Soil Remediation Report

Pink Elephant Carwash
616 Battery Street
Seattle, Washington

January 3, 2013

Prepared For:

Pink Elephant Carwash
616 Battery Street
Seattle, Washington

Thomas W. Smith
Senior Environmental Scientist

ICC Certified Site Assessor: 4132009730
ICC Certified Decommissioner: 4132009730

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Principal Environmental Scientist

Prepared By:

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Tacoma, Washington 98333
(253) 238-9270

ECI Project No.: 05023-01

Table of Contents

1.0 Introduction

During underground storage tank (UST) decommissioning activities conducted for Pink Elephant Carwash by EcoCon, Inc. (ECI) in December 2013, contaminated soil exceeding applicable Washington State Department of Ecology's (Ecology) Model Toxics Control Act (MTCA) Method A Cleanup limits was identified. The details of the UST Site Assessment are documented within ECI's report, "Underground Storage Tank Site Assessment", dated December 12, 2013.

ECI has prepared this soil remediation report to document activities during removal of contaminated soil at the Pink Elephant Carwash located at 616 Battery Street, Seattle, Washington (Site), Attachment A, Figure 1. Pursuant to the Ecology regulations, site activities were completed in accordance with the following documents published by Ecology.

Relevant Publications:

- The Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC

The project scope was to provide oversight of remedial activities in conjunction with the removal of contaminated soil. The scope also included collection of soil samples to document the presence or absence of petroleum contamination associated with the historic gas station operation on the site (Prior to 1990's).

1.1 Site Location and Description

The site identified as King County Tax Parcel: 069700-0325, a commercial land use occupied by Pink Elephant Carwash. According to recorded King County Assessor records, this Parcel occupies 0.44 acres (18,965 square feet). The parcel Property Report for the Site lists Clise Properties Inc., as the current owners of the parcel. The site is located within Township, 25N, Range 04E, Section 30, in the Southeast Quarter.

The following table includes the associated King County parcel number and associated abbreviated legal description:

Parcel Number	Abbreviated Legal Description
069700-0325	BELLS 6TH ADD 1 & 6-7-8 LESS STS **Plat Block:** W / **Plat Lot:** PORTION

1.2 Utility location identification

Prior to implementing site activities, the Public Underground Utilities Alert Network was notified of intrusive activities. The service contacted appropriate agencies or companies with underground utilities in the area. These agencies then marked the location of their utilities.

2.0 Site Conditions

The site is located in the Puget Lowlands geologic region, an elongated topographic and structural depression filled with complex sequences of glacial and non-glacial sediments that overlie bedrock. Continental ice sheets up to 3,000 feet thick covered portions of the Puget Lowland several times during the Quaternary period. Retreating ice carved new landscapes, rechanneled rivers, drained or formed lakes, and deposited glacial drift including till and outwash (Washington Department of Natural Resources, 2002). According to the United States Geologic Survey (USGS), the Site area overlies the Younger Glacial Drift, a till unit deposited during the Pleistocene Epoch, with a moraine as the primary geologic feature. Till is defined as hard, blue-gray to gray concrete-like mixture of clay, silt, sand and gravel, deposited as end or recessional moraines, principally Wisconsin in age. This unit is possibly outwash from the Fraser Glaciation approximately 10,000 to 20,000 years ago. Asphalt and a building cover the Site. .

The primary aquifers in the Puget Sound region are typically overlain by relatively impermeable glacial till deposits that are present at or near the ground surface. Within these till deposits are localized areas or lenses of water-bearing sands and gravels that may result in a shallow, perched water table. Lateral and vertical migration of shallow groundwater may be impeded by the relatively impermeable nature of the till and by the sometimes-discontinuous nature of the perched water-bearing sands and gravel. Perched and discontinuous zones of shallow groundwater may be seasonally or perennially present, depending on site-specific conditions. Shallow groundwater flow directions fluctuate and tend to follow topographic gradient but are also affected by seasonal high water tables and variable soil characteristics. Groundwater migration pathways may also follow underground conduits such as utility trenches.

Potable water for the site is provided by Seattle Public Utilities water system that receives water from the Tolt and Cedar Rivers. Based on a review of the USGS 47122-F3 SEATTLE NORTH, WA topographic map, the inferred groundwater flow at the site is to the west towards the Puget Sound.

During site activities, fill materials consisting of pea gravel (UST bedding material) and asphalt were observed from the ground surface to approximately ten feet below the ground surface (BGS). Below the fill material, observed soils include grey compacted sandy silts to a depth 15 feet bgs. Groundwater water was not encountered. Water was found to infiltrate the excavation (at four to eight feet bgs). However, it appears that this water was trapped within the fill material. Approximately 2,000 gallons of water was pumped, by Marvac Services, from the excavation prior to finalizing the excavation limits and properly disposed of at properly licensed and permitted facility. Subsequent to removal, there was no additional infiltration of water into the excavation during site activities.

3.0 Contaminated Soil Removal/Disposal

Soil excavation activities were competed under the supervision of a qualified environmental professional, licensed as an Ecology UST Site Assessor. Guidance was derived from Ecology Publication No. 10-09-057 – September 2011. Joe Hall Construction completed the excavation, transport and restoration services.

3.1 Waste Profiling & Disposal Authorization

Prior to excavation activities, ECI collected and had analyzed one soil sample using the parameters outlined in WAC 173-340: Table 830-1-Required Testing Form Petroleum Releases. The sample was analyzed for Dibromoethane, 1-2 (EDB), Dichloroethane, 1-2 (EDC) Methyl tertiary-butyl ether (MTBE) Total Lead. Sample results were reported non-detect or below the laboratory minimum reporting levels.

ECI competed waste disposal permitting through Republic Services by completing the required application and submittal of previous representative sample analysis.

3.2 Petroleum Contaminated Soil Excavation

The excavation activities of petroleum contaminated soils (PCS) were started immediately following the removal of the three UST's. Soil exhibiting field screening (olfactory, visual) evidence of petroleum hydrocarbon impact was excavated and direct loaded into dump trucks for off-site disposal (Republic Services).

PCS excavation activities were conducted from December 16th through December 18th, 2013. Field screening and onsite chemical analysis provided remediation guidance. The final excavation dimensions were approximately twenty-two feet wide and thirty-eight feet long and twelve to fourteen feet deep (Figure 3). A total of approximately 450 tons of contaminated soil was removed and disposed off-site.

3.3 Soil Sample Collection

During excavation activities, representative soil samples were collected in an effort to confirm removal of the PCS (conformation samples). Soil sample locations were determined based on visual and olfactory field screening. A total of fourteen confirmation[1] samples were collected from the excavation sidewalls and the base of the excavation. Ten sidewall and four base samples were collected from depths varying between 5.5 and 9 feet bgs. In addition, one performance[2] sample (S16-14) was collected at 14 feet bgs from soils being delivered to the disposal facility. Samples were collected using industry standard sampling techniques including EPA Method 5035 for the collection of soil samples for volatile organic analysis. Soil samples were selected for laboratory analysis based upon the results of

[1] Soil confirmation samples are samples collected at the completion of excavation beneath or adjacent to areas from which contaminated soil has been removed to determine or verify whether cleanup levels have been achieved.

[2] Performance soil samples are samples collected at the anticipated boundary of the excavation, however, laboratory analysis indicates concentrations of COC that exceeded the CULs

field screening observations. Samples were placed into new laboratory provided sample containers (40-milliliter vials and 4 oz. glass jar) immediately upon collection.

Each sample was provided with unique sample identifications and submitted to either the off-site (Friedman Bruya) or on-site mobile laboratory operated by Libby Environmental Inc., under industry standard chain of custody protocols.

CONTAMINANTS OF CONCERN (COCs)

Based on historical Site activities as a fueling facility, noted from the previous investigations, the contaminants of concern (COCs) at the Site are identified as gasoline-range organics (GRO); select volatile organic compounds benzene, toluene, ethylbenzene, and xylenes (BTEX); and fuel additives.

The Washington Administrative Code (WAC) 173-340: Model Toxic Control Act provided regulatory guidance in establishing site-specific soil cleanup levels (CUL). The concentrations of these contaminants in the samples collected will be compared to the MTCA Method-A CULs for Unrestricted Land Use. These cleanup levels are presented below:

Primary Contaminant of Concern	Analytical Method	Cleanup Levels (CUL) Soil - mg/kg
Gasoline Range Organics	NWTPH-Gx	100/30*
Benzene	EPA 8021B	0.03
Toluene	EPA 8021B	7
Ethylbenzene	EPA 8021B	6
Xylenes	EPA 8021B	9
Dibromoethane, 1-2 (EDB)	EPA 8260C	0.005
Dichloroethane, 1-2 (EDC)	EPA 8260C	0.005
Methyl Tertiary-Butyl Ether (MTBE)	EPA 8260C	0.1
Naphthalene	EPA 8260C	5
Total Lead	EPA 6000/7000	250

MTCA Cleanup Regulation 173-340-900: Table 740-1.
Required Testing for Petroleum Releases: Table 830-1.

3.4 Excavation Backfilling and Site Restoration

After sampling the excavation and transporting the contaminated soil to the disposal facility, the excavation was backfilled. The backfill consisted of imported clean fill material including recycled concrete, pit run and gravel, which was brought to grade and compacted.

4.0 Soil Sample Analysis

Analytical results for the confirmation samples reported concentrations of the COCs noted above to be below the laboratory reporting limits in all of the confirmation samples. The performance sample S16-14 was collected was analyzed for the COCs including additional fuel additives. The sample contained elevated concentrations of benzene (0.082 mg/kg). This concentration is above the MTCA A CUL for benzene (0.03 mg/kg). No other COCs were detected above the laboratory reporting limit in this sample.

All samples were prepared and/or analyzed within the required holding times and were properly preserved and cooled after collection. Method blanks were prepared and analyzed with the samples for all parameters. These applications were performed under Ecology accreditation parameters. All appropriate Quality Assurance / Quality Control (QA/QC) method parameters have been applied. Freidman and Bruya and Libby Environmental, LLC. stated there were no reportable sample analysis issues. (See Appendix B: Confirmation Soil Sample Result Table).

5.0 Summary and Recommendations

Approximately 450 tons of soil contaminated were excavated the southern portion of the Subject Site and disposed of at the REBENCO Seattle transfer station with an ultimate destination of the Roosevelt Landfill located in Eastern Washington. Analytical results from 14 confirmation samples collected from the sidewalls and base of the excavation reported concentrations of COCs below the laboratory reporting limits or non-detect. The Model Toxics Control Act Cleanup Regulation (WAC 173-340-300:2) states that owners and operators are required to report the discovery of a release of hazardous substances that may pose a threat to human health or the environment and that the release must be reported within ninety calendar days of the date of discovery.

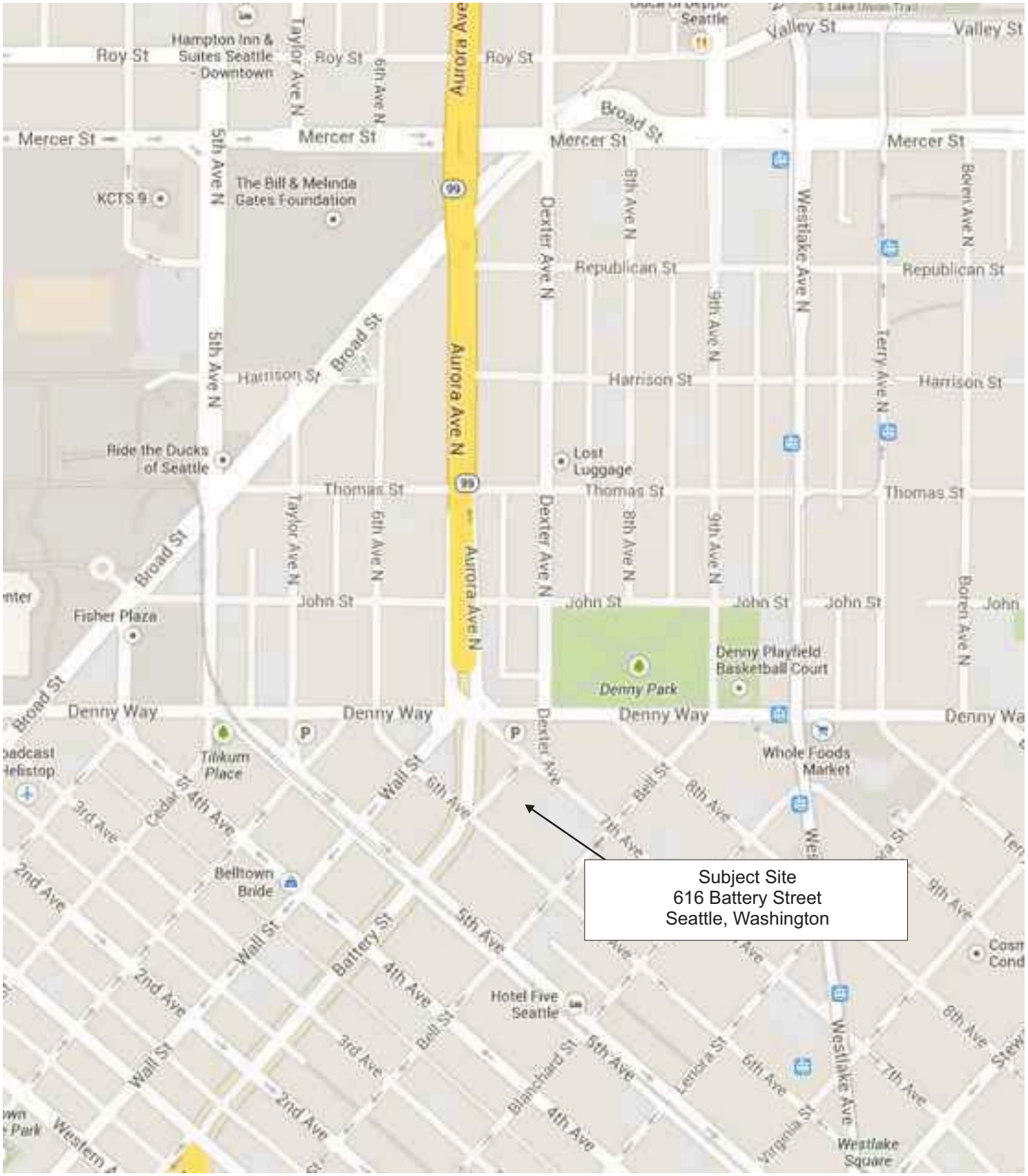
5.1 Standard Limitations

This report has been prepared to document the activities that occurred during remedial activities at the Pink Elephant Car Wash addressed at 616 Battery Street, Seattle, Washington. The findings and conclusions documented in this report have been prepared for the specific application to this project and have been developed in a manner consistent with the level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. No warranty, expressed or implied, is made. This report is for the exclusive use of Pink Elephant Carwash and/or its representatives.

If new information is developed in future site work (which may include excavations, additional borings, or other studies), ECI should be contacted to re-evaluate the interpretations in this report, and to provide amendments as required.

Attachment A

Project Figures



N
Not To Scale

Site Location Map
Site Remediation
616 Battery Street
Seattle, Washington

Date:	January 1, 2014
Completed By:	K. Spencer
Reviewed By.:	S.Spencer
Version:	ECI-001
Project No.:	0502-01

Figure No.: 01

Sheet 01 of 04

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N
Not To Scale

Site Topographic Map
Site Remediation
616 Battery Street
Seattle, Washington

Date:	January 1, 2014
Completed By:	K. Spencer
Reviewed By.:	S.Spencer
Version:	ECI-001
Project No.:	0502-01

Figure No.: 02
Sheet 02 of 04

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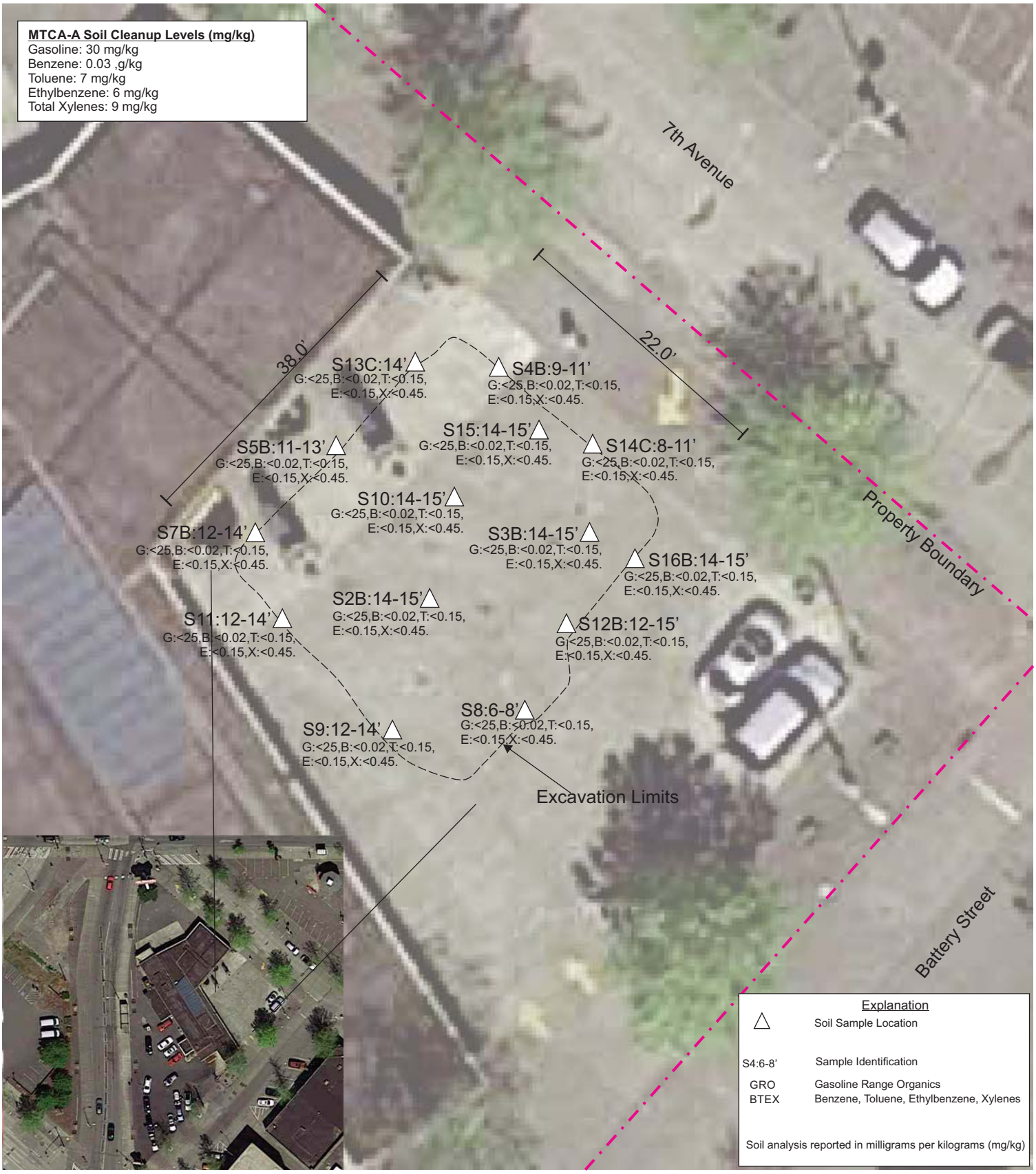

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Site Location Map
Site Remediation
616 Battery Street
Seattle, Washington

Date:	January 1, 2014
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Project No.:	0502-01

Figure No.: 03
Sheet 03 of 04

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Photograph 01: Soil excavation.

Photograph 02: Loading disposal transport.

Photograph 03: UST 2 - View of site excavation.

Photograph 04: Pump truck.

Photograph 05: Removing excavation water.

Photograph 06: Backfill.

Project Photographs
Site Remediation
616 Battery Street
Seattle, Washington

Date:	January 1, 2014
Completed By:	K. Spencer
Reviewed By.:	S.Spencer
Version:	ECI-001
Project No.:	0502-01

Figure No.: 04

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Attachment B

Project Tables

Attachment B
Project Tbles

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Table 1: Confirmation Soil Sample Analytical Results

616 Battery Street
Seattle, Washington

January 2, 2013

Sample Number	Sample Location		Sample Depth (ft)	Sample Date	NWTPH-Gx	EPA 8021B				EPA 8260C				EPA 200.8
	Latitude	Longitude			GRO	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	EDB	EDC	Naphthalene	Lead
					Analytes Reported in milligrams per killigrams (mg/kg)									
S2B-14-15	47°37'05.91"N	122°20'36.16"W	14 - 15	12/16/2013	<20	<0.027	<1	<1	<1	NT	NT	NT	NT	NT
S3B-14-15	47°37'05.99"N	122°20'36.17"W	14 - 15	12/16/2013	<20	<0.027	<1	<1	<1	NT	NT	NT	NT	NT
S4B-9-11	47°37'05.95"N	122°20'36.34"W	9 - 11	12/16/113	<20	<0.027	<1	<1	<1	NT	NT	NT	NT	NT
S5B-11-13	47°37'05.70"N	122°20'36.263"W	11 - 13	12/16/2013	<20	<0..027	<1	<1	<1	NT	NT	NT	NT	NT
S7B-12-14	47°37'05.69"N	122°20'36.24"W	12 - 14	12/16/2013	<20	<0..027	<1	<1	<1	NT	NT	NT	NT	NT
S8-6-8	47°37'05.78"N	122°20'35.97"W	6 -8	12/9/2013	<20	<0..027	<1	<1	<1	NT	NT	NT	NT	NT
S9B-12-14	47°37'05.63"N	122°20'35.97"W	12 - 14	12/16/2013	<20	<0..027	<1	<1	<1	NT	NT	NT	NT	NT
S10-14-15	47°37'05.78"N	122°20'36.20"W	14 - 15	12/17/2013	<20	<0..027	<1	<1	<1	NT	NT	NT	NT	NT
S11-11-14	47°37'05.59"N	122°20'36.11"W	11 -14	12/17/2013	<20	<0..027	<1	<1	<1	NT	NT	NT	NT	NT
S12-15	47°37'05.83"N	122°20'35.95"W	15	12/17/2013	<20	<0..027	<1	<1	<1	NT	NT	NT	NT	NT
S13C-14	47°37'05.78"N	122°20'36.37"W	14	12/18/2013	<20	<0..027	<1	<1	<1	NT	NT	NT	NT	NT
S14C-8-11	47°37'05.91"N	122°20'36.20"W	8 -11	12/18/2003	<20	<0..027	<1	<1	<1	NT	NT	NT	NT	NT
S15B-14-15	47°37'05.87"N	122°20'36.25"W	14 - 15	12/18/2013	<20	<0.027	<1	<1	<1	NT	NT	NT	NT	NT
S16B-14-15	47°37'05.92"N	122°20'36.13"W	14 - 15	12/18/2013	<20	**<0.027**	<1	<1	<1	NT	NT	NT	NT	NT
Minimum Method Reporting Level (MRL)					20	0.027	1	1	1	0.05	0.005	0.03	0.05	5
Model Toxic Control Act - Method A Soil Cleanup Level					30	0.03	7	6	9	0.1	0.005	0.03	5	250

Bold / Shaded: Analysis reported exceeding the MTCA Method A cleanup level
Bold: Analysis reported exceeding laboratory method reporting levels
MTCA 2007 Method A Cleanup Levels for Soil from the Model Toxics Control Act (MTCA) amendment Table 740-1 WAC 173-340 -900 Tables
Samples reported in millagrams per kilograms (mg/kg)
Longitude & Latitude cooridinates are estimated
bgs: below ground surface
NT: Not Tested
NA: Not Applicable
ND: Non Detect

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Table 2: Performance and Lead Analytical Results

616 Battery Street
Seattle, Washington

January 2, 2013

Sample Number	Sample Location		Sample Depth (ft)	Sample Date	NWTPH-Gx	EPA 8021B				EPA 8260C				EPA 200.8
	Latitude	Longitude			GRO	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	EDB	EDC	Naphthalene	Lead
					Analytes Reported in milligrams per killigrams (mg/kg)									
S4B-9-11	NA	NA	9 - 11	12/16/113	NA	NA	NA	NA	NA	NA	NA	NA	NA	**8.89**
S16-14	NA	NA	14	12/18/2013	ND	**0.082**	ND	ND	ND	ND	ND	ND	ND	NT
Minimum Method Reporting Level (MRL)					20	0.027	1	1	1	0.05	0.005	0.03	0.05	5
Model Toxic Control Act - Method A Soil Cleanup Level					30	0.03	7	6	9	0.1	0.005	0.03	5	250

Bold / Shaded: Analysis reported exceeding the MTCA Method A cleanup level
Bold: Analysis reported exceeding laboratory method reporting levels
MTCA 2007 Method A Cleanup Levels for Soil from the Model Toxics Control Act (MTCA) amendment Table 740-1 WAC 173-340-900 Tables
Samples reported in millagrams per kilograms (mg/kg)
Longitude & Latitude cooridinates are estimated
bgs: below ground surface
NT: Not Tested
NA: Not Applicable
ND: Non Detect

Attachment C

Project Analytical Data

Laboratory Analytical Results
Chains of Custody
MTCA-Table 740-1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

December 18, 2013

Tom Smith, Project Manager
EcoCon, Inc.
PO Box 153
Fox Island, WA 98333

Dear Mr. Smith:

Included are the results from the testing of material submitted on December 16, 2013 from the 616 Battery, F&BI 312228 project. There are 4 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Steve Spencer
EMS1218R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 16, 2013 by Friedman & Bruya, Inc. from the EcoCon 616 Battery, F&BI 312228 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	EcoCon
312228 -01	S7B 9-11
312228 -02	S5B 9-11
312228 -03	S4B 9-11
312228 -04	S9B 9-11

All quality control requirements were acceptable.

Date of Report: 12/18/13
Date Received: 12/16/13
Project: 616 Battery, F&BI 312228
Date Extracted: 12/16/13
Date Analyzed: 12/16/13

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

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

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
S7B 9-11 312228-01	<0.02	<0.15	<0.15	<0.45	<25	119
S5B 9-11 312228-02	<0.02	<0.15	<0.15	<0.45	<25	114
S4B 9-11 312228-03	<0.02	<0.15	<0.15	<0.45	<25	120
S9B 9-11 312228-04	<0.02	<0.15	<0.15	<0.45	<25	119
Method Blank 03-2567 MB	<0.02	<0.15	<0.15	<0.45	<25	118

Date of Report: 12/18/13
Date Received: 12/16/13
Project: 616 Battery, F&BI 312228

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: 312220-01 (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)	<0.15	<0.15	nm
Ethylbenzene	mg/kg (ppm)	<0.15	<0.15	nm
Xylenes	mg/kg (ppm)	<0.45	<0.45	nm
Gasoline	mg/kg (ppm)	<25	<25	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	93	69-120
Toluene	mg/kg (ppm)	0.5	99	70-117
Ethylbenzene	mg/kg (ppm)	0.5	103	65-123
Xylenes	mg/kg (ppm)	1.5	101	66-120
Gasoline	mg/kg (ppm)	20	95	71-131

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

[redacted] 312228

ME 12-16-13 VSI

CHAIN OF CUSTODY RECORD

CLIENT: EcoCon Inc. TSmith@ecocononline.com
ADDRESS: PO Box 153 Fox Island, WA
PHONE: (253) 365-7647 FAX:
CLIENT PROJECT #: PROJECT MANAGER: Tom Smith

DATE: 12/16/13 PAGE 1 OF 1
PROJECT NAME: 616 BA Hay
LOCATION: Seattle, WA
COLLECTOR: Tom Smith DATE OF COLLECTION: 12/16/13

Lab ID	Sample Number	Depth	Time	Sample Type	Container Type	TPH - HCID	TPH - Diesel & Oil	TPH - Gasoline	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH's 8270	PCB's 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	Asbestos - PLM	GRO Suite	DRO Suite	WO Suite	NOTES	Total Number of Containers	Laboratory Note Number
31A-B	1. S7B 9-11	11	6:40	Soil	4 WA		X	X																2	
32	2. S5B 9-11	"	6:50	"	"		"	"																	
33	3. S4B 9-11	"	7:04	"	"		"	"																	
34	4. S9B 9-11	"	9:25	"	"		"	"																	
	5.																								
	6.																								
	7.																								
	8.																								
	9.																								
	10.																								
	11.																								
	12.																								
	13.																								
	14.																								
	15.																								
	16.																								
	17.																								
	18.																								

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	12/16/13 10:12	[signature]	12/16/13
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
Received: Dave DD VO		FedEx	12-16-13 / 10:30

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES: Rush

Turn Around Time: 24 HR 48 HR 5 DAY

1210 Eastside Street SE, Suite 200
Olympia, Washington 98501
Phone: 360-459-4670
Fax: 360-459-3432

Samples received at 19 °C

Website: www.esnnw.com
E-Mail: info@esnnw.com

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

December 18, 2013

Tom Smith, Project Manager
EcoCon, Inc.
PO Box 153
Fox Island, WA 98333

Dear Mr. Smith:

Included are the results from the testing of material submitted on December 16, 2013 from the 616 Battery, F&BI 312228 project. There are 4 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Steve Spencer
EMS1218R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 16, 2013 by Friedman & Bruya, Inc. from the EcoCon 616 Battery, F&BI 312228 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	EcoCon
312228 -01	S7B 9-11
312228 -02	S5B 9-11
312228 -03	S4B 9-11
312228 -04	S9B 9-11

All quality control requirements were acceptable.

Date of Report: 12/18/13
Date Received: 12/16/13
Project: 616 Battery, F&BI 312228
Date Extracted: 12/16/13
Date Analyzed: 12/16/13

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

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

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
S7B 9-11 312228-01	<0.02	<0.15	<0.15	<0.45	<25	119
S5B 9-11 312228-02	<0.02	<0.15	<0.15	<0.45	<25	114
S4B 9-11 312228-03	<0.02	<0.15	<0.15	<0.45	<25	120
S9B 9-11 312228-04	<0.02	<0.15	<0.15	<0.45	<25	119
Method Blank 03-2567 MB	<0.02	<0.15	<0.15	<0.45	<25	118

Date of Report: 12/18/13
Date Received: 12/16/13
Project: 616 Battery, F&BI 312228

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: 312220-01 (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)	<0.15	<0.15	nm
Ethylbenzene	mg/kg (ppm)	<0.15	<0.15	nm
Xylenes	mg/kg (ppm)	<0.45	<0.45	nm
Gasoline	mg/kg (ppm)	<25	<25	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	93	69-120
Toluene	mg/kg (ppm)	0.5	99	70-117
Ethylbenzene	mg/kg (ppm)	0.5	103	65-123
Xylenes	mg/kg (ppm)	1.5	101	66-120
Gasoline	mg/kg (ppm)	20	95	71-131

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

[redacted] 312228

ME 12-16-13 VSI

CHAIN OF CUSTODY RECORD

CLIENT: EcoCon Inc. TSmith@ecocononline.com
ADDRESS: PO Box 153 Fox Island, WA
PHONE: (253) 365-7647 FAX:
CLIENT PROJECT #: PROJECT MANAGER: Tom Smith

DATE: 12/16/13 PAGE 1 OF 1
PROJECT NAME: 616 BA Hay
LOCATION: Seattle, WA
COLLECTOR: Tom Smith DATE OF COLLECTION: 12/16/13

Lab ID	Sample Number	Depth	Time	Sample Type	Container Type	TPH - HCID	TPH - Diesel & Oil	TPH - Gasoline	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH's 8270	PCB's 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	Asbestos - PLM	GRO Suite	DRO Suite	WO Suite	NOTES	Total Number of Containers	Laboratory Note Number
31A-B	1. S7B 9-11	11	6:40	Soil	4 WA		X	X																2	
32	2. S5B 9-11	"	6:50	"	"		"	"																	
33	3. S4B 9-11	"	7:04	"	"		"	"																	
34	4. S9B 9-11	"	9:25	"	"		"	"																	
	5.																								
	6.																								
	7.																								
	8.																								
	9.																								
	10.																								
	11.																								
	12.																								
	13.																								
	14.																								
	15.																								
	16.																								
	17.																								
	18.																								

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	12/16/13 10:12	[signature]	12/16/13
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
Received: Dave DD VO		FedEx	12-16-13 / 10:30

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES: Rush

Turn Around Time: 24 HR 48 HR 5 DAY

1210 Eastside Street SE, Suite 200
Olympia, Washington 98501
Phone: 360-459-4670
Fax: 360-459-3432

Samples received at 19 °C

Website: www.esnnw.com
E-Mail: info@esnnw.com

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

December 19, 2013

Tom Smith, Project Manager
EcoCon, Inc.
PO Box 153
Fox Island, WA 98333

Dear Mr. Smith:

Included are the additional results from the testing of material submitted on December 16, 2013 from the 616 Battery, F&BI 312228 project. There are 5 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Steve Spencer
EMS1219R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 16, 2013 by Friedman & Bruya, Inc. from the EcoCon 616 Battery, F&BI 312228 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	EcoCon
312228 -01	S7B 9-11
312228 -02	S5B 9-11
312228 -03	S4B 9-11
312228 -04	S9B 9-11

All quality control requirements were acceptable.

Analysis For Total Metals By EPA Method 200.8

Client ID:	S4B 9-11	Client:	EcoCon
Date Received:	12/16/13	Project:	616 Battery, F&BI 312228
Date Extracted:	12/17/13	Lab ID:	312228-03
Date Analyzed:	12/18/13	Data File:	312228-03.016
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	96	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	8.89

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	EcoCon
Date Received:	Not Applicable	Project:	616 Battery, F&BI 312228
Date Extracted:	12/17/13	Lab ID:	I3-861 mb
Date Analyzed:	12/18/13	Data File:	I3-861 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	95	60	125

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

Date of Report: 12/19/13
Date Received: 12/16/13
Project: 616 Battery, F&BI 312228

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

Laboratory Code: 312224-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	7.05	101	104	59-148	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	105	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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

[redacted] 312228

ME 12-16-13 VSI

CHAIN ~~OF CUSTODY~~ RECORD

CLIENT: EcoCon Inc. TSmith@ecoconnwline.com
ADDRESS: PO Box 153 Fox Island, WA
PHONE: (253) 365-7647 FAX:
CLIENT PROJECT #: PROJECT MANAGER: Tom Smith

DATE: 12/16/13 PAGE 1 OF 1
PROJECT NAME: 616 BA Hay
LOCATION: Seattle, WA
COLLECTOR: Tom Smith DATE OF COLLECTION: 12/16/13

ab ID	Sample Number	Depth	Time	Sample Type	Container Type	TPH - HCID	TPH - Diesel & Oil	TPH - Gasoline	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH's 8270	PCB's 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	Asbestos - PLM	GRO Suite	DRO Suite	WO Suite	NOTES	Total Number of Containers	Laboratory Note Number
1A-B	1. S7B 9-11	11	15:40	50:1	4 WA		X	X															~~per TS 12/16/13~~	2	
2	2. S5B 9-11		15:50																				mc		
3	3. S4B 9-11		11:04														★						Rush-ASAP.		
4	4. S9B 9-11		9:25																						
	5.																								
	6.																								
	7.																								
	8.																								
	9.																								
	10.																								
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	17.																								
	18.																								

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
[signature]	12/16/13 10:13	[signature]	12/16/13
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
Received - Dave	DD VO	FedEx	12-16-13 10:30

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES: Rush

Turn Around Time: 24 HR 48 HR 5 DAY

1210 Eastside Street SE, Suite 200
Olympia, Washington 98501
Phone: 360-459-4670
Fax: 360-459-3432

Samples received at 19 °C

Website: www.esnnw.com
E-Mail: info@esnnw.com

Client Information and Summary			
Libby Project Number:	L131217-30		
Chemist(s):	Paul Burke		
Start (Collection) Date:	12/17/2013		
End (Analysis) Date:	12/17/2013		
Client:	ECI		
Project Manager:			
Telephone:			
Fax:			
Client Project Number:			
Client Job Name:	ELEPHANT CAR WASH		
City, State:	Seattle, Washington		

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

ELEPHANT CAR WASH PROJECT
ECI
Seattle, Washington
Libby Project # L131217-30

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)	Surrogate Recovery (%)
Method Blank	12/17/13	nd	nd	nd	nd	nd	125
LCS	12/17/13	112%	113%				130
S11-11-14	12/17/13	nd	nd	nd	nd	nd	134
S10-14-15	12/17/13	nd	nd	nd	nd	nd	78
S12-15	12/17/13	nd	nd	nd	nd	nd	120
S13-14	12/17/13	0.055	nd	nd	nd	nd	115
S14-7-8	12/17/13	0.062	nd	nd	nd	nd	135
S15-13-14	12/17/13	0.061	nd	nd	nd	nd	129
S16-14.5-15	12/17/13	0.069	nd	nd	nd	nd	86
S13B-15	12/17/13	0.055	nd	nd	nd	nd	113
S14B-7-8	12/17/13	0.05	nd	nd	nd	nd	119
S14B-7-8 Dup	12/17/13	0.05	nd	nd	nd	nd	106
S12-15 MS	12/17/13	111%	110%				123
Practical Quantitation Limit		0.027	1.0	1.0	1.0	20	

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

Client Information and Summary			
Libby Project Number:	L131218-30		
Chemist(s):	Paul Burke		
Start (Collection) Date:	12/18/2013		
End (Analysis) Date:	12/18/2013		
Client:	ECI		
Project Manager:			
Telephone:			
Fax:			
Client Project Number:			
Client Job Name:	ELEPHANT CAR WASH		
City, State:	Seattle, Washington		

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

ELEPHANT CAR WASH PROJECT
ECI
Seattle, Washington
Libby Project # L131218-30

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260C) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)	Surrogate Recovery (%)
Method Blank	12/18/13	nd	nd	nd	nd	nd	99
LCS	12/18/13	97%	91%				98
S13C-14	12/18/13	nd	nd	nd	nd	nd	104
S13C-14 Dup	12/18/13	nd	nd	nd	nd	nd	104
S15B-14-15	12/18/13	nd	nd	nd	nd	nd	105
S16B-15.5	12/18/13	nd	nd	nd	nd	nd	101
S14C-8-11	12/18/13	nd	nd	nd	nd	nd	97
S15B-14-15 MS	12/18/13	114%	110%				102
S15B-14-15 MSD	12/18/13	106%	107%				98
Practical Quantitation Limit		0.027	1.0	1.0	1.0	20	

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Toluene-d8): 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

ELEPHANT CAR WASH PROJECT
ECI
Seattle, Washington
Libby Project # L131218-30

Specific Halogenated and Aromatic Hydrocarbons by EPA 8260C in Soil

Sample Description		Method Blank	S16-14.5-15
Date Sampled		N/A	12/17/13
Date Analyzed	PQL (mg/kg)	12/18/13 (mg/kg)	12/18/13 (mg/kg)
Benzene	0.02	nd	0.082
Toluene	0.03	nd	nd
Ethylbenzene	0.03	nd	nd
Total Xylenes	0.03	nd	nd
1,2-Dichloroethane (EDC)	0.03	nd	nd
1,2-Dibromoethane (EDB) *	0.005	nd	nd
Total Naphthalenes	0.05	nd	nd
Methyl *tert*- Butyl Ether (MTBE)	0.05	nd	nd
Surrogate Recovery			
Dibromofluoromethane		101	97
1,2-Dichloroethane-d4		127	128
Toluene-d8		99	105
4-Bromofluorobenzene		104	100

"nd" Indicates not detected at listed detection limit.
"int" Indicates that interference prevents determination.

* INSTRUMENT DETECTION LIMIT
ACCEPTABLE RECOVERY LIMITS FOR SURROGATE 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@aol.com

ELEPHANT CAR WASH PROJECT
ECI
Seattle, Washington
Libby Project # L131218-30

QA/QC Data - EPA 8260C Analyses

Sample Identification: S15B-14-15							
	Matrix Spike			Matrix Spike Duplicate			RPD
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)	
Benzene	0.5	0.57	114	0.5	0.53	106	7.3
Toluene	0.5	0.55	110	0.5	0.53	106	3.7
Surrogate Recovery							
Dibromofluoromethane			95			90	
1,2-Dichloroethane-d4			119			105	
Toluene-d8			102			98	
4-Bromofluorobenzene			102			99	

	Laboratory Control Sample		
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)
Benzene	0.5	0.48	96
Toluene	0.5	0.46	92
Surrogate Recovery			
Dibromofluoromethane			102
1,2-Dichloroethane-d4			120
Toluene-d8			98
4-Bromofluorobenzene			107

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%
ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Paul Burke

Attachment D

Project Documentation

Waste Disposal Authorization
PCS Disposal Receipts

Attachment D
Project Documentation

SPECIAL WASTE PROFILE

Requested Disposal Facility: 4178 Roosevelt Regional MSW LF WA

Waste Profile #
Sales Rep #:

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: Elephant Car Wash Inc.			
Generator Site Address: 616 Battery Street			
City: Seattle	County: King	State: Washington	Zip: 98121
State ID/Reg No: NA	State Approval/Waste Code: NA (if applicable)		NAICS # : 447110
Generator Mailing Address (if different): ☐ 616 Battery Street			
City: Seattle	County:	State: Washington	Zip: 98121
Generator Contact Name: Mike Hakala		Email:	
Phone Number: (253) 804-3498	Ext:	Fax Number: (253) 804-3505	

II. Billing Information

Bill To: Joe Hall Construction		Contact Name: Phil Keehnel	
Billing Address: 1317 54th Avenue E.		Email: philk@joehall.com	
City: Fife	State: WA	Zip: 98424	Phone: (253) 922-6815

III. Waste Stream Information

Name of Waste: Gasoline Contaminated Soil	
Process Generating Waste: Leaking Gasoline Underground Storage Tank System	
Type of Waste:	☐ INDUSTRIAL PROCESS WASTE ☑ POLLUTION CONTROL WASTE
Physical State:	☑ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	500 Tons
Frequency:	☑ ONE TIME ☐ ONGOING
Disposal Consideration:	☑ LANDFILL ☐ SOLIDIFICATION ☐ BIOREMEDIATION

IV. Representative Sample Certification

☐ NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	☑ YES or ☐ NO
Type of Sample: ☐ COMPOSITE SAMPLE ☑ GRAB SAMPLE	
Sample Date: 12/09/2013	
Sample ID Numbers: Sample ID's: S1:14', S2:8', S3:14', S4:6', S5:8', S6:8', S7:8', S8:6', S9:6'	

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

Waste Profile #

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Soil	100
2.	
3.	
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
Gray to Brown	Petroleum	☐ YES or ☑ NO	100	7	>250 °F

Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ Yes or ☑ No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☑ No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	☐ Yes or ☑ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☑ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☑ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☑ No
Is this waste generated at a Federal Superfund Clean Up Site?	☐ Yes or ☑ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☑ No

VI. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Stephen M. Spencer, Principal	EcoCon, Inc.
Authorized Representative Name And Title (Type or Print)	Company Name
Authorized Representative Signature	12/11/2013
	Date

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

December 11, 2013

Gina Mulderig, Project Manager
EcoCon, Inc.
PO Box 153
Fox Island, WA 98333

Dear Ms. Mulderig:

Included are the results from the testing of material submitted on December 9, 2013 from the Joe Hall Pink Elephant 0185-19, F&BI 312125 project. There are 27 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Steve Spencer
EMS1211R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 9, 2013 by Friedman & Bruya, Inc. from the EcoCon Joe Hall Pink Elephant 0185-19, F&BI 312125 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	EcoCon
312125 -01	S1-14' 120913
312125 -02	S2-8' 120913
312125 -03	S3-14' 120913
312125 -04	S4-6' 120913
312125 -05	S5-8' 120913
312125 -06	S6-8' 120913
312125 -07	S7-8' 120913
312125 -08	S8-6' 120913
312125 -09	S9-6' 120913
312125 -10	W1-14' 120913

The total lead water sample was received in a glass amber. The data were flagged accordingly.

All other quality control requirements were acceptable.

Date of Report: 12/11/13
Date Received: 12/09/13
Project: Joe Hall Pink Elephant 0185-19, F&BI 312125
Date Extracted: 12/10/13
Date Analyzed: 12/10/13

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

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

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
S1-14' 120913 312125-01	0.061	0.045	0.055	0.089	15	118
S2-8' 120913 312125-02	0.16	0.19	0.42	1.4	32	113
S3-14' 120913 312125-03	0.033	0.045	0.074	0.15	37	117
S4-6' 120913 312125-04	0.045	0.049	0.17	0.19	36	115
S5-8' 120913 312125-05	0.042	0.097	0.43	0.75	99	127
S6-8' 120913 312125-06	0.041	0.056	0.12	0.27	46	117
S7-8' 120913 312125-07	0.039	0.80	0.75	0.83	120	122
S8-6' 120913 312125-08	<0.02	<0.02	0.087	<0.06	3.2	115
S9-6' 120913 312125-09	<0.02	0.050	0.076	0.20	46	118
Method Blank 03-2540 MB	<0.02	<0.02	<0.02	<0.06	<2	114

Date of Report: 12/11/13
Date Received: 12/09/13
Project: Joe Hall Pink Elephant 0185-19, F&BI 312125
Date Extracted: 12/10/13
Date Analyzed: 12/10/13

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
W1-14' 120913 312125-10 1/100	800	110	480	1,900	21,000	93
Method Blank 03-2541 MB	<1	<1	<1	<3	<100	93

Date of Report: 12/11/13
Date Received: 12/09/13
Project: Joe Hall Pink Elephant 0185-19, F&BI 312125
Date Extracted: 12/10/13
Date Analyzed: 12/10/13

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
S1-14' 120913 312125-01	<50	<250	74
S2-8' 120913 312125-02	<50	<250	75
S3-14' 120913 312125-03	72 x	<250	76
S4-6' 120913 312125-04	<50	<250	75
S5-8' 120913 312125-05	180	<250	77
S6-8' 120913 312125-06	<50	<250	75
S7-8' 120913 312125-07	<50	<250	76
S8-6' 120913 312125-08	<50	<250	75
S9-6' 120913 312125-09	<50	<250	75
Method Blank 03-2552 MB	<50	<250	82

Date of Report: 12/11/13
Date Received: 12/09/13
Project: Joe Hall Pink Elephant 0185-19, F&BI 312125
Date Extracted: 12/10/13
Date Analyzed: 12/10/13

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

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 51-134)
W1-14' 120913 312125-10 1/10	86,000	2,600 x	52
Method Blank 03-2533 MB2	<50	<250	82

Analysis For Total Metals By EPA Method 200.8

Client ID:	S1-14' 120913	Client:	EcoCon
Date Received:	12/09/13	Project:	Joe Hall Pink Elephant 0185-19
Date Extracted:	12/11/13	Lab ID:	312125-01
Date Analyzed:	12/11/13	Data File:	312125-01.010
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	7.76

Analysis For Total Metals By EPA Method 200.8

Client ID:	S2-8' 120913	Client:	EcoCon
Date Received:	12/09/13	Project:	Joe Hall Pink Elephant 0185-19
Date Extracted:	12/11/13	Lab ID:	312125-02
Date Analyzed:	12/11/13	Data File:	312125-02.013
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	6.84

Analysis For Total Metals By EPA Method 200.8

Client ID:	S3-14' 120913	Client:	EcoCon
Date Received:	12/09/13	Project:	Joe Hall Pink Elephant 0185-19
Date Extracted:	12/11/13	Lab ID:	312125-03
Date Analyzed:	12/11/13	Data File:	312125-03.014
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	7.67

Analysis For Total Metals By EPA Method 200.8

Client ID:	S4-6' 120913	Client:	EcoCon
Date Received:	12/09/13	Project:	Joe Hall Pink Elephant 0185-19
Date Extracted:	12/11/13	Lab ID:	312125-04
Date Analyzed:	12/11/13	Data File:	312125-04.015
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	8.51

Analysis For Total Metals By EPA Method 200.8

Client ID:	S5-8' 120913	Client:	EcoCon
Date Received:	12/09/13	Project:	Joe Hall Pink Elephant 0185-19
Date Extracted:	12/11/13	Lab ID:	312125-05
Date Analyzed:	12/11/13	Data File:	312125-05.016
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

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

Analyte:	Concentration mg/kg (ppm)
Lead	4.38

Analysis For Total Metals By EPA Method 200.8

Client ID:	S6-8' 120913	Client:	EcoCon
Date Received:	12/09/13	Project:	Joe Hall Pink Elephant 0185-19
Date Extracted:	12/11/13	Lab ID:	312125-06
Date Analyzed:	12/11/13	Data File:	312125-06.017
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	6.33

Analysis For Total Metals By EPA Method 200.8

Client ID:	S7-8' 120913	Client:	EcoCon
Date Received:	12/09/13	Project:	Joe Hall Pink Elephant 0185-19
Date Extracted:	12/11/13	Lab ID:	312125-07
Date Analyzed:	12/11/13	Data File:	312125-07.019
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	5.42

Analysis For Total Metals By EPA Method 200.8

Client ID:	S8-6' 120913	Client:	EcoCon
Date Received:	12/09/13	Project:	Joe Hall Pink Elephant 0185-19
Date Extracted:	12/11/13	Lab ID:	312125-08
Date Analyzed:	12/11/13	Data File:	312125-08.020
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	7.08

Analysis For Total Metals By EPA Method 200.8

Client ID:	S9-6' 120913	Client:	EcoCon
Date Received:	12/09/13	Project:	Joe Hall Pink Elephant 0185-19
Date Extracted:	12/11/13	Lab ID:	312125-09
Date Analyzed:	12/11/13	Data File:	312125-09.021
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Lead	7.33

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	EcoCon
Date Received:	NA	Project:	Joe Hall Pink Elephant 0185-19
Date Extracted:	12/11/13	Lab ID:	I3-843 mb
Date Analyzed:	12/11/13	Data File:	I3-843 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	91	60	125

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

Analysis For Total Metals By EPA Method 200.8

Client ID:	W1-14' 120913	Client:	EcoCon
Date Received:	12/09/13	Project:	Joe Hall Pink Elephant 0185-19
Date Extracted:	12/10/13	Lab ID:	312125-10 x10
Date Analyzed:	12/10/13	Data File:	312125-10 x10.050
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	102	60	125

Analyte:	Concentration ug/L (ppb)
Lead	42.8 pc

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	EcoCon
Date Received:	NA	Project:	Joe Hall Pink Elephant 0185-19
Date Extracted:	12/10/13	Lab ID:	I3-839 mb
Date Analyzed:	12/10/13	Data File:	I3-839 mb.040
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	101	60	125

Analyte:	Concentration ug/L (ppb)
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	S4-6' 120913	Client:	EcoCon
Date Received:	12/09/13	Project:	Joe Hall Pink Elephant 0185-19
Date Extracted:	12/10/13	Lab ID:	312125-04
Date Analyzed:	12/10/13	Data File:	121009.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	98	51	121
4-Bromofluorobenzene	97	32	146

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,2-Dibromoethane (EDB)	<0.05
Naphthalene	1.8

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	EcoCon
Date Received:	NA	Project:	Joe Hall Pink Elephant 0185-19
Date Extracted:	12/10/13	Lab ID:	03-2518 mb
Date Analyzed:	12/10/13	Data File:	121008.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	97	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,2-Dibromoethane (EDB)	<0.05
Naphthalene	<0.05

Date of Report: 12/11/13
Date Received: 12/09/13
Project: Joe Hall Pink Elephant 0185-19, F&BI 312125

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: 312125-08 (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)	0.050	<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	86	69-120
Toluene	mg/kg (ppm)	0.5	93	70-117
Ethylbenzene	mg/kg (ppm)	0.5	99	65-123
Xylenes	mg/kg (ppm)	1.5	97	66-120
Gasoline	mg/kg (ppm)	20	95	71-131

Date of Report: 12/11/13
Date Received: 12/09/13
Project: Joe Hall Pink Elephant 0185-19, F&BI 312125

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	ug/L (ppb)	50	93	89	65-118	4
Toluene	ug/L (ppb)	50	97	96	72-122	1
Ethylbenzene	ug/L (ppb)	50	101	101	73-126	0
Xylenes	ug/L (ppb)	150	99	99	74-118	0
Gasoline	ug/L (ppb)	1,000	99	100	69-134	1

Date of Report: 12/11/13
Date Received: 12/09/13
Project: Joe Hall Pink Elephant 0185-19, F&BI 312125

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

Laboratory Code: 312125-01 (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	81	81	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	82	74-139

Date of Report: 12/11/13
Date Received: 12/09/13
Project: Joe Hall Pink Elephant 0185-19, F&BI 312125

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	91	97	58-134	6

Date of Report: 12/11/13
Date Received: 12/09/13
Project: Joe Hall Pink Elephant 0185-19, F&BI 312125

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

Laboratory Code: 312125-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	5.74	100	101	59-148	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	102	80-120

Date of Report: 12/11/13
Date Received: 12/09/13
Project: Joe Hall Pink Elephant 0185-19, F&BI 312125

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

Laboratory Code: 312093-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	28.7	81 b	82 b	79-121	1 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	101	83-115

Date of Report: 12/11/13
Date Received: 12/09/13
Project: Joe Hall Pink Elephant 0185-19, F&BI 312125

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

Laboratory Code: 312125-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	74	74	21-145	0
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	74	71	12-160	4
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	81	80	28-142	1
Naphthalene	mg/kg (ppm)	2.5	1.4	82 b	82 b	14-157	0 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	88	60-123
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	86	56-135
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	93	74-132
Naphthalene	mg/kg (ppm)	2.5	95	63-140

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

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.

312125

SAMPLE CHAIN OF CUSTODY

ME 12/9/13

BI3 ~~BB~~/V1/V5

Page # 1 of 1

Send Report To Gina Mulderig
Company ECI
Address
City, State, ZIP
Phone # Fax #

SAMPLERS (signature) G Mulderig
PROJECT NAME/NO. Joe Hall Pink Elephant 0185-19
PO #
REMARKS

TURNAROUND TIME
☐ Standard (2 Weeks)
☒ RUSH 24 hr per SS as noted.
Rush charges authorized by: MG.

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

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Lead	Fuel Additives				Notes
																	★ - per SS
S1-14'-120913	01 A-C	12/9/13	10:15		3	X	X	X				X					12/10/13
S2-8'-120913	02		13:30														MG
S3-14'-120913	03		5:15														Rush D, G, BTEX
S4-6'-120913	04		12:00										★				Rush All for S4
S5-8'-120913	05		13:00														
S6-8'-120913	06		13:20														
S7-8'-120913	07		15:30														
S8-6'-120913	08		5:20														Rush D, G, BTEX
S9-6'-120913	09		5:00														↓
W1-14'-120913	10		10:25														

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	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	G. Mulderig	Gina Mulderig	ECI	12/9/13	5:43 P
Received by:	Michele Castales Paglia	Michele Castales Paglia	FEBI	12/9/13	5:45 PM
Relinquished by:					
Received by:			Samples received at 4 °C		