02	<0.06	<2	86

Note: The NWTPH-Gx chromatograms are consistent with overlap from diesel range compounds.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/14/16  
Date Received: 11/08/16  
Project: PCard Woodinville, F&BI 611139  
Date Extracted: 11/09/16  
Date Analyzed: 11/09/16

**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)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> (% Recovery) (Limit 56-165)
WS1-B-9.0 611139-01	1,200	<250	121
WS2-SW-4.0 611139-02	3,300	<250	136
WS3-B-7.0 611139-03	<50	<250	130
WS4-SW-3.0 611139-04	17,000	1,200 x	125
ST1 611139-05	3,500	<250	114
Method Blank 06-2335 MB2	<50	<250	118

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Total Metals By EPA Method 200.8

Client ID:	WS4-SW-3.0	Client:	Maul Foster Alongi
Date Received:	11/08/16	Project:	PCard Woodinville, F&BI 611139
Date Extracted:	11/10/16	Lab ID:	611139-04
Date Analyzed:	11/10/16	Data File:	611139-04.083
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Lead	3.14
------	------

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	ST1	Client:	Maul Foster Alongi
Date Received:	11/08/16	Project:	PCard Woodinville, F&BI 611139
Date Extracted:	11/10/16	Lab ID:	611139-05
Date Analyzed:	11/10/16	Data File:	611139-05.084
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Lead	2.94
------	------



# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	NA	Project:	PCard Woodinville, F&BI 611139
Date Extracted:	11/10/16	Lab ID:	I6-748 mb
Date Analyzed:	11/10/16	Data File:	I6-748 mb.069
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

Analysis for TCLP Metals By EPA Method 6020A and 1311

Client ID:	ST1	Client:	Maul Foster Alongi
Date Received:	11/08/16	Project:	PCard Woodinville, F&BI 611139
Date Extracted:	11/08/16	Lab ID:	611139-05
Date Analyzed:	11/09/16	Data File:	611139-05.038
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis for TCLP Metals By EPA Method 6020A and 1311

Client ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	NA	Project:	PCard Woodinville, F&BI 611139
Date Extracted:	11/08/16	Lab ID:	I6-745 mb
Date Analyzed:	11/09/16	Data File:	I6-745 mb.036
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Lead	<1	5.0

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	WS4-SW-3.0	Client:	Maul Foster Alongi
Date Received:	11/08/16	Project:	PCard Woodinville, F&BI 611139
Date Extracted:	11/10/16	Lab ID:	611139-04 1/5
Date Analyzed:	11/10/16	Data File:	111012.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	98	31	163
Benzo(a)anthracene-d12	110	24	168

Compounds:	Concentration mg/kg (ppm)
Benz(a)anthracene	<0.01
Chrysene	0.031
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

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	PCard Woodinville, F&BI 611139
Date Extracted:	11/10/16	Lab ID:	06-2345 mb 1/5
Date Analyzed:	11/10/16	Data File:	111005.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	85	31	163
Benzo(a)anthracene-d12	106	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

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For PCBs By EPA Method 8082A

Client Sample ID:	WS4-SW-3.0	Client:	Maul Foster Alongi
Date Received:	11/08/16	Project:	PCard Woodinville, F&BI 611139
Date Extracted:	11/09/16	Lab ID:	611139-04 1/50
Date Analyzed:	11/09/16	Data File:	110917.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	MP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	70 d	29	154

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.2
Aroclor 1232	<0.2
Aroclor 1016	<0.2
Aroclor 1242	<0.2
Aroclor 1248	<0.2
Aroclor 1254	<0.2
Aroclor 1260	<0.2
Aroclor 1262	<0.2
Aroclor 1268	<0.2

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	Not Applicable	Project:	PCard Woodinville, F&BI 611139
Date Extracted:	11/09/16	Lab ID:	06-2332 mb2 1/5
Date Analyzed:	11/09/16	Data File:	110913.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	MP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	93	29	154

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/14/16

Date Received: 11/08/16

Project: PCard Woodinville, F&BI 611139

Date of Report: 11/14/16

Date Received: 11/08/16

Project: PCard Woodinville, F&BI 611139

**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: 611115-01 (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	81	69-120
Toluene	mg/kg (ppm)	0.5	80	70-117
Ethylbenzene	mg/kg (ppm)	0.5	80	65-123
Xylenes	mg/kg (ppm)	1.5	80	66-120
Gasoline	mg/kg (ppm)	20	80	71-131



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/14/16

Date Received: 11/08/16

Project: PCard Woodinville, F&BI 611139

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

Laboratory Code: 611128-02 (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	98	90	64-133	9

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	89	58-147

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/14/16

Date Received: 11/08/16

Project: PCard Woodinville, F&BI 611139

**QUALITY ASSURANCE RESULTS  
FOR THE ANALYSIS OF SOIL SAMPLES  
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 611164-01,,05 (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	5.05	89	87	70-130	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	101	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/14/16

Date Received: 11/08/16

Project: PCard Woodinville, F&BI 611139

**QUALITY ASSURANCE RESULTS  
FOR THE ANALYSIS OF WATER SAMPLES  
FOR TCLP METALS USING  
EPA METHODS 6020A AND 1311**

Laboratory Code: 611139-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/L (ppm)	1.0	<1	99	97	75-125	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/L (ppm)	1.0	106	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/14/16

Date Received: 11/08/16

Project: PCard Woodinville, F&BI 611139

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL  
SAMPLES FOR PAHS BY EPA METHOD 8270D SIM**

Laboratory Code: 611135-03 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	<0.01	100	23-144
Chrysene	mg/kg (ppm)	0.17	<0.01	90	32-149
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	115	23-176
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	115	42-139
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	101	21-163
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	90	23-170
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	81	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	99	100	51-115	1
Chrysene	mg/kg (ppm)	0.17	91	94	55-129	3
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	109	110	56-123	1
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	103	109	54-131	6
Benzo(a)pyrene	mg/kg (ppm)	0.17	94	96	51-118	2
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	85	90	49-148	6
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	79	80	50-141	1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/14/16

Date Received: 11/08/16

Project: PCard Woodinville, F&BI 611139

**QUALITY ASSURANCE RESULTS  
FOR THE ANALYSIS OF SOIL SAMPLES FOR  
POLYCHLORINATED BIPHENYLS AS  
AROCOR 1016/1260 BY EPA METHOD 8082A**

Laboratory Code: 611026-10 1/50 (Matrix Spike) 1/50

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Control Limits
Aroclor 1016	mg/kg (ppm)	4.2	<0.2	87	50-150
Aroclor 1260	mg/kg (ppm)	4.2	<0.2	75	50-150

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.8	85	88	55-130	3
Aroclor 1260	mg/kg (ppm)	0.8	74	76	58-133	3

**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.

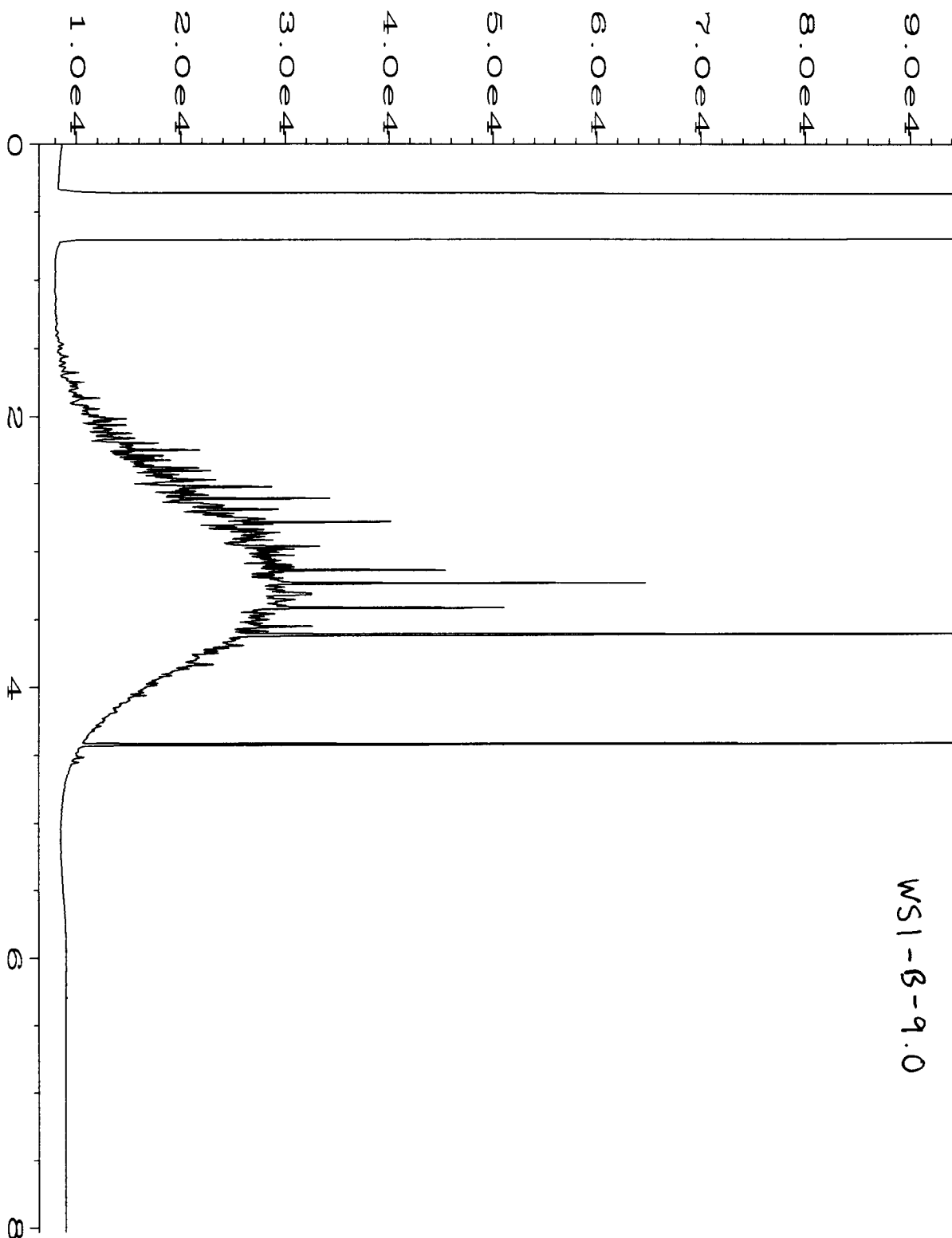
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

VS1/A02

Page # _____ of _____  TURNAROUND TIME <input type="checkbox"/> Standard (2 Weeks) <input checked="" type="checkbox"/> <del>RUSH</del> <i>Call Tex, 2x, Tel 4P</i> Rush charges authorized by _____ _____	SAMPLE DISPOSAL <input checked="" type="checkbox"/> <del>Dispose</del> after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions
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						ANALYSES REQUESTED											
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	C PAH	PCB	Lead	TCLP Pb	Notes	
WS1-B-9.0	01A-E A-E	11/8/16	1243	SOIL	5	X	X	X									hold on CPAH until Dec 15
WS2-SW-4.0	02+1 A-E		1315		5	X	X	X									
WS3-B-7.0	03+1 A-E		1328		5	X	X	X									
WS4-SW-3.0	04+1 A-E		1356		1	X	X	X				X	X	X			
STL	05A-E A-E		1254		5	X	X	X						X	X		
	06 A-E				(C) 11/9/16												

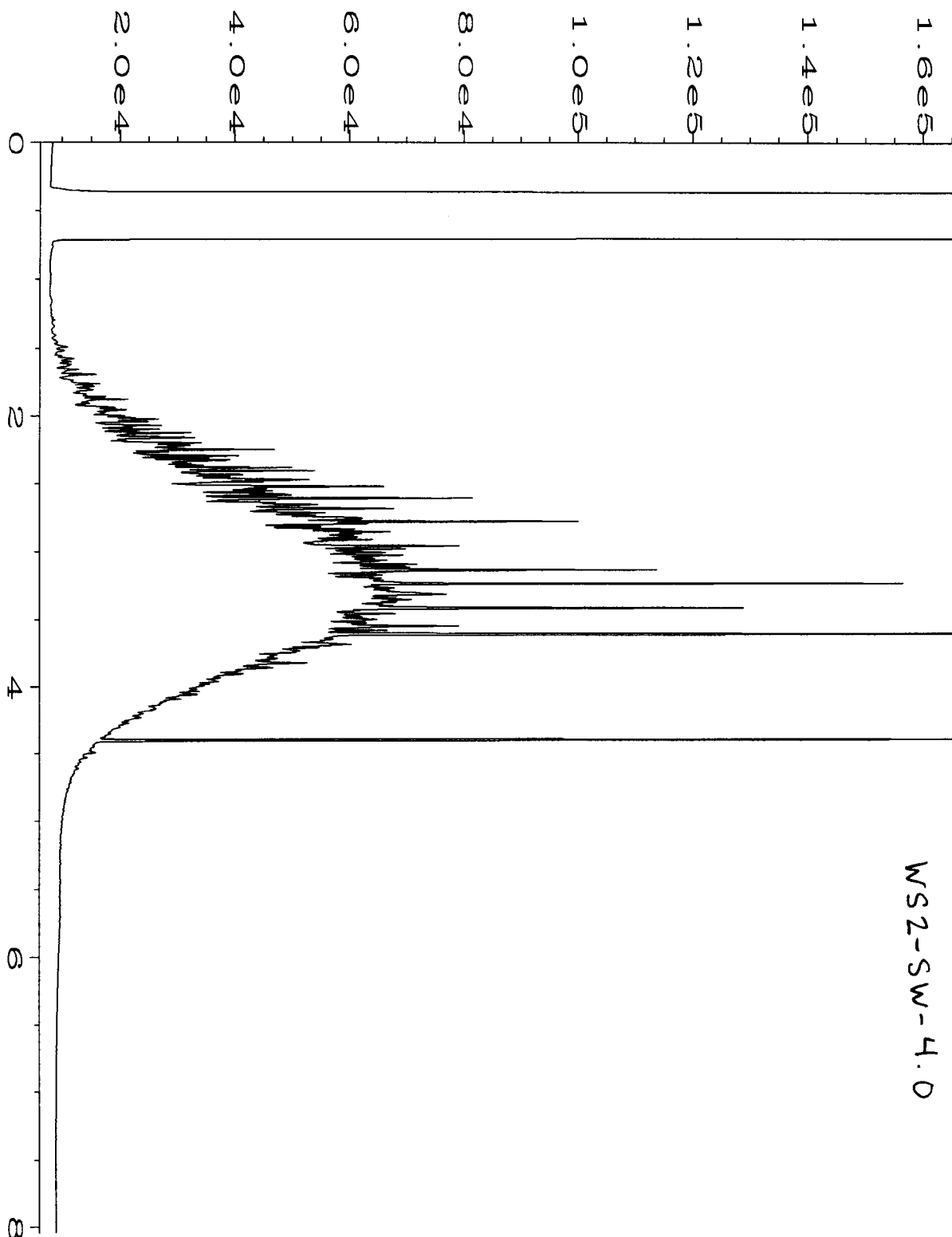
SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Yeh-Vi Vuu	MSA	11/18/16	1445
Received by: 	Eric Yane	FEA B	11/18/16	1445
Relinquished by:				
Received by:				



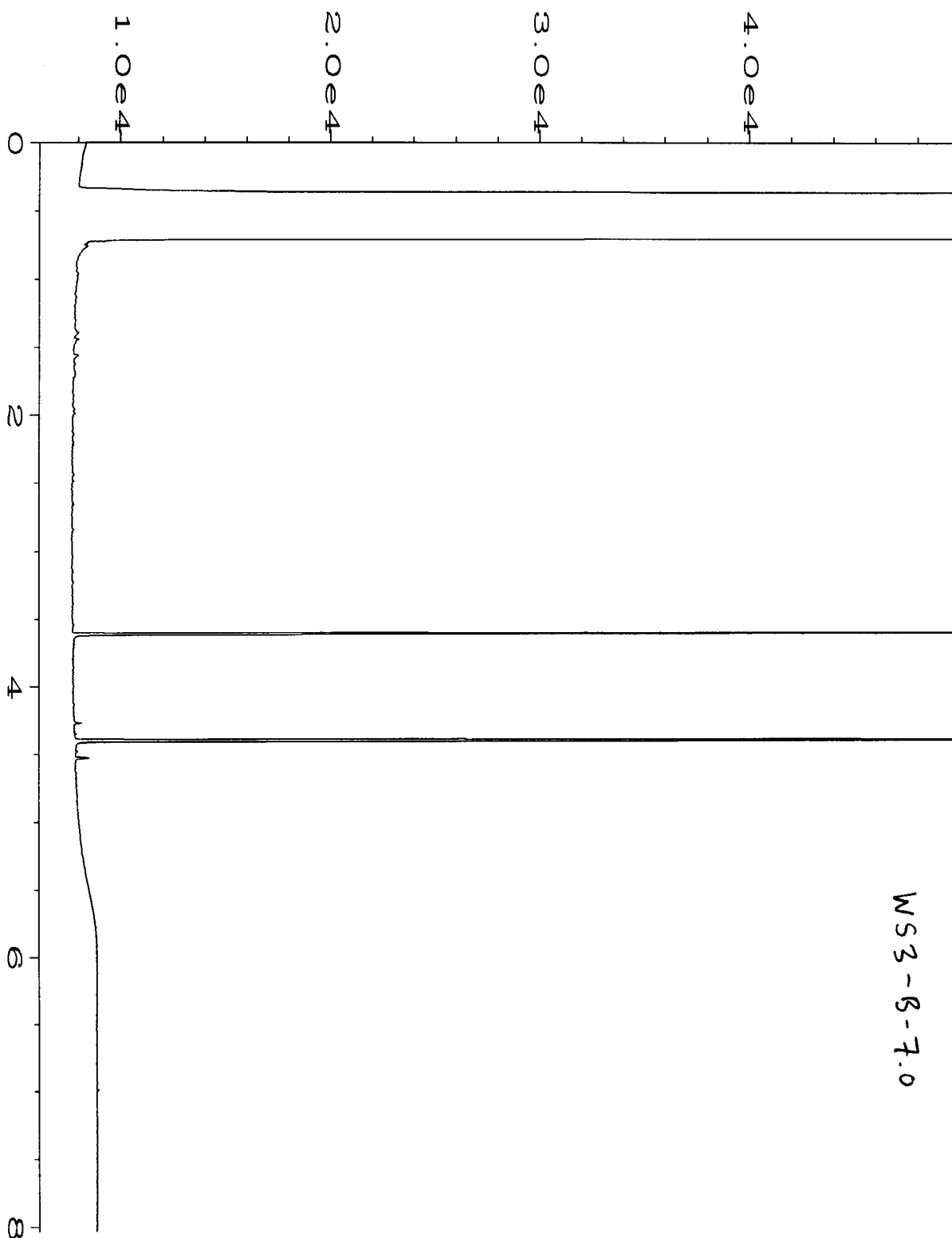
WS1-B-9.0

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Operator	: mwdl	Vial Number	: 6
Instrument	: GC1	Injection Number	: 1
Sample Name	: 611139-01	Sequence Line	: 3
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 09 Nov 16 08:22 AM	Analysis Method	: DX.MTH
Report Created on:	29 Dec 16 07:35 AM		

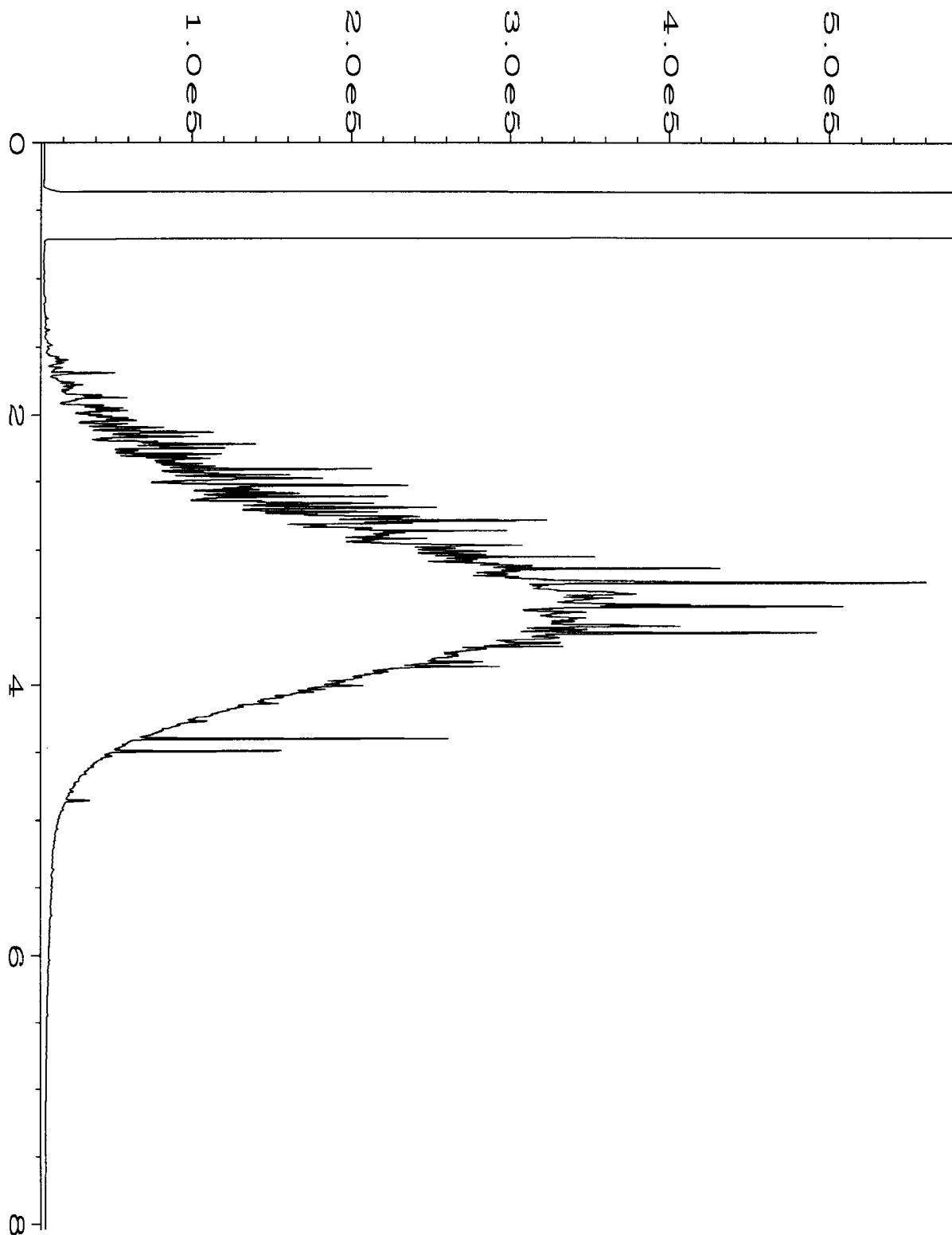




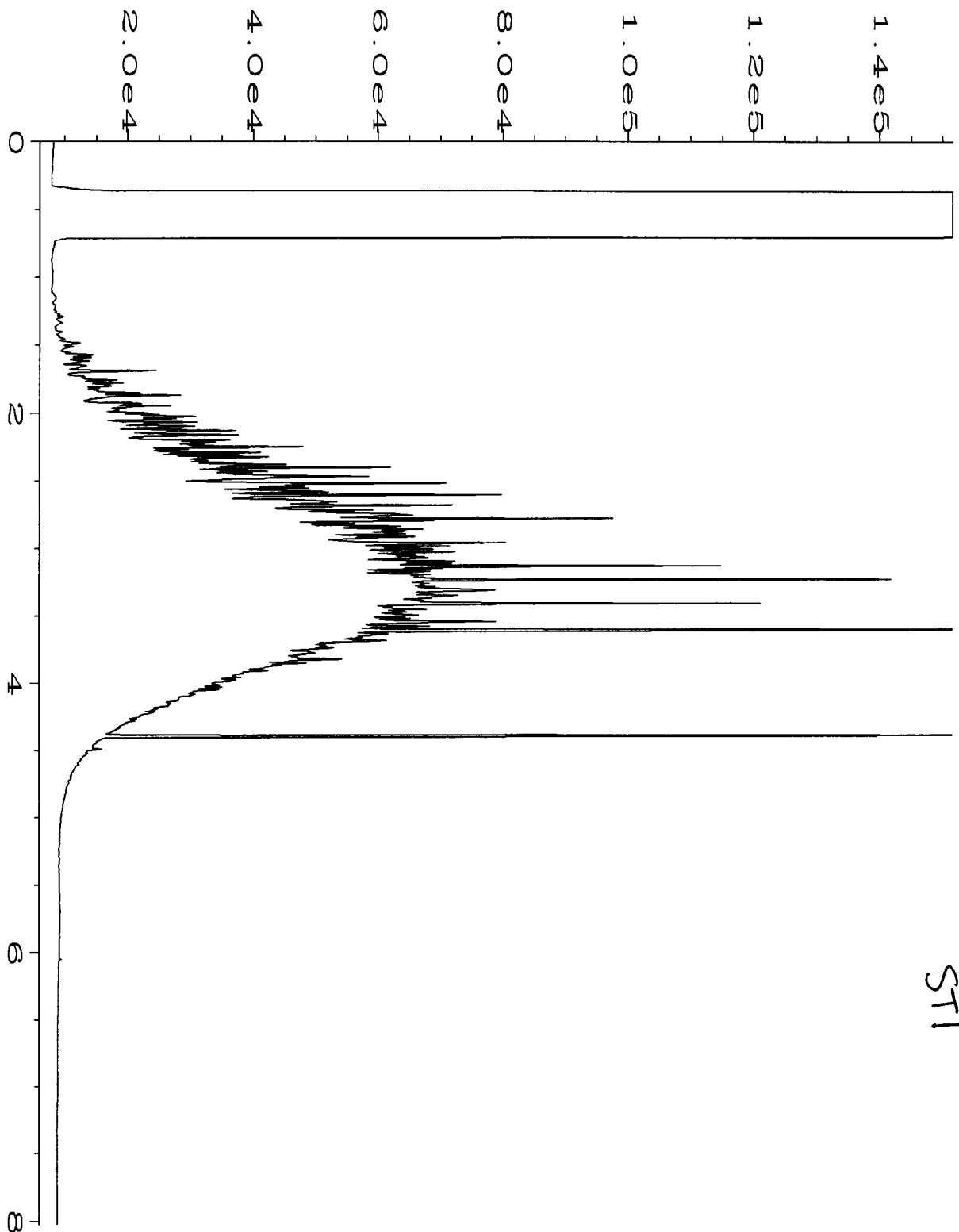
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Operator	: mwd1	Vial Number	: 7
Instrument	: GC1	Injection Number	: 1
Sample Name	: 611139-02	Sequence Line	: 3
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 09 Nov 16 08:31 AM	Analysis Method	: DX.MTH
Report Created on:	29 Dec 16 07:35 AM		



Data File Name	: C:\HPCHEM\1\DATA\11-09-16\008F0301.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 8
Instrument	: GC1	Injection Number	: 1
Sample Name	: 611139-03	Sequence Line	: 3
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 09 Nov 16 08:43 AM	Analysis Method	: DX.MTH
Report Created on:	29 Dec 16 07:35 AM		

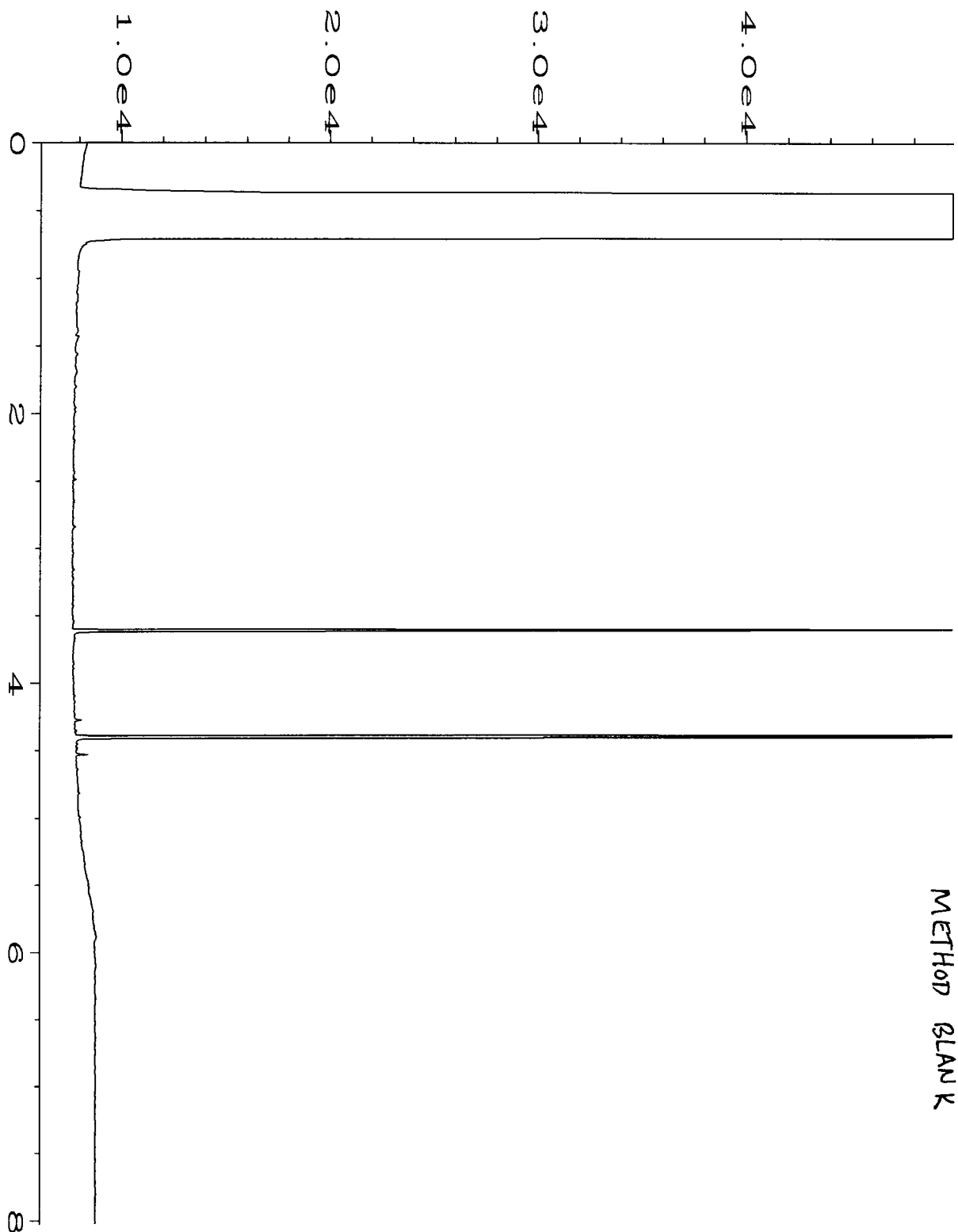


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Operator	: mwd1	Vial Number	: 10
Instrument	: GC1	Injection Number	: 1
Sample Name	: 611139-04	Sequence Line	: 3
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 09 Nov 16 09:07 AM	Analysis Method	: DX.MTH
Report Created on:	29 Dec 16 07:35 AM		

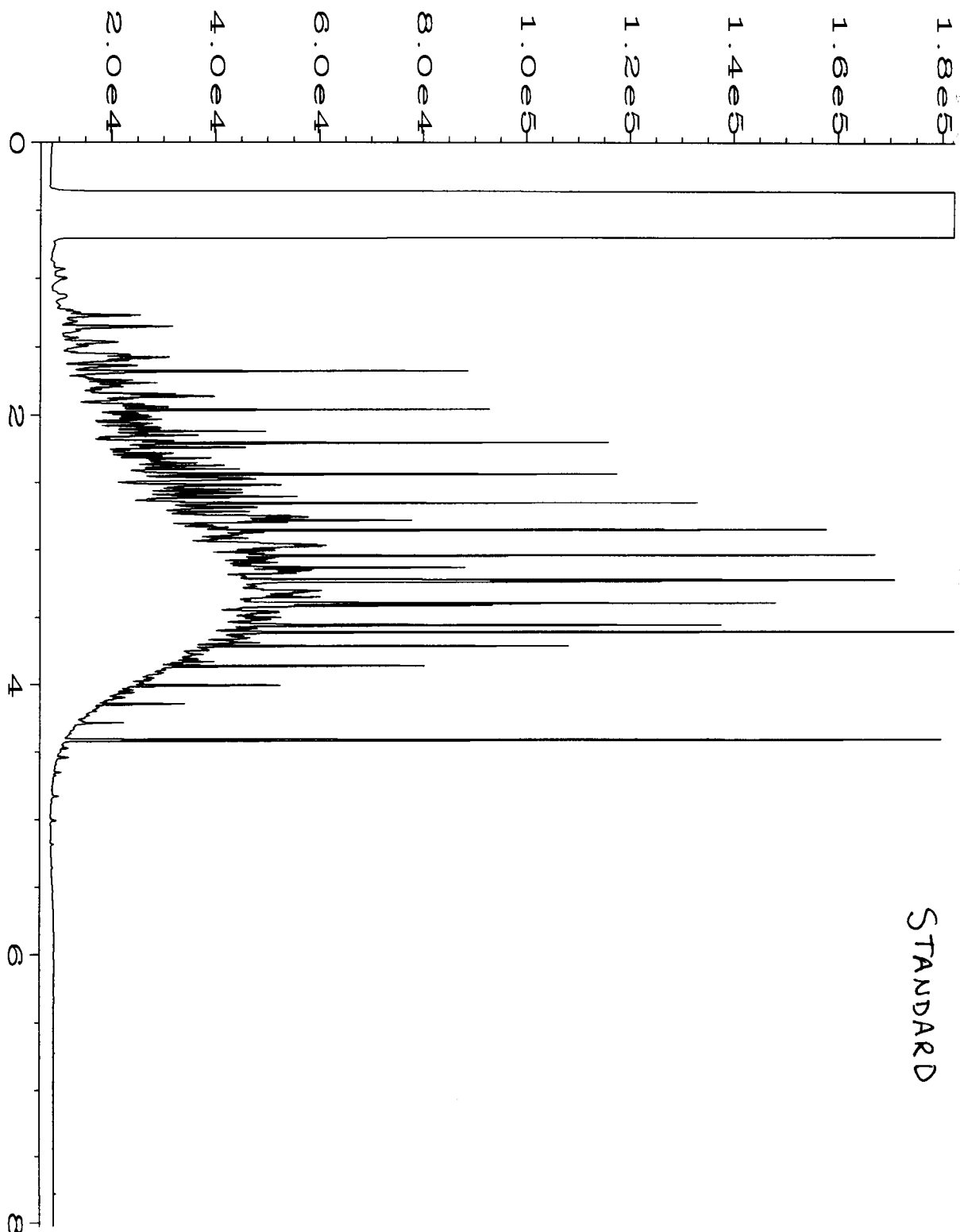


ST1

Data File Name	: C:\HPCHEM\1\DATA\11-09-16\009F0301.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 9
Instrument	: GC1	Injection Number	: 1
Sample Name	: 611139-05	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 09 Nov 16 08:55 AM	Analysis Method	: DX.MTH
Report Created on:	29 Dec 16 07:38 AM		



Data File Name	: C:\HPCHEM\1\DATA\11-09-16\011F0301.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 11
Instrument	: GC1	Injection Number	: 1
Sample Name	: 06-2335 mb2	Sequence Line	: 3
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 09 Nov 16 09:19 AM	Analysis Method	: DX.MTH
Report Created on:	29 Dec 16 07:36 AM		



Data File Name	: C:\HPCHEM\1\DATA\11-09-16\003F0201.D	Page Number	: 1
Operator	: mwdl	Vial Number	: 3
Instrument	: GC1	Injection Number	: 1
Sample Name	: 500 Dx 48-20B	Sequence Line	: 2
Run Time Bar Code:		Instrument Method	: DX.MTH
Acquired on	: 09 Nov 16 06:43 AM	Analysis Method	: DX.MTH
Report Created on:	29 Dec 16 07:34 AM		

FRIEDMAN & BRUYA, INC.

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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 29, 2016

Yen-Vy Van, Project Manager  
Maul Foster Alongi  
2815 2<sup>nd</sup> Ave, Suite 540  
Seattle, WA 98121

Dear Ms Van:

Included is the amended report from the testing of material submitted on November 9, 2016 from the PCard Woodinville, F&BI 611163 project. Per your request, the NWTPH-Gx results were qualified to indicate that they are due to overlap from diesel range contamination.

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  
MFA1117R.DOC

FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.  
Yelena Aravkina, M.S.  
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Eric Young, B.S.

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

November 17, 2016

Yen-Vy Van, Project Manager  
Maul Foster Alongi  
2815 2<sup>nd</sup> Ave, Suite 540  
Seattle, WA 98121

Dear Ms Van:

Included are the results from the testing of material submitted on November 9, 2016 from the PCard Woodinville, F&BI 611163 project. There are 11 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  
MFA1117R.DOC



FRIEDMAN & BRUYA, INC.

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ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 9, 2016 by Friedman & Bruya, Inc. from the Maul Foster Alongi PCard Woodinville, F&BI 611163 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Maul Foster Alongi</u>
611163 -01	WS5-B-9.5
611163 -02	WS6-SW-N-9.5
611163 -03	CB-1
611163 -04	WS7-B-8.0
611163 -05	WS8-SW-E-5.0
611163 -06	WS9-SW-S-9.0
611163 -07	WS-10-SW-W-7.0

The NWTPH-Dx chromatograms in the samples resembles a diesel fuel no.2 or heating oil.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/17/16  
Date Received: 11/09/16  
Project: PCard Woodinville, F&BI 611163  
Date Extracted: NA  
Date Analyzed: 11/10/16

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES  
FOR PERCENT MOISTURE  
USING ASTM D2216-98**

<u>Sample ID</u> Laboratory ID	<u>% Moisture</u>
WS5-B-9.5 611163-01	14
WS6-SW-N-9.5 611163-02	12
CB-1 611163-03	46
WS7-B-8.0 611163-04	14
WS8-SW-E-5.0 611163-05	15
WS9-SW-S-9.0 611163-06	31
WS-10-SW-W-7.0 611163-07	12

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/17/16  
 Date Received: 11/09/16  
 Project: PCard Woodinville, F&BI 611163  
 Date Extracted: 11/09/16  
 Date Analyzed: 11/09/16 and 11/10/16

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES  
 FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES  
 USING METHOD 8021B**

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

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
WS5-B-9.5 611163-01	<0.02	<0.02	<0.02	<0.06	82
WS6-SW-N-9.5 611163-02	<0.02	<0.02	<0.02	<0.06	83
WS7-B-8.0 611163-04	<0.02	<0.02	<0.02	<0.06	83
WS8-SW-E-5.0 611163-05	<0.02	<0.02	<0.02	<0.06	83
WS9-SW-S-9.0 611163-06	<0.02	<0.02	<0.02	<0.06	83
WS-10-SW-W-7.0 611163-07 1/5	<0.02 j	<0.1	0.11	0.41	84
Method Blank 06-2311 MB	<0.02	<0.02	<0.02	<0.06	83

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/17/16  
Date Received: 11/09/16  
Project: PCard Woodinville, F&BI 611163  
Date Extracted: 11/09/16  
Date Analyzed: 11/10/16

**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)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
CB-1 611163-03 1/5	<0.02 j	<0.1	0.26	2.5	370 x	85
Method Blank 06-2311 MB	<0.02	<0.02	<0.02	<0.06	<2	83

Note: The NWTPH-Gx chromatograms are consistent with overlap from diesel range compounds.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/17/16  
Date Received: 11/09/16  
Project: PCard Woodinville, F&BI 611163  
Date Extracted: 11/10/16  
Date Analyzed: 11/10/16

**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)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 48-168)
WS5-B-9.5 611163-01	<50	<250	87
WS6-SW-N-9.5 611163-02	<50	<250	91
CB-1 611163-03	61,000	11,000	ip
WS7-B-8.0 611163-04	<50	<250	92
WS8-SW-E-5.0 611163-05	<50	<250	94
WS9-SW-S-9.0 611163-06	<50	<250	90
WS-10-SW-W-7.0 611163-07	420	<250	95
Method Blank 06-2342 MB	<50	<250	91

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Total Metals By EPA Method 6020A

Client ID:	CB-1	Client:	Maul Foster Alongi
Date Received:	11/09/16	Project:	PCard Woodinville, F&BI 611163
Date Extracted:	11/10/16	Lab ID:	611163-03
Date Analyzed:	11/15/16	Data File:	611163-03.065
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	<5
Barium	111
Cadmium	<1
Chromium	22.9
Lead	14.3
Mercury	<1
Selenium	<5
Silver	<1

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Total Metals By EPA Method 6020A

Client ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	NA	Project:	PCard Woodinville, F&BI 611163
Date Extracted:	11/10/16	Lab ID:	I6-741 mb2
Date Analyzed:	11/15/16	Data File:	I6-741 mb2.064
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<5
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<5
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/17/16

Date Received: 11/09/16

Project: PCard Woodinville, F&BI 611163

**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: 611163-02 (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	81	70-117
Ethylbenzene	mg/kg (ppm)	0.5	82	65-123
Xylenes	mg/kg (ppm)	1.5	82	66-120
Gasoline	mg/kg (ppm)	20	90	71-131



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/17/16

Date Received: 11/09/16

Project: PCard Woodinville, F&BI 611163

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

Laboratory Code: 611163-02 (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	96	96	73-135	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	91	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/17/16

Date Received: 11/09/16

Project: PCard Woodinville, F&BI 611163

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

Laboratory Code: 610405-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<5	93	91	75-125	2
Barium	mg/kg (ppm)	50	78.6	81 b	74 b	75-125	9 b
Cadmium	mg/kg (ppm)	10	<1	95	95	75-125	0
Chromium	mg/kg (ppm)	50	11.4	82 b	256 b	75-125	103 b
Lead	mg/kg (ppm)	50	9.66	84	81	75-125	4
Mercury	mg/kg (ppm)	10	<1	82	84	75-125	2
Selenium	mg/kg (ppm)	5	<1	81	80	75-125	1
Silver	mg/kg (ppm)	10	<1	89	88	75-125	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	97	80-120
Barium	mg/kg (ppm)	50	106	80-120
Cadmium	mg/kg (ppm)	10	101	80-120
Chromium	mg/kg (ppm)	50	101	80-120
Lead	mg/kg (ppm)	50	97	80-120
Mercury	mg/kg (ppm)	10	96	80-120
Selenium	mg/kg (ppm)	5	95	80-120
Silver	mg/kg (ppm)	10	96	80-120

**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.

611163

## SAMPLE CHAIN OF CUSTODY

ME 11-09-16

A02/V82

Page # 1 of 2

Report To Yen Vy Van  
 Company MFA  
 Address 2015 2nd Ave #540  
 City, State, ZIP Seattle, WA  
 Phone 206-320-5378 Email

SAMPLERS (signature)	
PROJECT NAME <u>PCARD Washington</u>	PO #
REMARKS	INVOICE TO

TURNAROUND TIME
<input type="checkbox"/> Standard Turnaround <input type="checkbox"/> RUSH <u>Diocel/605/05EX</u> Rush charges authorized by:
SAMPLE DISPOSAL
<input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Archive Samples <input type="checkbox"/> Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED							Notes
						TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	
WS5-B-9.5	01A-E	11/9/16	12:55	Soil	5	X			X				
WS6-SW-U-9.5	02	11/9/16	11:20	Soil	5	X			X				
C-B-1	03	11/9/16	12:30	Soil	5	X	X		X			X	No rush on this
WS7-B-8.0	04	11/9/16	13:20	Soil	5	X			X				
WS8-SW-E-5.0	05	11/9/16	14:00	Soil	5	X			X				
WS9-SW-S-9.0	06	11/9/16	14:45	Soil	5	X			X				
WS10-SW-U-7.0	07	11/9/16	15:00	Soil	5	X			X				
													Samples received at 4°C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	Lori Fernandez	MFA	11/9/16	15:20
Received by: <u>[Signature]</u>	Eric Vance	Ecof	11/9/16	15:20
Relinquished by:				
Received by:				

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

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

November 17, 2016

Yen-Vy Van, Project Manager  
Maul Foster Alongi  
2815 2<sup>nd</sup> Ave, Suite 540  
Seattle, WA 98121

Dear Ms Van:

Included are the results from the testing of material submitted on November 10, 2016 from the Pcard Woodinville, F&BI 611191 project. There are 13 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  
MFA1117R.DOC

# FRIEDMAN & BRUYA, INC.

---

## ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on November 10, 2016 by Friedman & Bruya, Inc. from the Maul Foster Alongi Pcard Woodinville, F&BI 611191 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Maul Foster Alongi</u>
611191 -01	ST-2
611191 -02	ST-3
611191 -03	CB-2

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

Date of Report: 11/17/16

Date Received: 11/10/16

Project: Pcard Woodinville, F&BI 611191

Date Extracted: NA

Date Analyzed: 11/10/16

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES  
FOR PERCENT MOISTURE  
USING ASTM D2216-98**

<u>Sample ID</u>	<u>% Moisture</u>
Laboratory ID	
ST-2 611191-01	8
ST-3 611191-02	12
CB-2 611191-03	35

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/17/16

Date Received: 11/10/16

Project: Pcard Woodinville, F&BI 611191

Date Extracted: 11/10/16

Date Analyzed: 11/10/16

**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)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-132)
CB-2 611191-03	<0.02	0.063	0.12	0.82	46	84
Method Blank 06-2311 MB2	<0.02	<0.02	<0.02	<0.06	<2	87



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/17/16

Date Received: 11/10/16

Project: Pcard Woodinville, F&BI 611191

Date Extracted: 11/10/16

Date Analyzed: 11/10/16

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES  
FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES  
USING METHOD 8021B**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Surrogate (% Recovery)</u> (Limit 50-132)
ST-2 611191-01	<0.02	<0.02	0.14	0.65	98
ST-3 611191-02	<0.02	<0.02	0.26	0.89	104
Method Blank 06-2311 MB2	<0.02	<0.02	<0.02	<0.06	87

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/17/16

Date Received: 11/10/16

Project: Pcard Woodinville, F&BI 611191

Date Extracted: 11/10/16

Date Analyzed: 11/10/16

**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)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C <sub>10</sub> -C <sub>25</sub> )	(C <sub>25</sub> -C <sub>36</sub> )	(% Recovery) (Limit 48-168)
ST-2 611191-01	2,800	<250	105
ST-3 611191-02	2,800	<250	104
CB-2 611191-03	7,600	2,100 x	102
Method Blank 06-2341 MB	<50	<250	95

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Total Metals By EPA Method 6020A

Client ID:	ST-2	Client:	Maul Foster Alongi
Date Received:	11/10/16	Project:	Pcard Woodinville, F&BI 611191
Date Extracted:	11/14/16	Lab ID:	611191-01
Date Analyzed:	11/15/16	Data File:	611191-01.105
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Lead	3.31
------	------

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Total Metals By EPA Method 6020A

Client ID:	ST-3	Client:	Maul Foster Alongi
Date Received:	11/10/16	Project:	Pcard Woodinville, F&BI 611191
Date Extracted:	11/14/16	Lab ID:	611191-02
Date Analyzed:	11/15/16	Data File:	611191-02.108
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Lead	2.48
------	------

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Total Metals By EPA Method 6020A

Client ID:	CB-2	Client:	Maul Foster Alongi
Date Received:	11/10/16	Project:	Pcard Woodinville, F&BI 611191
Date Extracted:	11/14/16	Lab ID:	611191-03
Date Analyzed:	11/15/16	Data File:	611191-03.109
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
----------	------------------------------

Arsenic	<5
Barium	72.5
Cadmium	1.75
Chromium	37.8
Lead	13.6
Mercury	<1
Selenium	<5
Silver	<1

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Total Metals By EPA Method 6020A

Client ID:	Method Blank	Client:	Maul Foster Alongi
Date Received:	NA	Project:	Pcard Woodinville, F&BI 611191
Date Extracted:	11/14/16	Lab ID:	I6-750 mb
Date Analyzed:	11/15/16	Data File:	I6-750 mb.086
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<5
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<5
Silver	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/17/16

Date Received: 11/10/16

Project: Pcard Woodinville, F&BI 611191

**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: 611163-02 (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	Acceptance Criteria
			LCS	
Benzene	mg/kg (ppm)	0.5	82	69-120
Toluene	mg/kg (ppm)	0.5	81	70-117
Ethylbenzene	mg/kg (ppm)	0.5	82	65-123
Xylenes	mg/kg (ppm)	1.5	82	66-120
Gasoline	mg/kg (ppm)	20	90	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/17/16

Date Received: 11/10/16

Project: Pcard Woodinville, F&BI 611191

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

Laboratory Code: 611142-23 (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	97	95	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	98	74-139



# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

Date of Report: 11/17/16

Date Received: 11/10/16

Project: Pcard Woodinville, F&BI 611191

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

Laboratory Code: 611166-09 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<5	98	90	75-125	9
Barium	mg/kg (ppm)	50	33.3	105	86	75-125	20
Cadmium	mg/kg (ppm)	10	<1	99	90	75-125	10
Chromium	mg/kg (ppm)	50	18.0	100	89	75-125	12
Lead	mg/kg (ppm)	50	1.88	96	91	75-125	5
Mercury	mg/kg (ppm)	10	<1	95	90	75-125	5
Selenium	mg/kg (ppm)	5	<5	108	97	75-125	11
Silver	mg/kg (ppm)	10	<1	90	83	75-125	8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	102	80-120
Barium	mg/kg (ppm)	50	107	80-120
Cadmium	mg/kg (ppm)	10	102	80-120
Chromium	mg/kg (ppm)	50	105	80-120
Lead	mg/kg (ppm)	50	107	80-120
Mercury	mg/kg (ppm)	10	105	80-120
Selenium	mg/kg (ppm)	5	116	80-120
Silver	mg/kg (ppm)	10	99	80-120

**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.

# AI1 / VS1  
I of I

~~SAMPLES~~ (signature)

PROJECT NAME

PO #

PEARL WOODVILLE

1000 410 710 210 110

**INVOICE TO**

Phone 253-320-5378 Email \_\_\_\_\_

☐ Standard Turnaround  
~~RUSH~~ *D. Cal / 1/25/02*  
Rush charges authorized by \_\_\_\_\_

---

**SAMPLE DISPOSAL**

☐ Dispose after 30 days  
☐ Archive Samples  
☐ Other \_\_\_\_\_

ANALYSES REQUESTED



							ANALYSES REQUESTED										
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars												
						TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	RCRA 8 Metals	Lead			
ST-2	01A-E	11/17/16	15:45	Soil	5		X			X							No rush on site
ST-3	02	11/19/16	16:00	Soil	5		X			X					X		No rush,
CB-2	03	11/19/16	16:20	Soil	5		X	X		X				X			No rush on site

*Friedman & Bruya, Inc.*

3012 16<sup>th</sup> Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
	Levi Fagnonides	MFA	11/12/16	10:40
	Matt Langston	IBTnc	11/16/16	1040
Relinquished by:				
Received 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

November 18, 2016

Yen-Vy Van, Project Manager  
Maul Foster Alongi  
2815 2<sup>nd</sup> Ave, Suite 540  
Seattle, WA 98121

Dear Ms Van:

Included are the results from the testing of material submitted on November 14, 2016 from the Petro Card Woodinville Product Piping 0228.21.03 Task 01, F&BI 611243 project. There are 7 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  
MFA1118R.DOC

# FRIEDMAN & BRUYA, INC.

---

## ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on November 14, 2016 by Friedman & Bruya, Inc. from the Maul Foster Alongi Petro Card Woodinville Product Piping 0228.21.03 Task 01, F&BI 611243 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Maul Foster Alongi</u>
611243 -01	WS11-SW-N-13.5
611243 -02	WS12-SW-E-12.5
611243 -03	WS13-SW-W-13.5
611243 -04	WS14-B-C-14.0

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

Date of Report: 11/18/16

Date Received: 11/14/16

Project: Petro Card Woodinville Product Piping 0228.21.03 Task 01, F&BI 611243

Date Extracted: NA

Date Analyzed: 11/15/16

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES  
FOR PERCENT MOISTURE  
USING ASTM D2216-98**

<u>Sample ID</u>	<u>% Moisture</u>
Laboratory ID	
WS11-SW-N-13.5 611243-01	14
WS12-SW-E-12.5 611243-02	14
WS13-SW-W-13.5 611243-03	15
WS14-B-C-14.0 611243-04	17

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/18/16

Date Received: 11/14/16

Project: Petro Card Woodinville Product Piping 0228.21.03 Task 01, F&BI 611243

Date Extracted: 11/15/16

Date Analyzed: 11/15/16

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES  
FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES  
USING METHOD 8021B**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Surrogate (% Recovery)</u> (Limit 50-132)
WS11-SW-N-13.5 611243-01	<0.02	<0.02	<0.02	<0.06	91
WS12-SW-E-12.5 611243-02	<0.02	<0.02	<0.02	<0.06	94
WS13-SW-W-13.5 611243-03	<0.02	<0.02	<0.02	<0.06	90
WS14-B-C-14.0 611243-04	<0.02	<0.02	<0.02	<0.06	94
Method Blank 06-2324 MB	<0.02	<0.02	<0.02	<0.06	92

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/18/16

Date Received: 11/14/16

Project: Petro Card Woodinville Product Piping 0228.21.03 Task 01, F&BI 611243

Date Extracted: 11/15/16

Date Analyzed: 11/15/16

**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)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C <sub>10</sub> -C <sub>25</sub> )	<u>Motor Oil Range</u> (C <sub>25</sub> -C <sub>36</sub> )	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 53-144)
WS11-SW-N-13.5 611243-01	<50	<250	74
WS12-SW-E-12.5 611243-02	<50	<250	84
WS13-SW-W-13.5 611243-03	<50	<250	82
WS14-B-C-14.0 611243-04	<50	<250	73
Method Blank 06-2369 MB	<50	<250	83



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/18/16

Date Received: 11/14/16

Project: Petro Card Woodinville Product Piping 0228.21.03 Task 01, F&BI 611243

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES  
FOR BENZENE, TOLUENE, ETHYLBENZENE,  
AND XYLENES  
USING EPA METHOD 8021B**

Laboratory Code: 611243-01 (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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Acceptance Criteria
			Recovery LCS	
Benzene	mg/kg (ppm)	0.5	71	66-121
Toluene	mg/kg (ppm)	0.5	76	72-128
Ethylbenzene	mg/kg (ppm)	0.5	70	69-132
Xylenes	mg/kg (ppm)	1.5	74	69-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/18/16

Date Received: 11/14/16

Project: Petro Card Woodinville Product Piping 0228.21.03 Task 01, F&BI 611243

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

Laboratory Code: 611243-01 (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	<50	101	99	64-133	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	98	58-147

**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.

AD/VS1

Phone # 253-320-5378 Fax # \_\_\_\_\_

TURN AROUND TIME

Standard (2 Weeks)

**BRUSH**

Rush charges authorized by \_\_\_\_\_

### SAMPLE DISPOSAL

☒ Dispose after 30 days

☐ Return samples☐ Will call with instructions

REMARKS

ANALYSES REQUESTED

[illegible]

FORMS\COC\COC.DOC

TIME

537

5

# ATTACHMENT C

## DATA VALIDATION MEMORANDUM



# DATA QUALITY ASSURANCE/QUALITY CONTROL REVIEW

PROJECT NO. 0228.21.03 | DECEMBER 29, 2016 | PETROCARD, INC.

Maul Foster & Alongi, Inc. (MFA) conducted an independent review of the quality of analytical results for excavation soil samples collected at the PetroCard property located at 24019 Snohomish Woodinville Rd. in Woodinville, Washington. The samples were collected in November 2016.

Friedman & Bruya, Inc. (FBI) in Seattle, Washington performed the analyses. FBI report numbers 611139, 611163, 611191 and 611243 were reviewed. The analyses performed and samples analyzed are listed below.

Analysis	Reference
Diesel and Motor Oil Range Hydrocarbons	NWTPH-Dx
Benzene, toluene, ethylbenzene, xylenes	USEPA 8021B
Gasoline range hydrocarbons	NWTPH-Gx
Percent moisture	ASTM D2216-98
Polychlorinated Biphenyls as Aroclors	USEPA 8082A
Carcinogenic Polycyclic Aromatic Hydrocarbons	USEPA 8270D SIM
TCLP Metals	USEPA 6020A
Total Metals	USEPA 6020A

ASTM = American Society for Testing and Materials  
NWTPH = Northwest Total Petroleum Hydrocarbons  
SIM = Selective ion monitoring  
TCLP = Toxicity Characteristic Leaching Procedure  
USEPA = U.S. Environmental Protection Agency

Samples Analyzed			
Report 611139	Report 611163	Report 611191	Report 611243
WS1-B-9.0	WS5-B-9.5	ST-2	WS11-SW-N-13.5
WS2-SW-4.0	WS6-SW-N-9.5	ST-3	WS12-SW-E-12.5
WS3-B-7.0	CB-1	CB-2	WS13-SW-W-13.5
WS4-SW-3.0	WS7-B-8.0	--	WS14-B-C-14.0
ST1	WS8-SW-E-5.0	--	--
--	WS9-SW-S-9.0	--	--
--	WS10-SW-W-7.0	--	--

## DATA QUALIFICATIONS

Analytical results were evaluated according to applicable sections of USEPA procedures (USEPA, 2016) and appropriate laboratory and method-specific guidelines (FBI, 2015); USEPA, 1986). Not all samples were analyzed by all methods.

Data validation procedures were modified, as appropriate, to accommodate quality-control requirements for methods not specifically addressed by the USEPA procedures (i.e., NWTPH-Dx and ASTM D2216-98 analyses).

In report 611139, the laboratory noted that the NWTPH-Dx motor oil chromatogram pattern for sample WS4-SW-3.0 did not match that of the standard used for quantification. No action was necessary.

In report 611191, the laboratory noted that the NWTPH-Dx motor oil chromatogram pattern for sample CB-2 did not match that of the standard used for quantification. No action was necessary.

The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

## HOLDING TIMES, PRESERVATION, AND SAMPLE STORAGE

### Holding Times

Extractions and analyses were performed within the recommended holding time criteria.

### Preservation and Sample Storage

The samples were preserved and stored appropriately.

## BLANKS

### Method Blanks

Laboratory method blank analyses were performed at the required frequencies. For purposes of data qualification, the method blanks were associated with all samples prepared in the analytical batch. The method blanks were non-detect.

### Trip Blanks

Trip blanks were not submitted for analysis.

### Equipment Rinse Blanks

Equipment rinse blanks were not required for this sampling event, as all samples were collected using dedicated, single-use equipment.

## SURROGATE RECOVERY RESULTS

The samples were spiked with surrogate compounds to evaluate laboratory performance on individual samples.

In report 611163, the NWTPH-Dx surrogate for sample CB-1 exceeded the upper percent recovery acceptance criterion of 168%, at 371%. The reviewer confirmed with the laboratory that the surrogate failure was due to high analyte concentration in the sample and that qualification was not necessary.

All remaining surrogate recoveries were within percent recovery acceptance limits.

## MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

Matrix spike/matrix spike duplicate (MS/MSD) results are used to evaluate laboratory precision and accuracy. All MS/MSD samples were extracted and analyzed at the required frequency. When MS/MSD percent recoveries and relative percent differences (RPDs) were outside acceptance limits due to high concentrations of target analyte in the sample, and MS/MSD exceedances were flagged by the laboratory due to high concentrations of target analyte, no qualifications were made by the reviewer.

In report 611163, the USEPA Method 6020A total chromium MSD exceeded the upper percent recovery acceptance criteria at 256%. The MS result was within acceptance criteria and the RPD exceeded acceptance criteria at 103%. The sample used to prepare the MS/MSD was from an unrelated project; thus, qualification was not necessary.

All remaining MS/MSD results were within acceptance limits for percent recovery and RPDs.

## LABORATORY DUPLICATE RESULTS

Duplicate results are used to evaluate laboratory precision. Laboratory duplicate samples were not reported. Laboratory precision was evaluated with MS/MSD percent recoveries and RPD.

## LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RESULTS

A laboratory control sample/laboratory control sample duplicate (LCS/LCSD) is spiked with target analytes to provide information on laboratory precision and accuracy. The LCS/LCSD samples were extracted and analyzed at the required frequency. All LCS/LCSD analytes were within acceptance limits for percent recovery and RPD.

## FIELD DUPLICATE RESULTS

Field duplicate samples measure both field and laboratory precision. Field duplicate samples were not submitted for analysis.

## REPORTING LIMITS

FBI used routine reporting limits for non-detect results except for samples requiring dilution due to high analytical concentration and/or matrix interference.



## DATA PACKAGE

The data packages were reviewed for transcription errors, omissions, and anomalies.

In report 611139, the laboratory noted that sample WS4-SW-3.0 was received in a glass jar, which is not approved for NWTPH-Gx/USEPA Method 8081B. The sample was extracted on the date of collection; thus, no action was taken by the reviewer.

In report 611243, the laboratory noted that no stir bar was included in the sample vial for sample WS13-SW-W-13.5. The reviewer confirmed that stir bars are not necessary for methanolic extractions and that the sample is vortexed prior to analysis; thus, qualification was not necessary.

In report 611139, the laboratory indicated that the USEPA Method 8021B benzene reporting limits for several samples were less than the lowest calibration standard concentration. The laboratory qualified the results as estimated non-detect with "UJ." No further action was necessary.

No other issues were found.

## REFERENCES

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- FBI. 2015. Friedman & Bruya, Inc. Quality Assurance Manual. Seattle, Washington. December 23.
- USEPA. 1986. Test methods for evaluating solid waste: physical/chemical methods. EPA-530/SW-846. Update V. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. September (revision 1, July 2014).
- USEPA. 2016. USEPA contract laboratory program, national functional guidelines for Superfund organic methods data review. EPA 540-R-2016-002. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation. August.

# ATTACHMENT D

## EXPORT TRUCK TICKETS





CEMEX  
PO Box 2037  
Everett WA 98213-2037

CEMEX Construction Materials Pacific, LLC

PETROCARD INC  
730 CENTRAL AVE S  
KENT WA 98032-6109

# INVOICE

PAGE 1 OF 1

Date: 11/18/2016  
Invoice No: 9434530554  
Terms: Net 20th prox  
Payment Due On: 12/20/2016  
Job No: 14356593  
Legal Address: 24019 WOODINVILLE SNOHOMISH RD-WDNV  
Customer Job No: WOODINVILLE  
Account No: 3172046  
Account Name: PETROCARD INC

For All Inquiries Call:  
800-355-2772

Remit To:  
CEMEX | PO Box 100497 | Pasadena, CA 91189-0497

## DETAILED INFORMATION BY PO

PO Number: CEA#548				DELIVERY ADDRESS: 24019 WOODINVILLE SNOHOMISH RD-WDNV, EVERETT, WA, 98203						
Ship Date	Delivery	Ref #.	Product Code / Description	Qty	UOM	Net Price By UOM	Units	Amount	Freight	Tx
11/18/2016	8073291706	1876090016	1187394 SERV,ENVIRONMENTAL COMPLIANCE FEE	6.070	TON	\$0.00		\$0.00	\$0.00	
11/18/2016	8073291706	1876090016	1373906 CLASS 3 VAC WASTE DUMPED BY TON	6.070	TON	\$218.01	1 TON	\$1,323.32	\$0.00	
PO Subtotal		0.00 Yards	6.07 Tons	\$1,323.32 Material		\$0.00 Freight		\$47.64 Other	\$0.00 Tax	\$1,370.96 Total

Billing Text: "Other" amount includes \$ 47.64 of Refuse Tax

0.00 Yards	6.07 Tons	\$0.00 Freight	\$47.64 Other	\$0.00 Tax	\$1,370.96 Invoice Total
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The invoice incorporates herein by reference Buyer's previously executed Credit Application, if any, Sellers Standard Terms and Conditions, Seller's Quotation and Seller's Order Confirmation (including limitations of warranties) as fully set forth on this Invoice ("Agreement"). Buyer agrees that, unless otherwise noted herein, all quantities and items were delivered as indicated and further expressly agrees to pay in accordance with this Agreement. Interest shall accrue on late payments.



CEMEX  
PO Box 2037  
Everett WA 98213-2037

CEMEX Construction Materials Pacific, LLC

PETROCARD INC  
730 CENTRAL AVE S  
KENT WA 98032-6109

# INVOICE

PAGE 1 OF 1

Date: 11/21/2016  
Invoice No: 9434547059  
Terms: Net 20th prox  
Payment Due On: 12/20/2016  
Job No: 14356593  
Legal Address: 24019 WOODINVILLE SNOHOMISH RD-WDNV  
Customer Job No: WOODINVILLE  
Account No: 3172046  
Account Name: PETROCARD INC

For All Inquiries Call:  
800-355-2772

Remit To:  
CEMEX | PO Box 100497 | Pasadena, CA 91189-0497

## DETAILED INFORMATION BY PO

PO Number: CEA#548				DELIVERY ADDRESS: 24019 WOODINVILLE SNOHOMISH RD-WDNV, EVERETT, WA, 98203						
Ship Date	Delivery	Ref #.	Product Code / Description	Qty	UOM	Net Price By UOM	Units	Amount	Freight	Tx
11/21/2016	8073314619	1876090024	1187394 SERV,ENVIRONMENTAL COMPLIANCE FEE	31.440	TON	\$0.00		\$0.00	\$0.00	
11/21/2016	8073314619	1876090024	1192508 CLASS 3 SOIL DUMPED BY TON	31.440	TON	\$46.00	1 TON	\$1,446.24	\$0.00	
11/21/2016	8073314638	1876090030	1187394 SERV,ENVIRONMENTAL COMPLIANCE FEE	32.310	TON	\$0.00		\$0.00	\$0.00	
11/21/2016	8073314638	1876090030	1192508 CLASS 3 SOIL DUMPED BY TON	32.310	TON	\$46.00	1 TON	\$1,486.26	\$0.00	
11/21/2016	8073314654	1876090036	1187394 SERV,ENVIRONMENTAL COMPLIANCE FEE	33.660	TON	\$0.00		\$0.00	\$0.00	
11/21/2016	8073314654	1876090036	1192508 CLASS 3 SOIL DUMPED BY TON	33.660	TON	\$46.00	1 TON	\$1,548.36	\$0.00	
11/21/2016	8073314667	1876090040	1187394 SERV,ENVIRONMENTAL COMPLIANCE FEE	34.450	TON	\$0.00		\$0.00	\$0.00	
11/21/2016	8073314667	1876090040	1192508 CLASS 3 SOIL DUMPED BY TON	34.450	TON	\$46.00	1 TON	\$1,584.70	\$0.00	
PO Subtotal		0.00 Yards	131.86 Tons	\$6,065.56 Material	\$0.00 Freight	\$218.36 Other	\$0.00 Tax	\$6,283.92 Total		

Billing Text: "Other" amount includes \$ 218.36 of Refuse Tax

0.00 Yards	131.86 Tons	\$0.00 Freight	\$218.36 Other	\$0.00 Tax	\$6,283.92 Invoice Total
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The invoice incorporates herein by reference Buyer's previously executed Credit Application, if any, Sellers Standard Terms and Conditions, Seller's Quotation and Seller's Order Confirmation (including limitations of warranties) as fully set forth on this Invoice ("Agreement"). Buyer agrees that, unless otherwise noted herein, all quantities and items were delivered as indicated and further expressly agrees to pay in accordance with this Agreement. Interest shall accrue on late payments.



CEMEX  
PO Box 2037  
Everett WA 98213-2037

CEMEX Construction Materials Pacific, LLC

PETROCARD INC  
730 CENTRAL AVE S  
KENT WA 98032-6109

# INVOICE

PAGE 1 OF 1

Date: 11/21/2016  
Invoice No: 9434547060  
Terms: Net 20th prox  
Payment Due On: 12/20/2016  
Job No: 14356593  
Legal Address: 24019 WOODINVILLE SNOHOMISH RD-WDNV  
Customer Job No: WOODINVILLE  
Account No: 3172046  
Account Name: PETROCARD INC

For All Inquiries Call:  
800-355-2772

Remit To:  
CEMEX | PO Box 100497 | Pasadena, CA 91189-0497

## DETAILED INFORMATION BY PO

PO Number: CEA#548				DELIVERY ADDRESS: 24019 WOODINVILLE SNOHOMISH RD-WDNV, EVERETT, WA, 98203						
Ship Date	Delivery	Ref #.	Product Code / Description	Qty	UOM	Net Price By UOM	Units	Amount	Freight	Tx
11/21/2016	8073314630	1876090027	1187394 SERV,ENVIRONMENTAL COMPLIANCE FEE	33.250	TON	\$0.00		\$0.00	\$0.00	
11/21/2016	8073314630	1876090027	1192508 CLASS 3 SOIL DUMPED BY TON	33.250	TON	\$46.00 1 TON	33.250	\$1,529.50	\$0.00	
11/21/2016	8073314644	1876090032	1187394 SERV,ENVIRONMENTAL COMPLIANCE FEE	28.730	TON	\$0.00		\$0.00	\$0.00	
11/21/2016	8073314644	1876090032	1192508 CLASS 3 SOIL DUMPED BY TON	28.730	TON	\$46.00 1 TON	28.730	\$1,321.58	\$0.00	
11/21/2016	8073314659	1876090038	1187394 SERV,ENVIRONMENTAL COMPLIANCE FEE	29.930	TON	\$0.00		\$0.00	\$0.00	
11/21/2016	8073314659	1876090038	1192508 CLASS 3 SOIL DUMPED BY TON	29.930	TON	\$46.00 1 TON	29.930	\$1,376.78	\$0.00	
11/21/2016	8073314669	1876090041	1187394 SERV,ENVIRONMENTAL COMPLIANCE FEE	28.840	TON	\$0.00		\$0.00	\$0.00	
11/21/2016	8073314669	1876090041	1192508 CLASS 3 SOIL DUMPED BY TON	28.840	TON	\$46.00 1 TON	28.840	\$1,326.64	\$0.00	
PO Subtotal		0.00 Yards	120.75 Tons	\$5,554.50 Material	\$0.00 Freight	\$199.96 Other	\$0.00 Tax	\$5,754.46 Total		

Billing Text: "Other" amount includes \$ 199.96 of Refuse Tax

0.00 Yards	120.75 Tons	\$0.00 Freight	\$199.96 Other	\$0.00 Tax	\$5,754.46 Invoice Total
------------	-------------	----------------	----------------	------------	--------------------------

The invoice incorporates herein by reference Buyer's previously executed Credit Application, if any, Sellers Standard Terms and Conditions, Seller's Quotation and Seller's Order Confirmation (including limitations of warranties) as fully set forth on this Invoice ("Agreement"). Buyer agrees that, unless otherwise noted herein, all quantities and items were delivered as indicated and further expressly agrees to pay in accordance with this Agreement. Interest shall accrue on late payments.



Weighed At Soil Remediation

1876090027

 6300 Glenwood Ave  
Everett, WA 98213

Location 1876

Order: 41085851 Dispatch: 0 Date: 11/21/2016

 Ship To: 50067897 - PETROCARD INC-VARIOUS JOBS AGG VARIOUS J  
 P 76 WOODINVILLE  
 24019 WOODINVILLE SNOHOMISH RD-WDNV  
 EVERETT, WA 98203

Instruct: CLASS 3 TO EVERETT SOIL REMEDIATION

Job #: - WOODINVILLE PO: CEA#548

Product: 1192508 - CLASS 3 SOIL DUMPED BY TON

Carrier: -

Vehicle: 2146079 - RS58T,RIVERSIDE SAND &amp; GAVEL

Tractor / Trailer1 / Trailer 2 -/- -/-

Qty: 33.25 ton --- DRIVER ON AT TARE &amp; GROSS ---

Weightmaster:		lb	ton	tne
CEMEX	Gross:	106,440	53.22	48.28
Deputy Weightmaster:	Tare:	39,940	19.97	18.12
Richard J Regan	Net:	66,500	33.25	30.16

Scale: 1

In. 9:08 am Today Loads: 2

 Out: 9:28 am Today Qty: -64.89 ton  
 0.00
CEMEX'S STANDARD TERMS AND  
CONDITIONS INCORPORATED HEREIN


0.00

Signature of Receiving Agent


Driver

 METRIC CONVERSION FORMULA: POUNDS DIVIDED BY 2204.623, ROUNDED TO 2 DECIMALS  
 SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION



Weighed At Soil Remediation

1876090032

 6300 Glenwood Ave  
Everett, WA 98213

Location 1876

Order: 41085851 Dispatch: 0 Date: 11/21/2016

 Ship To: 50067897 - PETROCARD INC-VARIOUS JOBS AGG VARIOUS J  
 P 76 WOODINVILLE  
 24019 WOODINVILLE SNOHOMISH RD-WDNV  
 EVERETT, WA 98203

Instruct: CLASS 3 TO EVERETT SOIL REMEDIATION

Job #: WOODINVILLE PO: CEA#548

Product: 1192508 - CLASS 3 SOIL DUMPED BY TON

Carrier: -

Vehicle: 2146079 - RS58T,RIVERSIDE SAND &amp; GAVEL

Tractor / Traller1 / Traller 2 -/- -/-

Qty: 28.73 ton --- DRIVER ON AT TARE &amp; GROSS ---

Weighmaster:		lb	ton	tne
CEMEX	Gross:	97,400	48.70	44.18
Deputy Weighmaster:	Tare:	39,940	19.97	18.12
Richard J Regan	Net:	57,460	28.73	26.06

Scale: 1 \* Predetermined Tare

In: Today Loads: 4

 Out: 10 55 am Today Qty: -3.65 ton  
 0.00
CEMEX'S STANDARD TERMS AND  
CONDITIONS INCORPORATED HEREIN

0.00

Signature of Receiving Agent

Driver


 METRIC CONVERSION FORMULA: POUNDS DIVIDED BY 2000 GIVE, ROUNDED TO 2 DECIMALS  
 SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION





Weighed At Soil Remediation

1876090038

 6300 Glenwood Ave  
Everett, WA 98213

Location 1875

Order: 41085851 Dispatch: 0 Date: 11/21/2016

 Ship To: 50067897 - PETROCARD INC-VARIOUS JOBS AGG VARIOUS J  
 P 76 WOODINVILLE  
 24019 WOODINVILLE SNOHOMISH RD-WDNV  
 EVERETT, WA 98203

Instruct: CLASS 3 TO EVERETT SOIL REMEDIATION

Job #: WOODINVILLE PO: CEA#548

Product: 1192508 - CLASS 3 SOIL DUMPED BY TON

Carrier: -

Vehicle: 2146079 - RS58T,RIVERSIDE SAND &amp; GAVEL

Tractor / Trailer1 / Trailer 2 -/- -/-

Qty: 29.93 ton --- DRIVER ON AT TARE &amp; GROSS ---

Weighmaster:		lb	ton	tne
CEMEX	Gross:	99,800	49.90	45.27
Deputy Weighmaster:	Tare:	39,940	19.97	18.12
Richard J Regan	Net:	59,860	29.93	27.15

Scale: 1 \* Predetermined Tare

In: Today Loads: 6

 Out: 12.56 pm Today Qty: -7.38 ton  
 0.00
CEMEX'S STANDARD TERMS AND  
CONDITIONS INCORPORATED HEREIN

0.00

Signature of Receiving Agent

Driver

 METRIC CONVERSION FORMULA: 1 TON (MTC) = 2204.623 LBS (POUNDED TO 2 DECIMALS)  
 SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION



Weighed At Soil Remediation:

1876090041

**CEMEX** 6300 Glenwood Ave  
Everett, WA 98213

Location: 1876

Order: 41085851 Dispatch: 0 Date: 11/21/2016

Ship To: 50067897 - PETROCARD INC-VARIOUS JOBS AGG VARIOUS J  
P 76 WOODINVILLE  
24019 WOODINVILLE SNOHOMISH RD-WDNV  
EVERETT, WA 98203

Instruct: CLASS 3 TO EVERETT SOIL REMEDIATION

Job #: WOODINVILLE PO: CEA#548

Product: 1192508 - CLASS 3 SOIL DUMPED BY TON

Carrier: -

Vehicle: 2146079 - RS58T,RIVERSIDE SAND & GAVEL

Tractor / Trailer1 / Trailer 2 -/- -/-

Qty: 28.84 ton --- DRIVER ON AT TARE & GROSS ---

Weighmaster:

CEMEX

		lb	ton	line
Gross:		97,620	48.81	44.28
Tare:		39,940	19.97	18.12
Net:		57,680	28.84	26.16

Deputy Weighmaster:

Richard J. Regan

Scale: 1

\* Predetermined Tare

In:

Today Loads:

8

Out: 2.43 pm

Today Qty:

-12.99 ton

0.00

CEMEX'S STANDARD TERMS AND  
CONDITIONS INCORPORATED HEREIN

0.00

Signature of Receiving Agent

Driver

METRIC CONVERSION FORMULA: POUNDS DIVIDED BY 2204.622, ROUNDED TO 3 DECIMALS  
SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION