

June 8, 2015

ECI Project No.: 0185-23-02

Joe Hall Construction
1317 54th Avenue East
Fife, Washington 98424

Re: **Soil Remediation Report**

220 Strander Boulevard
Tukwila, Washington

EcoCon, Inc. (ECI) has prepared this Soil Remediation Report to document the removal of contaminated soil identified during the removal of two hydraulic hoists and an oil water separator located inside the service bay of the Chevron Station located at 220 Strander Boulevard (the "Subject Property").

The purpose of the remedial activities conducted by ECI is to evaluate the removal of hazardous substances from the "Site" and provide conclusions, recommendations, and/or opinions as to whether further action or investigation is warranted. The Site is defined as the vertical and lateral extent of contamination. Field activities were conducted on May 20, 2015 and were performed under the supervision of ECI Site Assessor, Gina Mulderig (ICC ID: 5319877) and managed by ECI Washington State licensed Geologist, Missy Leone, L.G. (License No.: 2714).

The location of the Subject Property is depicted on Figures 1 & 2 in Appendix A.

The project scope of work included the following:

- Oversight of soil removal from the vicinity of the hoists;
- Sample Collection and Analysis;
- Completion of this Soil Remedial Report

Project Description and Background

The Property consists of a single rectangular-shaped tax parcel (King County # 2623049104), currently operating as a Chevron Service Station, improved with one 2,044 square foot building, constructed of prefab steel. King County Assessor's records indicate the structure was built in 1972.

Contaminated soil was identified during sampling conducted by ECI on March 18, 2015, following the removal of two hydraulic hoists from the service bay on the west side of the building. Analytical results for soil samples collected by ECI from the westernmost hoist excavation reported concentrations of total petroleum hydrocarbons as Oil Range Organics (ORO) above the Model Toxics Control Act (MTCA)

Soil Remediation Report

220 Strander Blvd.
Tukwila, Washington

June 3, 2015

Method A Soil Cleanup Level for Unrestricted Land Uses (MTCA-A). Additional sampling conducted by Conestoga-Rovers & Associates (CRA) reported Tetrachloroethene (PCE) at 0.36 mg/kg at the same sampling location. A release was subsequently reported to the Washington Department of Ecology (DOE) on April 13, 2015 through the Environmental Incident Report Form (ERTS). The DOE assigned the site ERTS # 656142.

Contaminants of Concern

Based on historical land use at the Property and field screening (olfactory) observations, the contaminants of concern at the Site were identified as gasoline-range organics (GRO), diesel-range organics (DRO) and oil-range organics (ORO). The presence of ORO triggers additional test parameters as required by table 830-1 of the MTCA Cleanup Regulations, specifically cPAHs, PCBs, and VOCs. The concentrations of these contaminants in soil were compared to the MTCA Method-A Soil Cleanup Levels for Unrestricted Land Use and the Method-A Cleanup Levels for Groundwater to determine the need for additional assessment or remedial activities.

Table 1: Contaminants of Concern

Contaminants of Concern (COCs)	Soil Cleanup Levels (CUL) - mg/kg
Gasoline Range Organics (GRO)	100
Diesel Range Organics (DRO)	2,000
Oil Range Organics (HRO)	2,000
Chlorinated Volatile Organic Compound as Tetrachloroethylene (PCE)	0.05
Chlorinated Polycyclic Aromatic Hydrocarbons (cPAHs)	0.1 Toxicity Equivalency
Polychlorinated Biphenyl's (PCBs)	1.0

Remedial Excavation Activities

Based on the results of previous soil sample analytical results (ECI on March 18, 2015), contaminated soil was removed from the Hoist excavation to meet the applicable regulatory cleanup standards. A small sump, which emptied into the larger oil water separator, was also removed from the service bay to the immediate north of the westernmost hoist. Additional soil was excavated from around the oil / water separator when field screening indicated that the impacted soil extended beneath the separator. The excavation was extended northward until field screening indicated the presence of petroleum hydrocarbon contamination was unlikely. The original dimensions of the hoist excavation

Soil Remediation Report

220 Strander Blvd.
Tukwila, Washington

June 3, 2015

(approximately 4 feet wide by 4 feet long) was widened to 5 feet wide by 18 feet long and the total depth of the excavation was approximately 6 feet below ground surface (bgs).

Field screening techniques, including odor and sheen screening, were used to direct excavation activities. When field screening indicated that the contamination had been effectively removed, confirmation soil samples were collected from each sidewall and the excavation floor. Five soil samples and three stockpile soil samples were submitted for the analysis of COCs detailed in Table 1, above. Table 1 in Attachment B summarizes the results from the laboratory analysis.

Joe Hall Construction, under the supervision of an ECI environmental scientist, excavated the contaminated soil using a track mounted hydraulic excavator and stockpiled the material on site pending profiling for proper disposal.

Regulatory Compliance

Regulatory compliance for this project is based on the Ecology Model Toxic Control Act (MTCA) Method A Soil Cleanup Levels for Unrestricted Land Uses– WAC 173-340-900 - Table 740-1 and Table 720-1; specifically, the cleanup levels for GRO, DRO and ORO, PCE, PAHs, and PCBs.

Project Sampling

Soil samples were collected using industry standard sampling techniques by a properly trained environmental professional licensed as a Washington State Site Assessor. Each soil sample was collected using a backhoe and manually transferred directly into new laboratory provided four-ounce jars for non-VOC analysis. Samples to be analyzed for VOCs were collected using US EPA Method 5035 sampling procedures. New disposable nitrile gloves were worn during the collection of each sample.

Five confirmation soil samples (RS1 through RS5) were collected from the remedial excavation. One sample was obtained from each sidewall and one sample was obtained from the base of the excavation. Three soil samples were collected from the excavation stockpile (SP1 through SP3) and were composited by the laboratory.

Groundwater was not present in the excavation and was not sampled.

Following collection, each sample was assigned a unique sample identification number, placed into a climate controlled container maintained at or below 4° Celsius and submitted to Friedman and Bruya, Inc. under proper chain of custody protocol the same day as collection.

Soil Remediation Report

220 Strander Blvd.
Tukwila, Washington

June 3, 2015

Project Analytical Results

Five soil samples and three soil stockpile samples were collected by ECI on May 20, 2015. Samples were submitted to the laboratory for the analysis of GRO using Northwest Method NWTPH-Gx, and DRO and ORO using Northwest Method NWTPH-Dx Extended. Each sample reported concentrations of contaminants of concern below their respective MTCA-A cleanup level for unrestricted land uses as described below.

Four of the five confirmation soil samples reported concentrations of GRO, DRO and ORO below the laboratory reporting limit. One sample (RS3-B6) was reported to contain ORO above laboratory detection methods, but below the MTCA Method A Cleanup Level, so all of the samples were analyzed for VOCs, cPAHs, and PCBs as required by table 830-1 of the MTCA Cleanup Regulations. All samples reported concentrations below laboratory reporting limits for the additional test parameters, with the exception of chysene in RS1-NSW5, which was detected below the MTCA Method B cleanup level using the PAH Toxicity Equivalency Methodology in WAC 173-340-708(8). Sample results are shown in Table 1 in Attachment B.

The locations of soil samples are depicted on Figure 3. Laboratory analytical reports are presented in Appendix C.

Data Quality

A total of five confirmation soil samples and three soil stockpile samples were submitted for analysis under industry standard chain-of-custody protocols to Friedman & Bruya, Inc. The soil stockpile samples were composited into a single sample for analysis. 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 Washington State Department of Ecology accreditation parameters. All appropriate Quality Assurance/Quality Control (QA/QC) method parameters have been applied. Friedman & Bruya, Inc. stated there were no reportable sample analysis issues.

Site Restoration

Upon receipt of confirmation sample analytical results, the excavation was backfilled to surface grade with clean structural fill.

Conclusions & Opinion

The remediation of contaminated soil identified following the removal of two hydraulic hoists and one oil water separator was completed on May 20, 2015, by Joe Hall Construction under the supervision of

Soil Remediation Report

220 Strander Blvd.
Tukwila, Washington

June 3, 2015

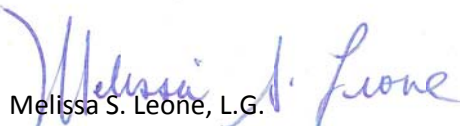
ECI. Contaminated soil was removed from the excavation and stored on site under plastic sheeting pending profiling for disposal.

Confirmation soil sample analytical results reported concentrations of COCs below MTCA-A cleanup levels for all samples collected following excavation activities. It is the opinion of ECI that no additional characterization or remediation of the hoist and oil water separator area is warranted.

Respectively Submitted,

ECI | Environmental Consulting Services


Gina M. Mulderig
Sr. Environmental Scientist
ICC Certified Site Assessor, No 5319877


Melissa S. Leone, L.G.
Senior Environmental Geologist



List of Appendices

Appendix A: Project Figures

- Figure 1 - Site Location Map
- Figure 2 - Site Topographic Map
- Figure 3 - Soil Sample Location Map
- Figure 4 - Project Photographs

Appendix B: Project Tables

- Table 2 - Soil Sample Analytical Results

Appendix C: Project Analytical Results

- Laboratory Analytical Reports
- Sample Chain of Custody

List of Appendices

Appendix A: Project Figures

Figure 1 - Site Location Map

Figure 2 - Site Topographic Map

Figure 3 - Soil Sample Location Map

Figure 4 - Project Photographs

Appendix B: Project Tables

Table 2 - Soil Sample Analytical Results

Appendix C: Project Analytical Results

Laboratory Analytical Reports

Sample Chain of Custody

Appendix A

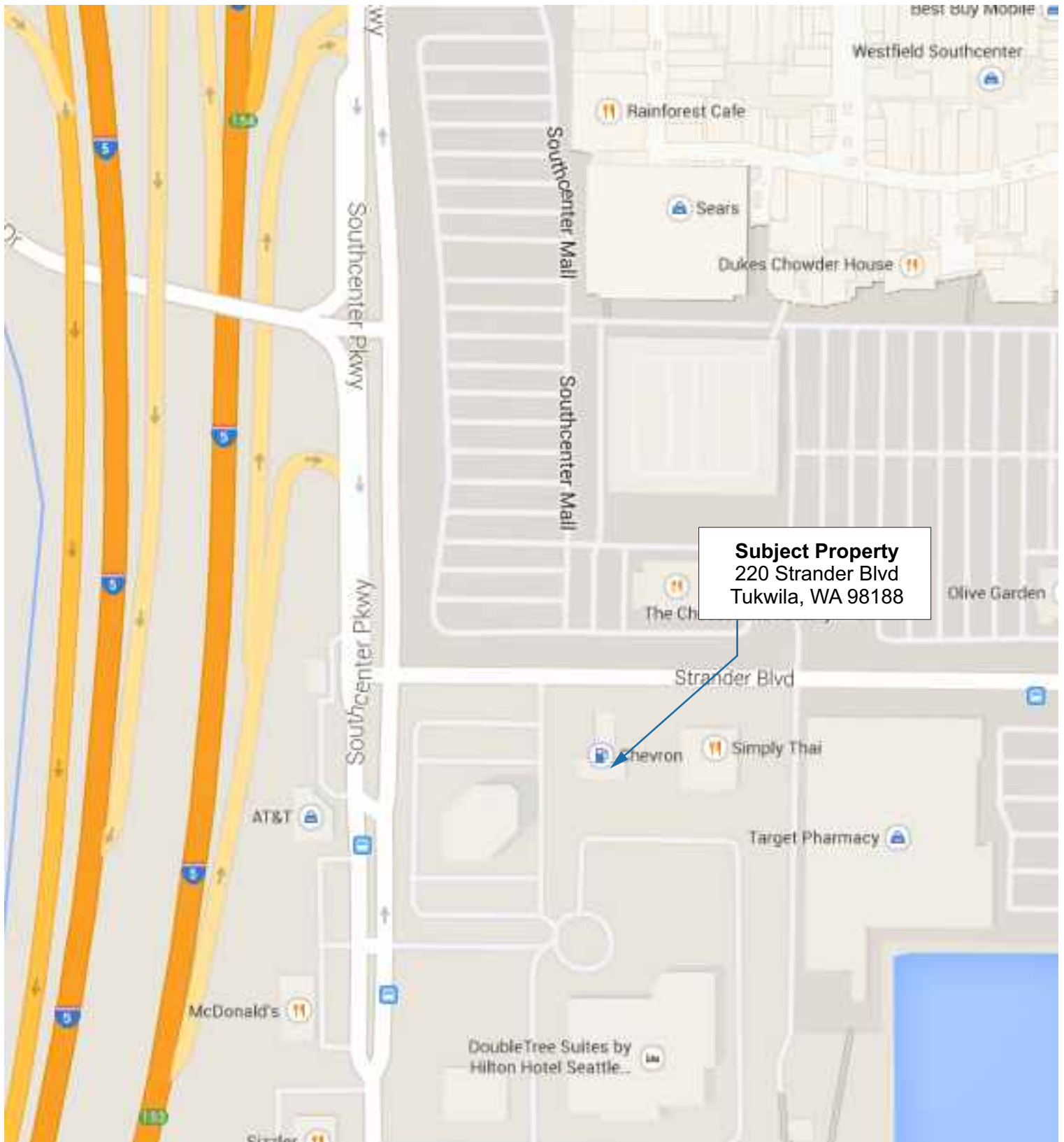
Project Figures

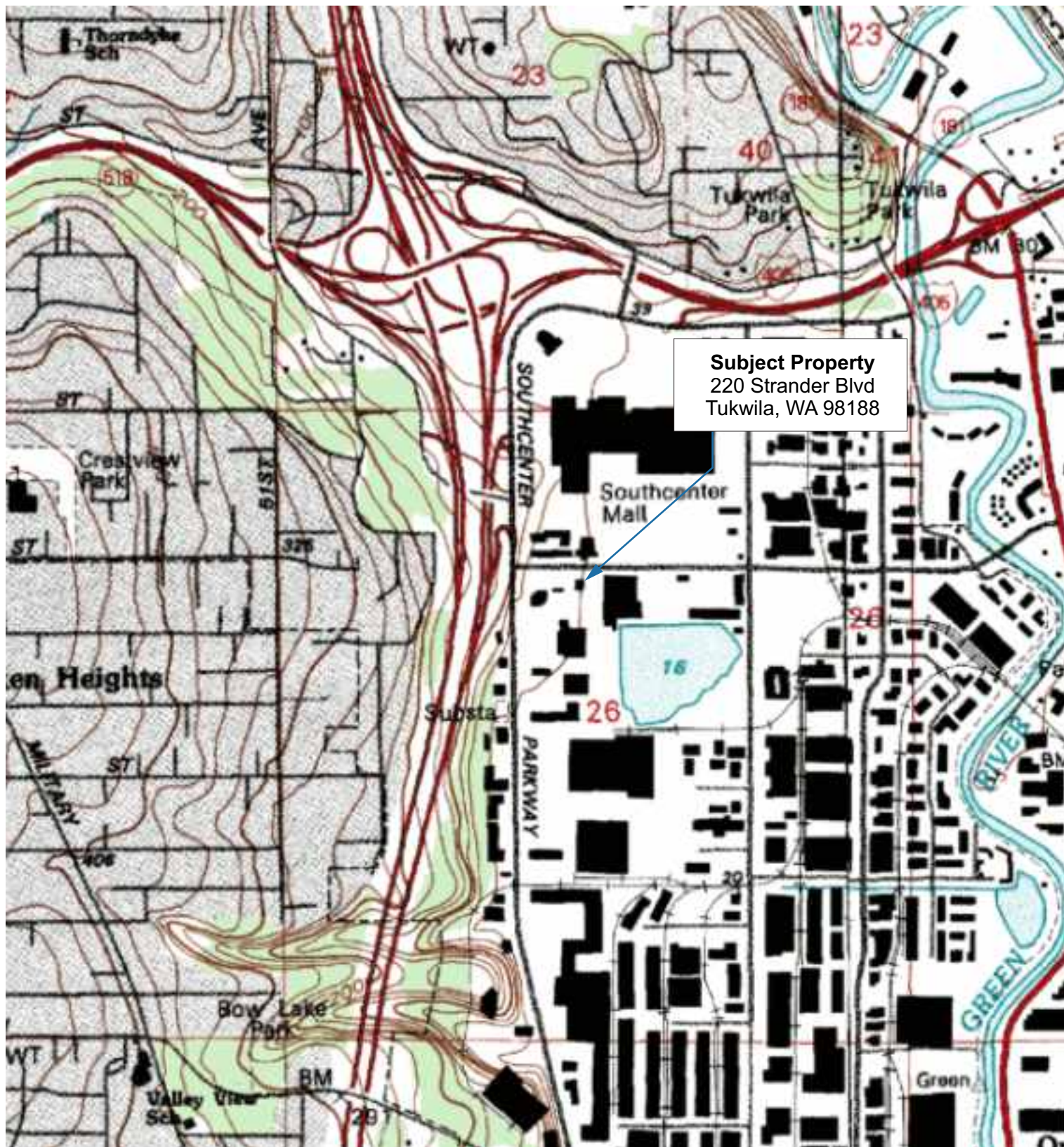
Figure 1 - Site Location Map

Figure 2 - Site Topographic Map

Figure 3 - Soil Sample Location Map

Figure 4 - Project Photographs

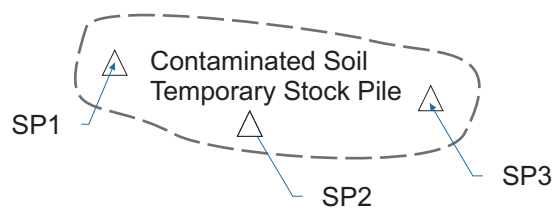
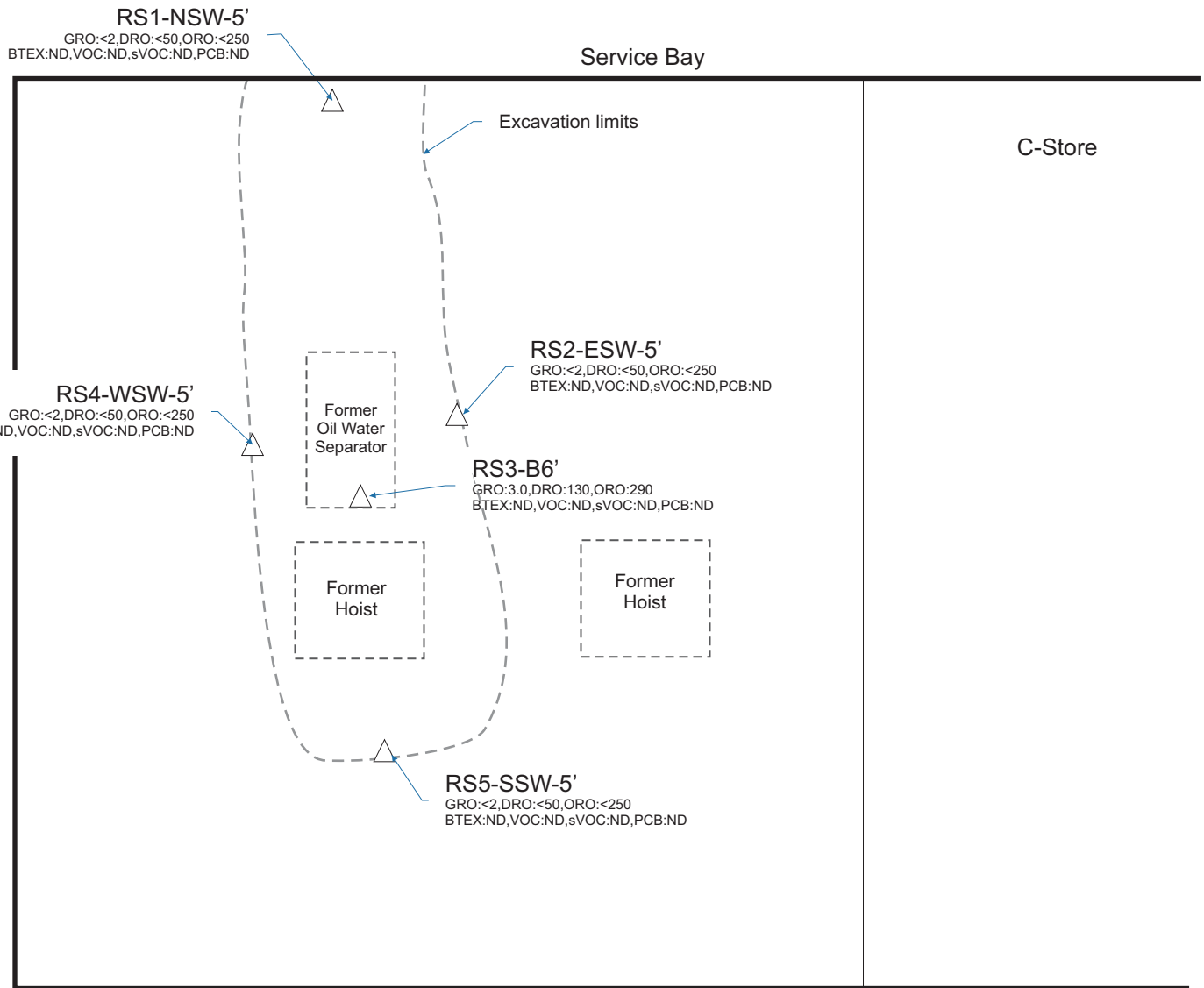




Project Topographic Map
Soil Remediation Project
220 Strander Blvd
Tukwila, WA 98188

Date: June 06, 2015
Completed By: K. Spencer
Reviewed By:
Version: ECI-001
Project No.: 0185-23-02

Figure No.:
02
Sheet 02 of 04



EXPLANATION

GRO: Gasoline Range Organics
DRO: Diesel Range Organics
ORO: Oil Range Organics
BTEX: Benzene, Toluene, Ethylbenzene, Xylenes
sVOC's: Semi Volatile Organic Compounds
VOC's: Volatile Organic Compounds
PAH's: Polycyclic Aromatic Hydrocarbon
PCB's: Polychlorinated Biphenyl
ND: Non-Detect
mg/kg: milligram per kilogram
ug/L: micro gram per liter

△ : Sample Location
RS5-SSW-5' : Sample Identification

0 5 10 20
Approximate Scale in Feet



Project Sample Map
Soil Remediation Project
220 Strander Blvd
Tukwila, WA 98188

Date: June 06, 2015
Completed By: K. Spencer
Reviewed By.: S. Spencer
Version: ECI-001
Project No.: 0185-23-02

Figure No.:
03
Sheet 03 of 04

ECI | environmental Services
www.ecoonline.com



Photograph 01: Top of hoist exposed prior to removal



Photograph 02: Oil Water Separator.



Photograph 03: Remedial excavation area



Photograph 04: Oil Water Separator removal.



Photograph 05: Contaminated soil stock pile



Photograph 06: Excavation following backfill placement

Project Photographs
 Soil Remediation Project
 220 Strander Blvd
 Tukwila, WA 98188

Date: June 06, 2015
 Completed By: K. Spencer
 Reviewed By.: S. Spencer
 Version: ECI-001
 Project No.: 0185-23-02

Figure No.:
04
 Sheet 04 of 04

ECI | environmental Services
www.ecocononline.com

Appendix B

Project Tables

Table 2 - Soil Sample Analytical Results

Table 1: Confirmation Soil Sample Analytical Results

Soil Remediation Project

220 Strander Blvd

Tukwila, WA 98188

June 8, 2015

Sample Number	Sample Depth	Sample Date	NWTPH-Dx		NWTPH-Gx	SW8021B				8270D	8082A	8260C
			Diesel Range Organics	Oil Range Organics	Gasoline Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes	cPAHs TEF	PCB	VOC
	below ground surface		Samples Report in milligram per kilogram (mg/kg)									
R-S1 NSW5	5-6'	05/20/20105	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	0.00011	ND	ND
R-S2 ESW5	5-6'	05/20/20105	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	ND	ND	ND
R-S3 B6	6-6.5'	05/20/20105	130	290	3	<0.02	<0.02	<0.02	<0.06	ND	ND	ND
R-S4 WSW5	5-6'	05/20/20105	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	ND	ND	ND
R-S5 SSW-5	5-6'	05/20/20105	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	ND	ND	ND
SP1-3 Composite	NA	05/20/20105	<50	<250	<2	<0.02	<0.02	<0.02	<0.06	ND	ND	ND
Minimum Method Reporting Level (MRL)			50	250	2	0.02	0.02	0.02	0.06	0.01	0.02	0.1
MTCA Method A Soil Cleanup Level			500	500	30/100	0.03	7	6	9	0.1	1	--

Bold / Shaded: Analysis reported exceeding the MTCA Method A cleanup level

Bold: Analysis reported exceeding laboratory method reporting levels

Cleanup Levels for Soil - Model Toxics Control Act (MTCA) WAC 173-340 -900 Table 740-1

Samples reported in micrograms per kilograms (mg/kg)

Longitude & Latitude coordinates are estimated

NT: Not Tested

ND: None Detect for all analytes

cPAHs: Chlorinated Polycyclic Aromatic Hydrocarbons

TEF: Toxicity Equivalency Factor

PCBs: Polychlorinated Biphenyl's

VOCs: Volatile Organic Compounds

Appendix C

Project Analytical Results

Laboratory Analytical Reports
Sample Chain of Custody

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

May 27, 2015

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 May 20, 2015 from the Strander Chevron 0185-23, F&BI 505347 project. There are 17 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
EMS0527R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 20, 2015 by Friedman & Bruya, Inc. from the EcoCon Strander Chevron 0185-23, F&BI 505347 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>EcoCon</u>
505347 -01	R-S1 NSW5
505347 -02	R-S2 ESW5
505347 -03	R-S3 B6
505347 -04	R-S4 WSW5
505347 -05	R-S5 SSW-5
505347 -06	SP1
505347 -07	SP2
505347 -08	SP3

Dichlorofluoromethane failed below the acceptance criteria in the 8260C matrix spike sample duplicate as well as the associated relative percent difference. The laboratory control sample met the acceptance criteria, therefore the data were likely due to sample matrix effect. In addition, 1,1,2-trichloroethane exceeded the acceptance in the 8260C laboratory control sample. 1,1,2-Trichloroethane was not detected in the samples, therefore the data were acceptable.

The 8270D matrix spike and matrix spike duplicate failed the relative percent difference for several compounds. The analytes were not detected therefore the data were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

Date Extracted: 05/21/15

Date Analyzed: 05/21/15

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u>	<u>Gasoline Range</u>	Surrogate (% Recovery)
Laboratory ID		(Limit 50-150)
R-S1 NSW5 505347-01	<2	100
Method Blank 05-1235 MB	<2	100

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

Date Extracted: 05/21/15

Date Analyzed: 05/21/15

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<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)
R-S2 ESW5 505347-02	<0.02	<0.02	<0.02	<0.06	<2	89
R-S3 B6 505347-03	<0.02	<0.02	<0.02	<0.06	3.0	88
R-S4 WSW5 505347-04	<0.02	<0.02	<0.02	<0.06	<2	76
R-S5 SSW-5 505347-05	<0.02	<0.02	<0.02	<0.06	<2	89
Method Blank 05-1235 MB	<0.02	<0.02	<0.02	<0.06	<2	87

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

Date Extracted: 05/21/15

Date Analyzed: 05/21/15

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	(% Recovery)
			(Limit 56-165)
R-S1 NSW5 505347-01	<50	<250	100
R-S2 ESW5 505347-02	<50	<250	94
R-S3 B6 505347-03	130 x	290	95
R-S4 WSW5 505347-04	<50	<250	87
R-S5 SSW-5 505347-05	<50	<250	94
Method Blank 05-992 MB	<50	<250	109

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	R-S1 NSW5	Client:	EcoCon
Date Received:	05/20/15	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/21/15	Lab ID:	505347-01
Date Analyzed:	05/21/15	Data File:	052107.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	62	142
Toluene-d8	102	55	145
4-Bromofluorobenzene	100	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	EcoCon
Date Received:	Not Applicable	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/21/15	Lab ID:	05-1214 mb2
Date Analyzed:	05/21/15	Data File:	052105.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	101	55	145
4-Bromofluorobenzene	99	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	R-S1 NSW5	Client:	EcoCon
Date Received:	05/20/15	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/21/15	Lab ID:	505347-01 1/5
Date Analyzed:	05/21/15	Data File:	052111.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	93	24	168

Compounds:	Concentration mg/kg (ppm)
Benz(a)anthracene	<0.01
Chrysene	0.011
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:	EcoCon
Date Received:	Not Applicable	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/21/15	Lab ID:	05-997 mb 1/5
Date Analyzed:	05/21/15	Data File:	052104.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	88	31	163
Benzo(a)anthracene-d12	89	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:	R-S1 NSW5	Client:	EcoCon
Date Received:	05/20/15	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/21/15	Lab ID:	505347-01 1/5
Date Analyzed:	05/22/15	Data File:	04.D\ECD1A.CH
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	87	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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	EcoCon
Date Received:	Not Applicable	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/21/15	Lab ID:	05-998 mb 1/5
Date Analyzed:	05/21/15	Data File:	14.D\ECD1A.C
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

**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: 505340-02 (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	80	69-120
Toluene	mg/kg (ppm)	0.5	91	70-117
Ethylbenzene	mg/kg (ppm)	0.5	91	65-123
Xylenes	mg/kg (ppm)	1.5	90	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

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

Laboratory Code: 505355-01 (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	106	110	63-146	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	97	79-144

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

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

Laboratory Code: 505314-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	12	9 vo	10-142	29 vo
Chloromethane	mg/kg (ppm)	2.5	<0.5	35	30	10-126	15
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	36	32	10-138	12
Bromomethane	mg/kg (ppm)	2.5	<0.5	49	48	10-163	2
Chloroethane	mg/kg (ppm)	2.5	<0.5	50	47	10-176	6
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	35	33	10-176	6
Acetone	mg/kg (ppm)	12.5	<0.5	79	74	10-163	7
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	48	44	10-160	9
Hexane	mg/kg (ppm)	2.5	<0.25	25	27	10-137	8
Methylene chloride	mg/kg (ppm)	2.5	<0.5	71	66	10-156	7
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	72	67	21-145	7
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	61	57	14-137	7
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	66	63	19-140	5
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	55	55	10-158	0
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	71	66	25-135	7
Chloroform	mg/kg (ppm)	2.5	<0.05	70	66	21-145	6
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	87	81	19-147	7
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	73	69	12-160	6
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	60	56	10-156	7
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	60	57	17-140	5
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	63	57	9-164	10
Benzene	mg/kg (ppm)	2.5	<0.03	67	63	29-129	6
Trichloroethene	mg/kg (ppm)	2.5	<0.02	69	66	21-139	4
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	75	70	30-135	7
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	76	72	23-155	5
Dibromomethane	mg/kg (ppm)	2.5	<0.05	74	70	23-145	6
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	87	81	24-155	7
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	84	78	28-144	7
Toluene	mg/kg (ppm)	2.5	0.054	64	59	35-130	8
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	82	78	26-149	5
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	79	75	10-205	5
2-Hexanone	mg/kg (ppm)	12.5	<0.5	87	81	15-166	7
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	76	71	31-137	7
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	54	51	20-133	6
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	78	73	28-150	7
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	78	73	28-142	7
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	68	63	32-129	8
Ethylbenzene	mg/kg (ppm)	2.5	0.65	55 b	47 b	32-137	16 b
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	72	69	31-143	4
m,p-Xylene	mg/kg (ppm)	5	1.8	50 b	39 b	34-136	25 b
o-Xylene	mg/kg (ppm)	2.5	0.087	63	57	33-134	10
Styrene	mg/kg (ppm)	2.5	<0.05	70	66	35-137	6
Isopropylbenzene	mg/kg (ppm)	2.5	0.60	54 b	47 b	31-142	14 b
Bromoform	mg/kg (ppm)	2.5	<0.05	72	67	21-156	7
n-Propylbenzene	mg/kg (ppm)	2.5	1.4	45 b	32 b	23-146	34 b
Bromobenzene	mg/kg (ppm)	2.5	<0.05	70	65	34-130	7
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	2.2	33 b	13 b	18-149	87 b
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	80	74	28-140	8
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	81	74	25-144	9
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	79	69	31-134	14
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	70	64	31-136	9
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	59	54	30-137	9
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	2.6	24 b	2 b	10-182	169 b
sec-Butylbenzene	mg/kg (ppm)	2.5	1.2	45 b	33 b	23-145	31 b
p-Isopropyltoluene	mg/kg (ppm)	2.5	0.53	47 b	40 b	21-149	16 b
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	64	60	30-131	6
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	64	59	29-129	8
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	69	63	31-132	9
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	85	73	11-161	15
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	57	52	22-142	9
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	48	45	10-142	6
Naphthalene	mg/kg (ppm)	2.5	7.3	0 b	0 b	14-157	nm
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	62	56	20-144	10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	39	10-146
Chloromethane	mg/kg (ppm)	2.5	64	27-133
Vinyl chloride	mg/kg (ppm)	2.5	76	22-139
Bromomethane	mg/kg (ppm)	2.5	86	38-114
Chloroethane	mg/kg (ppm)	2.5	91	10-163
Trichlorofluoromethane	mg/kg (ppm)	2.5	84	10-196
Acetone	mg/kg (ppm)	12.5	109	52-141
1,1-Dichloroethene	mg/kg (ppm)	2.5	89	47-128
Hexane	mg/kg (ppm)	2.5	104	43-142
Methylene chloride	mg/kg (ppm)	2.5	111	42-132
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	103	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	104	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	104	68-115
2,2-Dichloropropane	mg/kg (ppm)	2.5	90	52-170
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	106	72-113
Chloroform	mg/kg (ppm)	2.5	105	66-120
2-Butanone (MEK)	mg/kg (ppm)	12.5	117	57-123
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	105	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	102	62-131
1,1-Dichloropropene	mg/kg (ppm)	2.5	106	69-128
Carbon tetrachloride	mg/kg (ppm)	2.5	113	60-139
Benzene	mg/kg (ppm)	2.5	106	68-114
Trichloroethene	mg/kg (ppm)	2.5	113	64-117
1,2-Dichloropropane	mg/kg (ppm)	2.5	113	72-127
Bromodichloromethane	mg/kg (ppm)	2.5	113	72-130
Dibromomethane	mg/kg (ppm)	2.5	109	70-120
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	122	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	122	75-136
Toluene	mg/kg (ppm)	2.5	106	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	121	72-132
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	114 vo	75-113
2-Hexanone	mg/kg (ppm)	12.5	119	33-152
1,3-Dichloropropane	mg/kg (ppm)	2.5	113	72-130
Tetrachloroethene	mg/kg (ppm)	2.5	108	72-114
Dibromochloromethane	mg/kg (ppm)	2.5	117	74-125
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	116	74-132
Chlorobenzene	mg/kg (ppm)	2.5	107	76-111
Ethylbenzene	mg/kg (ppm)	2.5	107	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	112	69-135
m,p-Xylene	mg/kg (ppm)	5	108	78-122
o-Xylene	mg/kg (ppm)	2.5	108	77-124
Styrene	mg/kg (ppm)	2.5	108	74-126
Isopropylbenzene	mg/kg (ppm)	2.5	109	76-127
Bromoform	mg/kg (ppm)	2.5	110	56-132
n-Propylbenzene	mg/kg (ppm)	2.5	114	74-124
Bromobenzene	mg/kg (ppm)	2.5	111	72-122
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	112	76-126
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	114	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	116	61-137
2-Chlorotoluene	mg/kg (ppm)	2.5	109	74-121
4-Chlorotoluene	mg/kg (ppm)	2.5	111	75-122
tert-Butylbenzene	mg/kg (ppm)	2.5	114	73-130
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	112	76-125
sec-Butylbenzene	mg/kg (ppm)	2.5	113	71-130
p-Isopropyltoluene	mg/kg (ppm)	2.5	112	70-132
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	106	75-121
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	105	74-117
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	108	76-121
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	111	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	107	64-135
Hexachlorobutadiene	mg/kg (ppm)	2.5	110	50-153
Naphthalene	mg/kg (ppm)	2.5	113	63-140
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	109	63-138

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

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

Laboratory Code: 505355-01 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	87	81	23-144	7
Chrysene	mg/kg (ppm)	0.17	<0.01	84	79	32-149	6
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	131	105	23-176	22 vo
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	119	96	42-139	21 vo
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	108	94	21-163	14
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	84	92	23-170	9
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	83	92	31-146	10

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benz(a)anthracene	mg/kg (ppm)	0.17	92	51-115
Chrysene	mg/kg (ppm)	0.17	89	55-129
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	110	56-123
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	110	54-131
Benzo(a)pyrene	mg/kg (ppm)	0.17	104	51-118
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	104	49-148
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	99	50-141

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/27/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

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

Laboratory Code: 505355-01 1/5 (Matrix Spike) 1/5

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Control Limits
Aroclor 1016	mg/kg (ppm)	0.8	<0.02	66	50-150
Aroclor 1260	mg/kg (ppm)	0.8	0.025	67	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	86	55-130	1
Aroclor 1260	mg/kg (ppm)	0.8	83	86	58-133	4

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.

SAMPLE CHAIN OF CUSTODY

ME 05/20/15

VS2/ 704

Send Report To Simon Mulderig
 Company ECI

Address _____

City, State, ZIP _____

Phone # 253 386376 Fax # _____

SAMPLERS (signature) <u>Simon Mulderig</u>	
PROJECT NAME/NO.	PO#
Strader Chevron	
0185-23	
REMARKS	

Page # _____ of _____
TURNAROUND TIME
<input checked="" type="checkbox"/> Standard (2 Weeks)
<input type="checkbox"/> RUSH
Rush charges authorized by _____
SAMPLE DISPOSAL
<input checked="" type="checkbox"/> Dispose after 30 days
<input type="checkbox"/> Return samples
<input type="checkbox"/> Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED						Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	
R-S1 NSW5	01F	5/20/15	12:00	S	4	X	X	X	X		X	CPAH PCB
R-S2 FSW5	02		1:20			X	X	X				
R-S3 B6	03		1:40			X	X	X				
R-S4 NSW5	04		2:00			X	X	X				
R-S5 CSW-5	05		2:15			X	X	X				
SP1	06E		12:15		6							Hold for instructions
SP2	07E		12:20		5							
SP3	08E		12:30		6							

Friedman & Bryna, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS/COC/COC.DOC

SIGNATURE		PRINT NAME		COMPANY		DATE		TIME	
Relinquished by: <u>Simon Mulderig</u>		<u>Simon Mulderig</u>		<u>ECI</u>		<u>5/20/15</u>		<u>2:30</u>	
Received by: <u>[Signature]</u>		<u>Jeff Gustafson</u>		<u>ECI</u>		<u>5/20/15</u>		<u>14:35</u>	
Relinquished by:									
Received by:									

Hold for instructions

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

June 4, 2015

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

Dear Ms. Mulderig:

Included are the additional results from the testing of material submitted on May 20, 2015 from the Strander Chevron 0185-23, F&BI 505347 project. There are 26 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
EMS0604R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 20, 2015 by Friedman & Bruya, Inc. from the EcoCon Strander Chevron 0185-23, F&BI 505347 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>EcoCon</u>
505347 -01	R-S1 NSW5
505347 -02	R-S2 ESW5
505347 -03	R-S3 B6
505347 -04	R-S4 WSW5
505347 -05	R-S5 SSW-5
505347 -06	SP1
505347 -07	SP2
505347 -08	SP3

The 8260C matrix spike and matrix spike duplicate failed the relative percent difference for several compounds. The analytes were not detected therefore the data were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/04/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

Date Extracted: 05/27/15

Date Analyzed: 05/27/15

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u>	<u>Gasoline Range</u>	Surrogate (% Recovery)
Laboratory ID		(Limit 50-150)
SP1,SP2,SP3 505347-06,,08	<2	101
Method Blank 05-1239 MB2	<2	101

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/04/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

Date Extracted: 05/27/15

Date Analyzed: 05/27/15

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

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	(% Recovery)
			(Limit 53-144)
SP1, SP2, SP3	<50	<250	100
505347-06,,08			
Method Blank	<50	<250	102
05-1014 MB			

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	R-S2 ESW5	Client:	EcoCon
Date Received:	05/20/15	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/27/15	Lab ID:	505347-02
Date Analyzed:	05/27/15	Data File:	052724.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	89	113
Toluene-d8	103	64	137
4-Bromofluorobenzene	106	81	119

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	R-S3 B6	Client:	EcoCon
Date Received:	05/20/15	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/27/15	Lab ID:	505347-03
Date Analyzed:	05/27/15	Data File:	052725.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	89	113
Toluene-d8	102	64	137
4-Bromofluorobenzene	104	81	119

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	0.065
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	R-S4 WSW5	Client:	EcoCon
Date Received:	05/20/15	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/27/15	Lab ID:	505347-04
Date Analyzed:	05/27/15	Data File:	052734.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	89	113
Toluene-d8	103	64	137
4-Bromofluorobenzene	102	81	119

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	0.037
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	R-S5 SSW-5	Client:	EcoCon
Date Received:	05/20/15	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/27/15	Lab ID:	505347-05
Date Analyzed:	05/27/15	Data File:	052726.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	89	113
Toluene-d8	103	64	137
4-Bromofluorobenzene	106	81	119

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	SP1, SP2, SP3	Client:	EcoCon
Date Received:	05/20/15	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/27/15	Lab ID:	505347-06,,08
Date Analyzed:	05/27/15	Data File:	052723.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	89	113
Toluene-d8	101	64	137
4-Bromofluorobenzene	104	81	119

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	EcoCon
Date Received:	Not Applicable	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/27/15	Lab ID:	05-1224 mb
Date Analyzed:	05/27/15	Data File:	052722.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	89	113
Toluene-d8	102	64	137
4-Bromofluorobenzene	104	81	119

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	R-S2 ESW5	Client:	EcoCon
Date Received:	05/20/15	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/28/15	Lab ID:	505347-02 1/5
Date Analyzed:	05/28/15	Data File:	052808.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	93	31	163
Benzo(a)anthracene-d12	100	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 Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	R-S3 B6	Client:	EcoCon
Date Received:	05/20/15	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/28/15	Lab ID:	505347-03 1/5
Date Analyzed:	05/29/15	Data File:	052821.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	97	31	163
Benzo(a)anthracene-d12	100	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 Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	R-S4 WSW5	Client:	EcoCon
Date Received:	05/20/15	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/28/15	Lab ID:	505347-04 1/5
Date Analyzed:	05/29/15	Data File:	052823.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	102	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 Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	R-S5 SSW-5	Client:	EcoCon
Date Received:	05/20/15	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/28/15	Lab ID:	505347-05 1/5
Date Analyzed:	05/29/15	Data File:	052822.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	92	31	163
Benzo(a)anthracene-d12	99	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 Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	EcoCon
Date Received:	Not Applicable	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	05/28/15	Lab ID:	05-1019 mb 1/5
Date Analyzed:	05/28/15	Data File:	052807.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	87	31	163
Benzo(a)anthracene-d12	91	24	168

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	R-S2 ESW5	Client:	EcoCon
Date Received:	05/20/15	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	06/01/15	Lab ID:	505347-02 1/5
Date Analyzed:	06/02/15	Data File:	12.D\ECD1A.CH
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	mcp

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	69	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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	R-S3 B6	Client:	EcoCon
Date Received:	05/20/15	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	06/01/15	Lab ID:	505347-03 1/5
Date Analyzed:	06/02/15	Data File:	09.D\ECD1A.CH
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	mcp

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	76	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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	R-S4 WSW5	Client:	EcoCon
Date Received:	05/20/15	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	06/01/15	Lab ID:	505347-04 1/5
Date Analyzed:	06/02/15	Data File:	10.D\ECD1A.CH
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	mcp

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	73	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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	R-S5 SSW-5	Client:	EcoCon
Date Received:	05/20/15	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	06/01/15	Lab ID:	505347-05 1/5
Date Analyzed:	06/02/15	Data File:	11.D\ECD1A.CH
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	mcp

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	65	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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	EcoCon
Date Received:	Not Applicable	Project:	Strander Chevron 0185-23, F&BI 505347
Date Extracted:	06/01/15	Lab ID:	05-1029 mb 1/5
Date Analyzed:	06/01/15	Data File:	16.D\ECD1A.CH
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	mcp

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	80	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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/04/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR TPH AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: 505423-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	100	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/04/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

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

Laboratory Code: 505435-01 (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	109	103	64-133	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	95	58-147

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/04/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

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

Laboratory Code: 505342-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	20	15	10-56	29 vo
Chloromethane	mg/kg (ppm)	2.5	<0.5	49	43	10-90	13
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	48	41	10-91	16
Bromomethane	mg/kg (ppm)	2.5	<0.5	69	63	10-110	9
Chloroethane	mg/kg (ppm)	2.5	<0.5	62	57	10-101	8
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	56	48	10-95	15
Acetone	mg/kg (ppm)	12.5	<0.5	88	86	11-141	2
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	66	58	11-103	13
Hexane	mg/kg (ppm)	2.5	<0.25	47	36	10-95	27 vo
Methylene chloride	mg/kg (ppm)	2.5	<0.5	87	80	14-128	8
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	80	76	17-134	5
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	70	64	13-112	9
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	77	71	23-115	8
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	73	65	18-117	12
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	81	75	25-120	8
Chloroform	mg/kg (ppm)	2.5	<0.05	84	79	29-117	6
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	90	86	20-133	5
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	81	77	22-124	5
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	80	74	27-112	8
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	76	70	26-107	8
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	78	68	22-115	14
Benzene	mg/kg (ppm)	2.5	<0.03	78	73	26-114	7
Trichloroethene	mg/kg (ppm)	2.5	<0.02	82	74	30-112	10
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	83	76	31-119	9
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	91	87	31-131	4
Dibromomethane	mg/kg (ppm)	2.5	<0.05	87	81	27-124	7
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	94	90	16-147	4
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	87	81	28-137	7
Toluene	mg/kg (ppm)	2.5	<0.05	79	72	34-112	9
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	79	76	30-136	4
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	85	81	32-126	5
2-Hexanone	mg/kg (ppm)	12.5	<0.5	87	83	17-147	5
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	84	79	29-125	6
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	79	71	25-114	11
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	96	91	32-143	5
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	85	81	32-126	5
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	79	74	37-113	7
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	80	75	34-115	6
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	88	82	35-126	7
m,p-Xylene	mg/kg (ppm)	5	<0.1	85	78	25-125	9
o-Xylene	mg/kg (ppm)	2.5	<0.05	85	78	27-126	9
Styrene	mg/kg (ppm)	2.5	<0.05	86	80	39-121	7
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	85	79	34-123	7
Bromoform	mg/kg (ppm)	2.5	<0.05	98	90	18-155	9
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	85	80	31-120	6
Bromobenzene	mg/kg (ppm)	2.5	<0.05	82	77	40-115	6
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	88	82	24-130	7
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	89	89	27-148	0
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	86	81	33-123	6
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	83	79	39-110	5
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	85	80	39-111	6
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	89	84	36-116	6
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	90	88	35-116	2
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	91	87	33-118	4
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	87	81	32-119	7
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	80	75	38-111	6
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	79	74	39-109	7
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	82	78	40-111	5
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	94	88	37-122	7
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	82	75	31-121	9
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	85	80	24-128	6
Naphthalene	mg/kg (ppm)	2.5	<0.05	90	94	24-139	4
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	84	79	35-117	6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/04/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	53	10-76
Chloromethane	mg/kg (ppm)	2.5	72	34-98
Vinyl chloride	mg/kg (ppm)	2.5	76	42-107
Bromomethane	mg/kg (ppm)	2.5	97	46-113
Chloroethane	mg/kg (ppm)	2.5	92	47-115
Trichlorofluoromethane	mg/kg (ppm)	2.5	93	53-112
Acetone	mg/kg (ppm)	12.5	106	39-147
1,1-Dichloroethene	mg/kg (ppm)	2.5	92	65-110
Hexane	mg/kg (ppm)	2.5	90	55-107
Methylene chloride	mg/kg (ppm)	2.5	112	50-127
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	95	72-122
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	91	71-113
1,1-Dichloroethane	mg/kg (ppm)	2.5	97	74-109
2,2-Dichloropropane	mg/kg (ppm)	2.5	94	64-151
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	98	73-110
Chloroform	mg/kg (ppm)	2.5	103	76-110
2-Butanone (MEK)	mg/kg (ppm)	12.5	107	60-121
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	98	73-111
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	102	72-116
1,1-Dichloropropene	mg/kg (ppm)	2.5	100	72-112
Carbon tetrachloride	mg/kg (ppm)	2.5	100	67-123
Benzene	mg/kg (ppm)	2.5	99	72-106
Trichloroethene	mg/kg (ppm)	2.5	102	72-107
1,2-Dichloropropane	mg/kg (ppm)	2.5	101	74-115
Bromodichloromethane	mg/kg (ppm)	2.5	112	75-126
Dibromomethane	mg/kg (ppm)	2.5	107	76-116
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	113	80-128
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	106	71-138
Toluene	mg/kg (ppm)	2.5	97	74-111
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	97	77-135
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	102	77-116
2-Hexanone	mg/kg (ppm)	12.5	104	70-129
1,3-Dichloropropane	mg/kg (ppm)	2.5	102	75-115
Tetrachloroethene	mg/kg (ppm)	2.5	99	73-111
Dibromochloromethane	mg/kg (ppm)	2.5	117	64-152
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	104	77-117
Chlorobenzene	mg/kg (ppm)	2.5	97	76-109
Ethylbenzene	mg/kg (ppm)	2.5	99	75-112
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	104	76-125
m,p-Xylene	mg/kg (ppm)	5	103	77-115
o-Xylene	mg/kg (ppm)	2.5	101	76-115
Styrene	mg/kg (ppm)	2.5	105	76-119
Isopropylbenzene	mg/kg (ppm)	2.5	101	76-120
Bromoform	mg/kg (ppm)	2.5	117	50-174
n-Propylbenzene	mg/kg (ppm)	2.5	100	77-115
Bromobenzene	mg/kg (ppm)	2.5	97	76-112
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	107	77-121
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	105	74-121
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	99	74-116
2-Chlorotoluene	mg/kg (ppm)	2.5	101	75-113
4-Chlorotoluene	mg/kg (ppm)	2.5	103	77-115
tert-Butylbenzene	mg/kg (ppm)	2.5	104	77-123
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	105	77-119
sec-Butylbenzene	mg/kg (ppm)	2.5	108	78-120
p-Isopropyltoluene	mg/kg (ppm)	2.5	104	77-120
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	96	76-112
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	95	74-109
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	97	75-114
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	109	68-122
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	92	75-122
Hexachlorobutadiene	mg/kg (ppm)	2.5	97	74-130
Naphthalene	mg/kg (ppm)	2.5	98	73-122
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	97	75-117

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/04/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

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

Laboratory Code: 505347-02 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	102	98	23-144	4
Chrysene	mg/kg (ppm)	0.17	<0.01	93	89	32-149	4
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	115	111	23-176	4
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	113	111	42-139	2
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	113	113	21-163	0
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	117	108	23-170	8
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	112	102	31-146	9

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benz(a)anthracene	mg/kg (ppm)	0.17	77	51-115
Chrysene	mg/kg (ppm)	0.17	74	55-129
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	93	56-123
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	91	54-131
Benzo(a)pyrene	mg/kg (ppm)	0.17	84	51-118
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	90	49-148
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	86	50-141

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/04/15

Date Received: 05/20/15

Project: Strander Chevron 0185-23, F&BI 505347

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

Laboratory Code: 505347-02 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Control Limits
Aroclor 1016	mg/kg (ppm)	0.8	<0.02	87	50-150
Aroclor 1260	mg/kg (ppm)	0.8	<0.02	88	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	84	82	55-130	2
Aroclor 1260	mg/kg (ppm)	0.8	88	85	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.

505347

SAMPLE CHAIN OF CUSTODY

ME 05/20/15

V52/404

Send Report To

Cina Mulderig

Company

ECI

Address

City, State, ZIP

Phone # 253 386376 Fax #

SAMPLERS (signature)

PROJECT NAME/NO.

Strander Chevron

D185-23

REMARKS

Page # of

TURNAROUND TIME

Standard (2 Weeks)

RUSH

Rush charges authorized by

SAMPLE DISPOSAL

Dispose after 30 days

Return samples

Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED					Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	
R-S1 NSWS	01	5/20/15	12:00	5	6	X	X	X	X	X	1 per GUL
R-S2 FSW5	02	5/20/15	12:20	1	1	X	X	X	X	X	SP2
R-S3 B6	03	5/20/15	14:00	1	1	X	X	X	X	X	
R-S4 NSWS	04	5/20/15	2:00	1	1	X	X	X	X	X	
R-S5 CSW-5	05	5/20/15	2:15	1	1	X	X	X	X	X	
SP1	06	5/20/15	12:15	1	6	X	X	X	X	X	Hold for
SP2	07	5/20/15	12:20	1	5	X	X	X	X	X	INSTRUCTIONS
SP3	08	5/20/15	12:30	1	6	X	X	X	X	X	composite of
											analyze -
											per GUL
											SP2

SIGNATURE

PRINT NAME

COMPANY

DATE

TIME

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COC.DOC

Relinquished by:

Cina Mulderig

PRINT NAME

Cina Mulderig

COMPANY

DATE

TIME

Received by:

Cina Mulderig

PRINT NAME

Cina Mulderig

COMPANY

DATE

TIME

Relinquished by:

Cina Mulderig

PRINT NAME

Cina Mulderig

COMPANY

DATE

TIME

Received by:

Cina Mulderig

PRINT NAME

Cina Mulderig

COMPANY

DATE

TIME

Samples received at 6:00