

**LIMITED SUBSURFACE SAMPLING
AND TESTING**

Lot 18 Apple Blossom
131 South Apple Blossom Drive
Chelan, Washington 98816

MR. BILL DUESENBERG

ENVIRONMENTAL ASSOCIATES, INC.

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April 12, 2017

JN-37044

Mr. Bill Duesenberg
c/o Jeff Gregg
Alaska USA Federal Credit Union
606 Oakesdale Avenue Southwest, Suite 201
Renton, Washington 98057

Subject: **LIMITED SOIL SAMPLING AND TESTING**
 Lot 18 Apple Blossom
 131 South Apple Blossom
 Chelan, Washington 98816

Gentlemen:

Environmental Associates, Inc. (EAI) has performed limited soil sampling and testing at the above identified address. This report, prepared in general accordance with the terms of our proposal, dated March 14, 2017, summarizes our approach to the project along with results and conclusions. This letter is governed by the same limitations included in the attached report of which it is a part.

The contents of this report are confidential and are intended solely for your use and those of your representatives. Two (2) copies of this report are being distributed to you. No other distribution or discussion of this report will take place without your prior approval in writing. Additional copies are available for a small fee.

During this study, EAI collected five (5) shallow soil samples from the subject property. Analysis of those samples revealed lead and arsenic concentrations in excess of MTCA Method A cleanup levels for "unrestricted" land use, and substantially in excess of the published values for likely related to historic use of pesticides in former orchard use.



Mr. Bill Duesenberg
April 12, 2017

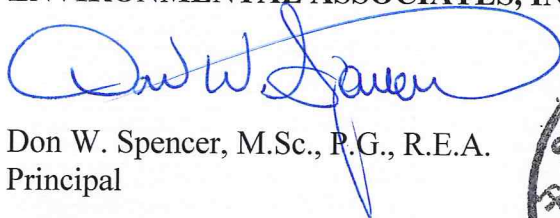
JN-37044
Page - 2

Responding to these conditions and their relative prevalence in Chelan and other agricultural counties of eastern Washington, the WDOE has implemented an ad hoc "policy" allowing such soils to remain onsite when a property is redeveloped if certain management actions are implemented. These actions include placing affected soils beneath buildings, parking lots, and/or other impermeable surfaces. In areas where such impermeable surfaces are not included (i.e. grass-covered or landscaped areas), soils with regulated lead and/or arsenic concentrations may also be covered by a geotextile/ barrier fabric and at least 12-inches of clean overburden soil. Finally, to obtain regulatory acceptance, a deed-restriction/restrictive covenant must be recorded documenting these known conditions.

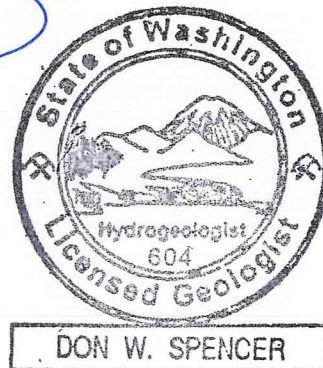
Additional discussion regarding these findings are presented in the Conclusions/Recommendations section of the attached report.

We appreciate the opportunity to be of service on this assignment. If you have any questions or if we may be of additional service, please do not hesitate to contact us.

Respectfully submitted,
ENVIRONMENTAL ASSOCIATES, INC.


Don W. Spencer, M.Sc., P.G., R.E.A.
Principal

License: 604 (Washington)
License: 11464 (Oregon)
License: 876 (California)
License: 5195 (Illinois)
License: 0327 (Mississippi)



LIMITED SUBSURFACE SAMPLING AND TESTING

Lot 18 Apple Blossom
131 South Apple Blossom Drive
Chelan, Washington 98816

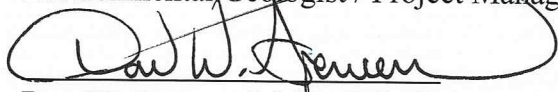
Prepared for:

Bill Duesenberg
c/o Alaska USA Federal Credit Union
606 Oakesdale Avenue Southwest, Suite 201
Renton, Washington 98057

Questions regarding this investigation, the conclusions reached and the recommendations given should be addressed to one of the following undersigned.

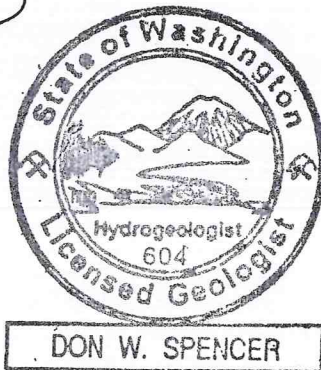


Ryan D. Opitz
Environmental Geologist / Project Manager



Don W. Spencer, M.Sc., P.G., R.E.A.
Principal

License: 604 (Washington)
License: 11464 (Oregon)
License: 876 (California)
License: 5195 (Illinois)
License: 0327 (Mississippi)



Reference Job Number: JN 37044

April 12, 2017

ENVIRONMENTAL ASSOCIATES, INC.

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INTRODUCTION/SCOPE OF WORK

SITE/PROJECT DESCRIPTION

The subject property consists of a somewhat rectangular-shaped parcel (#272318627065) covering approximately 1.9-acres of land located approximately one and one-half of a mile east of “downtown” Chelan, Washington. The site is located in an area of predominantly vacant land that includes isolated clusters of commercial development and residences. According to the Chelan County Assessor’s Office, the subject property is zoned for commercial/light industrial use. The approximate location of the site is shown on the Vicinity Map, Plate 1, appended herewith.

Background

Described in a Phase I report prepared by others (Aerotech Environmental Consulting) for the subject property (2/28/2017), the previous occupancy and use of the subject property was by “a large apple orchard from 1900s to 1999. As the orchard operated on the property during a time when lead-arsenate was a commonly used pesticide, Aerotech recommended that shallow soil samples from the subject property be collected and analyzed for lead and arsenic along with organophosphates and organochlorines

As previously discussed, given that large areas of Chelan and other counties in eastern Washington had historically been used as fruit orchards, so long as certain conditions can be met, the WDOE has implemented an ad hoc “policy” whereby leaving these heavy metal containing soils at a given former agricultural use property during redevelopment is an acceptable “remedial” solution.

Based on our conversations with Mr. Jeff Newschwander of the central regional office of the WDOE, these “certain conditions” include, among other things:

- Placing affected soils beneath buildings, parking lots, and/or other impermeable surfaces (i.e. “capping”);
- In areas of the property that would ultimately be covered with a “permeable” surface, sampling and testing of soils must demonstrate contaminant levels (i.e. lead and arsenic) to be compliant Washington State Model Toxics Control Act Method A (MTCA A) cleanup levels. Alternatively, if contaminant levels in these soils are non-compliant with MTCA A standards, such soils must be covered with a geotextile/barrier fabric membrane and at least 12-inches of clean fill material, and;
- Recording a deed-restriction/restrictive covenant for the property that documents these known conditions for the property.

Upon sufficiently documenting such measures in a formal report, and upon submitting that documentation to the WDOE for review by the “Voluntary Cleanup Program,” EAI is aware of other similarly encumbered properties that have been granted a “No Further Action (NFA)” status by the WDOE.

Current Study

Your expressed interests to conduct a preliminary evaluation of current subsurface conditions as recommended by others and as memorialized in our proposal to you dated March 14, 2017, formed the basis for the following scope of work:

- Sampled five (5) shallow borings at various accessible locations on the site. Soil samples were obtained from each boring and a soil description was made by the EAI project geologist.
- Laboratory analysis of selected soil samples was performed for arsenic, lead, organophosphates, and organochlorines
- Preparation of this summary report documenting the methodology and results of the investigation.

FINDINGS

SUBSURFACE INVESTIGATION

Soil Boring Sampling

Five (5) soil borings were made on March 22, 2017 at the approximate locations noted as H1 through H5 on the Site Plan, Plate 2. The subject site was divide into four quadrants and samples H1 through H4 were taken in the center of each. H5 was located in the approximate center of the property.

Soil Sampling Procedure

An EAI field geologist utilized a shovel to reach a depth of approximately 6 to 8 inches below ground surface (bgs). Once at that depth, soil samples were collected by sterilized jar from the bottom of each boring.

Soil samples were transferred from the sampler directly to sterilized laboratory prepared glassware and were then stored in an iced chest maintained at approximately 4 degrees centigrade at the site and taken to the laboratory in this condition in an effort to preserve sample integrity.

Each sample container was clearly labeled as to boring and sample number/depth, date, time, project, etc. EPA-recommended sample-management protocol was observed at each stage of the project. A field log was made by EAI for each boring. Information recorded versus corresponding depth included soil classification (Unified Soil Classification System), color, texture, relative moisture, odors (if present), etc.

Subsurface Conditions

Soils encountered throughout the site were brown to grey medium to fine grain silty sands with some small pebbles (sm/sp).

LABORATORY ANALYSIS

Laboratory testing of soil samples for various analytes was conducted by Friedman Bruya Laboratories (FBL) and by Fremont Analytical (FA) of Seattle, Washington, a WDOE-accredited analytical laboratory. In accordance with Washington Department of Ecology (WDOE) site assessment protocol, laboratory analysis was performed on selected soil samples. All soil samples were analyzed for lead and arsenic (EPA Method 200.8), organophosphates (EPA Method 8270-SIM), and organochlorines (EPA Method 8081).

As summarized in Table 1 attached to this report, all soil results for lead and arsenic were above (i.e. not compliant with) MTCA cleanup levels.

All soil results for organophosphates and organochlorines were either non detect (concentrations below the level of detection by laboratory methods) or concentrations are below the MTCA Method B compliance level. All laboratory results are contained in Appendix A of this report.

CONCLUSIONS

As discussed earlier in this report, owing to the past occupancy of the subject property by a fruit orchard, soils at the site have been impacted by lead and arsenic. It is our (EAI) understanding that the site will be developed in the near future with the building and parking lot footprints covering the majority of the subject, thus providing essentially an impermeable "cap" for underlying soils. It is our recommendation at this point in time that project designers of the proposed on-site construction meet with members of EAI staff to discuss plans in order to develop a Cleanup Action Plan (CAP). Once the plan is formalized, the site can be entered into the WDOE Voluntary Cleanup Program, hopefully leading to attainment of a determination of "no further action" (NFA) from the WDOE.

LIMITATIONS

This report has been prepared for the exclusive use of Mr. Bill Duesenberg, along with Alaska USA Federal Credit Union and their several representatives for specific application to this site. Our work for this project was conducted in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area, and in accordance with the terms and conditions set forth in our proposal dated March 14, 2017. The findings and conclusions of this study are based upon the results of laboratory testing of selected samples obtained from separated boring localities and conditions may vary between those locations or at other locations, media, or depths. No other warranty, expressed or implied, is made. If new information is developed in future site work which may include excavations, borings, studies, etc., Environmental Associates, Inc., must be retained to reevaluate the conclusions of this report and to provide amendments as required. Given that groundwater was not encountered during this sampling event, no warranty is made regarding its condition.

REFERENCES

Aerotech Environmental Consulting, Inc., February 28, 2017, Phase I Environmental Site Assessment, Subject Property, Lot 18 Apple Blossom, 131 South Apple Blossom Drive, Chelan.



Approximate Property Location



Inferred Approximate Direction of Groundwater Flow



ENVIRONMENTAL ASSOCIATES, INC.

1380 - 112th Avenue N.E., Ste. 300
Bellevue, Washington 98004

Vicinity/Topographic Map

Lot 18 Apple Blossom
131 South Apple Blossom Drive
Chelan, Washington 98816

Job Number:

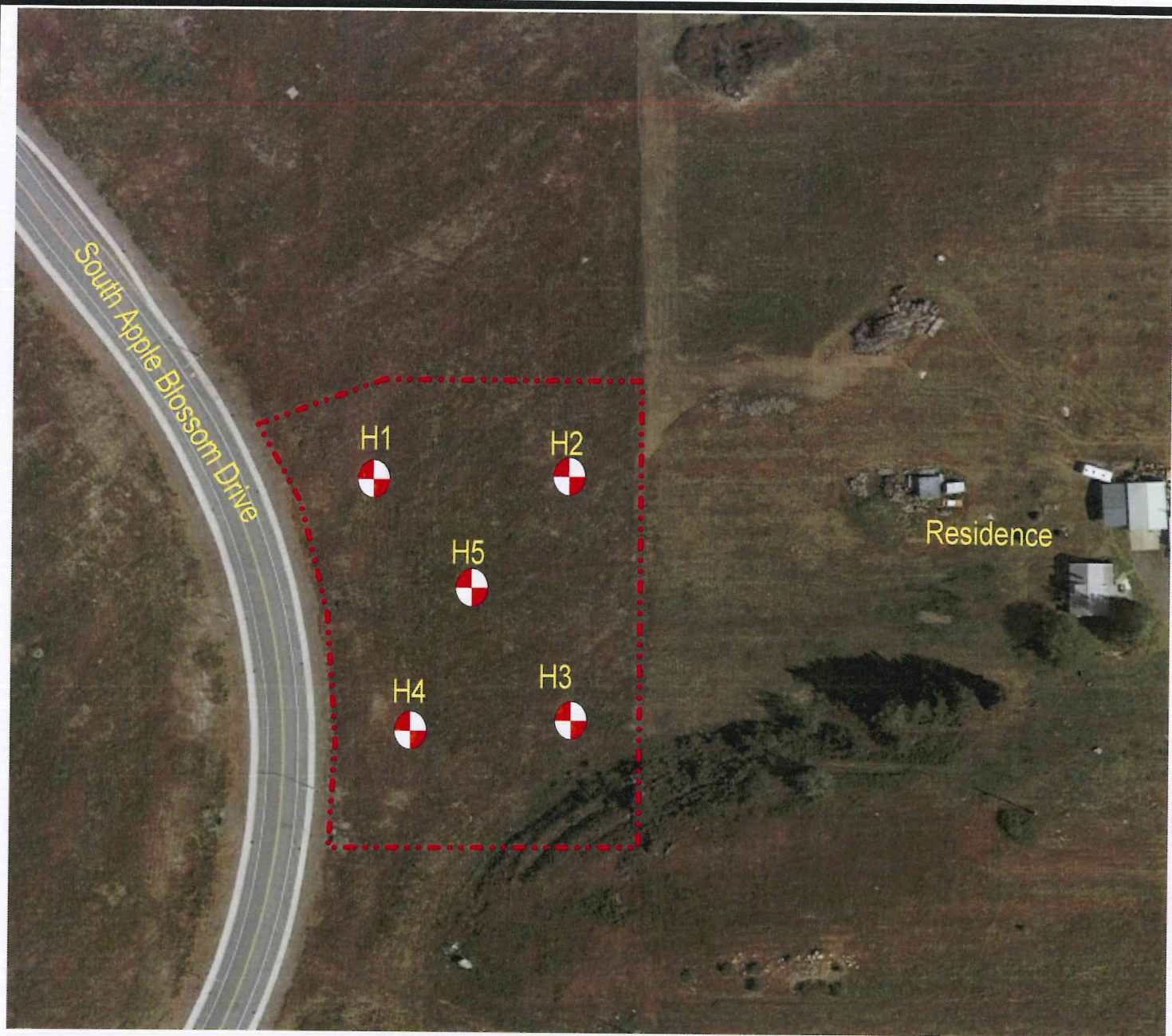
JN 37044

Date:

April 2017

Plate:

1



Approximate Site Boundary



Approximate Location of Borings



Inferred Approximate Direction of Groundwater Flow



**ENVIRONMENTAL
ASSOCIATES, INC.**

1380 - 112th Avenue N.E., Ste. 300
Bellevue, Washington 98004

SITE PLAN

Lot 18 Apple Blossom
131 South Apple Blossom Drive
Chelan, Washington 98816

Job Number:
JN 37044

Date:
April 2017

Plate:
2

**TABLE 1 Total Metals EPA Method 200.8- Soil Sampling Results
All results and limits in parts per million (ppm)**

Sample Name	Arsenic	Lead
H1 @ 8"	112	958
H2 @ 6"	177	1400
H3 @ 6"	204	1580
H4 @ 6 "	104	863
H5 @ 8"	144	1090
Reporting Limit ³	10	5
WDOE-Method-A Cleanup Level (unrestricted land use)	20	250
WDOE-Method-A Cleanup Level (industrial property)	20	1000

Notes:

- 1- "ND" denotes analyte not detected at or above listed Reporting Limit.
- 2- "NA" denotes sample not analyzed for specific analyte.
- 3- "Reporting Limit" represents the laboratory lower quantitation limit.
- 4- Method A or B cleanup levels as published in the Model Toxics Control Act (MTCA) 173-340-WAC.
- 5- Results reported as total chromium. The Method A target compliance level for chromium III is 2,000 ppm, while the Method-A compliance level for chromium VI is 19 ppm. The Method-C target compliance level (for industrial properties) for chromium VI is 40.3 ppm (established for the protection of groundwater).

Bold and Italics denotes concentrations above existing MTCA Method A soil cleanup levels.

APPENDIX A

Laboratory Reports

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

March 31, 2017

Ryan Opitz, Project Manager
Environmental Associates, Inc.
1380 112th Ave. NE, 300
Bellevue, WA 98004

Dear Mr Opitz:

Included are the results from the testing of material submitted on March 23, 2017 from the 37044, F&BI 703400 project. There are 9 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
EAI0331R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 23, 2017 by Friedman & Bruya, Inc. from the Environmental Associates 37044, F&BI 703400 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Environmental Associates</u>
703400 -01	H1-8
703400 -02	H1-14
703400 -03	H2-6
703400 -04	H2-12
703400 -05	H3-6
703400 -06	H3-11
703400 -07	H4-6
703400 -08	H4-10
703400 -09	H5-8
703400 -10	H5-14

Samples H1-8, H2-6, H3-6, H4-6, and H5-8 were sent to Fremont Analytical for organochlorine pesticides and organophosphorus pesticides analyses. Review of the enclosed report indicates that all quality assurance were acceptable. The report generated by AR will be forwarded to your office upon receipt.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	H1-8	Client:	Environmental Associates
Date Received:	03/23/17	Project:	37044, F&BI 703400
Date Extracted:	03/28/17	Lab ID:	703400-01 x5
Date Analyzed:	03/28/17	Data File:	703400-01 x5.085
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	112
Lead	958

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	H2-6	Client:	Environmental Associates
Date Received:	03/23/17	Project:	37044, F&BI 703400
Date Extracted:	03/28/17	Lab ID:	703400-03 x10
Date Analyzed:	03/28/17	Data File:	703400-03 x10.089
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	177
Lead	1,400

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	H3-6	Client:	Environmental Associates
Date Received:	03/23/17	Project:	37044, F&BI 703400
Date Extracted:	03/28/17	Lab ID:	703400-05 x10
Date Analyzed:	03/28/17	Data File:	703400-05 x10.090
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	204
Lead	1,580

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	H4-6	Client:	Environmental Associates
Date Received:	03/23/17	Project:	37044, F&BI 703400
Date Extracted:	03/28/17	Lab ID:	703400-07 x10
Date Analyzed:	03/28/17	Data File:	703400-07 x10.091
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	104
Lead	863

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	H5-8	Client:	Environmental Associates
Date Received:	03/23/17	Project:	37044, F&BI 703400
Date Extracted:	03/28/17	Lab ID:	703400-09 x10
Date Analyzed:	03/28/17	Data File:	703400-09 x10.092
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	144
Lead	1,090

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	Method Blank	Client:	Environmental Associates
Date Received:	Not Applicable	Project:	37044, F&BI 703400
Date Extracted:	03/28/17	Lab ID:	I7-160 mb
Date Analyzed:	03/28/17	Data File:	I7-160 mb.073
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/31/17
Date Received: 03/23/17
Project: 37044, F&BI 703400

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

Laboratory Code: 703400-01 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	88.5	0 b	22 b	75-125	200 b
Lead	mg/kg (ppm)	50	757	0 b	0 b	75-125	0 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	93	80-120
Lead	mg/kg (ppm)	50	98	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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.



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

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

RE: 703400
Work Order Number: 1703262

March 30, 2017

Attention Michael Erdahl:

Fremont Analytical, Inc. received 5 sample(s) on 3/23/2017 for the analyses presented in the following report.

Organochlorine Pesticides by EPA Method 8081
Organophosphorus Pesticides by EPA Method 8270-SIM
Sample Moisture (Percent Moisture)

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
Laboratory Director

DoD/ELAP Certification #L2371, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 03/30/2017

CLIENT: Friedman & Bruya
Project: 703400
Work Order: 1703262

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1703262-001	H1-8	03/22/2017 11:05 AM	03/23/2017 1:53 PM
1703262-002	H2-6	03/22/2017 11:35 AM	03/23/2017 1:53 PM
1703262-003	H3-6	03/22/2017 11:50 AM	03/23/2017 1:53 PM
1703262-004	H4-6	03/22/2017 12:15 PM	03/23/2017 1:53 PM
1703262-005	H5-8	03/22/2017 12:30 PM	03/23/2017 1:53 PM



CLIENT: Friedman & Bruya
Project: 703400

I. SAMPLE RECEIPT:

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

II. GENERAL REPORTING COMMENTS:

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

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

III. ANALYSES AND EXCEPTIONS:

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



Qualifiers & Acronyms

WO#: 1703262

Date Reported: 3/30/2017

Qualifiers:

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

Acronyms:

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



Analytical Report

Work Order: 1703262
Date Reported: 3/30/2017

Client: Friedman & Bruya

Collection Date: 3/22/2017 11:05:00 AM

Project: 703400

Lab ID: 1703262-001

Matrix: Soil

Client Sample ID: H1-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Organochlorine Pesticides by EPA Method 8081

Batch ID: 16614

Analyst: SG

Toxaphene	ND	0.118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
Alpha BHC	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
Beta BHC	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
Gamma BHC (Lindane)	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
Delta BHC	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
Heptachlor	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
Aldrin	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
Heptachlor epoxide	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
gamma-Chlordane	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
Endosulfan I	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
alpha-Chlordane	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
Dieldrin	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
4,4'-DDE	0.690	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
Endrin	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
Endosulfan II	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
4,4'-DDD	0.0500	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
Endrin aldehyde	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
SF Endosu...	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
4,4'-DDT	0.254	0.0118	Q	mg/Kg-dry	1	3/29/2017 8:45:56 PM
Endrin ketone	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:45:56 PM
Methoxychlor	ND	0.0118	Q	mg/Kg-dry	1	3/29/2017 8:45:56 PM
Surr: Decachlorobiphenyl	157	17.8-157	S	%Rec	1	3/29/2017 8:45:56 PM
Surr: Tetrachloro-m-xylene	165	11-150	S	%Rec	1	3/29/2017 8:45:56 PM

NOTES:

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

S - Outlying surrogate recovery(ies) observed.

Organophosphorus Pesticides by EPA Method 8270-SIM

Batch ID: 16615

Analyst: BT

DDVP	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Mevinphos	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
TEPP	ND	59.9	Q	µg/Kg-dry	1	3/30/2017 12:19:14 AM
Demeton, Total	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Ethoprophos	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Naled	ND	59.9	Q	µg/Kg-dry	1	3/30/2017 12:19:14 AM
Sulfotepp	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Monocrotophos	ND	59.9	Q	µg/Kg-dry	1	3/30/2017 12:19:14 AM
Phorate	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM

Original



Analytical Report

Work Order: 1703262
Date Reported: 3/30/2017

Client: Friedman & Bruya
Project: 703400
Lab ID: 1703262-001
Client Sample ID: H1-8

Collection Date: 3/22/2017 11:05:00 AM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Organophosphorus Pesticides by EPA Method 8270-SIM						
						Batch ID: 16615 Analyst: BT
Dimethoate	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Diazinon	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Disulfoton	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Parathion, methyl	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Fenchorphos	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Malathion	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Dursban	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Fenthion	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Parathion	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Trichloronate	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Merphos	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Stirophos	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Prothiofos	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Fensulfothion	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Sulprofos	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
EPN	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Guthion	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Coumaphos	ND	59.9		µg/Kg-dry	1	3/30/2017 12:19:14 AM
Surr: Triphenylphosphate	47.0	10-147		%Rec	1	3/30/2017 12:19:14 AM

NOTES:

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

Sample Moisture (Percent Moisture)

Batch ID: R35178 Analyst: BB

Percent Moisture	22.1	0.500		wt%	1	3/28/2017 11:01:37 AM
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Analytical Report

Work Order: 1703262
Date Reported: 3/30/2017

Client: Friedman & Bruya
Project: 703400
Lab ID: 1703262-002
Client Sample ID: H2-6

Collection Date: 3/22/2017 11:35:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 16614 Analyst: SG

Toxaphene	ND	0.112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
Alpha BHC	ND	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
Beta BHC	ND	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
Gamma BHC (Lindane)	ND	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
Delta BHC	ND	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
Heptachlor	ND	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
Aldrin	ND	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
Heptachlor epoxide	ND	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
gamma-Chlordane	ND	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
Endosulfan I	ND	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
alpha-Chlordane	ND	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
Dieldrin	ND	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
4,4'-DDE	0.294	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
Endrin	ND	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
Endosulfan II	ND	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
4,4'-DDD	0.0681	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
Endrin aldehyde	ND	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
SF Endosu...	ND	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
4,4'-DDT	0.451	0.0112	Q	mg/Kg-dry	1	3/29/2017 8:01:53 PM
Endrin ketone	ND	0.0112		mg/Kg-dry	1	3/29/2017 8:01:53 PM
Methoxychlor	0.0176	0.0112	Q	mg/Kg-dry	1	3/29/2017 8:01:53 PM
Surr: Decachlorobiphenyl	149	17.8-157		%Rec	1	3/29/2017 8:01:53 PM
Surr: Tetrachloro-m-xylene	160	11-150	S	%Rec	1	3/29/2017 8:01:53 PM

NOTES:

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

S - Outlying surrogate recovery(ies) observed.

Organophosphorus Pesticides by EPA Method 8270-SIM

Batch ID: 16615 Analyst: BT

DDVP	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Mevinphos	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
TEPP	ND	59.2	Q	µg/Kg-dry	1	3/30/2017 1:35:39 AM
Demeton, Total	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Ethoprophos	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Naled	ND	59.2	Q	µg/Kg-dry	1	3/30/2017 1:35:39 AM
Sulfotepp	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Monocrotophos	ND	59.2	Q	µg/Kg-dry	1	3/30/2017 1:35:39 AM
Phorate	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM



Client: Friedman & Bruya

Collection Date: 3/22/2017 11:35:00 AM

Project: 703400

Lab ID: 1703262-002

Matrix: Soil

Client Sample ID: H2-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organophosphorus Pesticides by EPA Method 8270-SIM

Batch ID: 16615

Analyst: BT

Dimethoate	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Diazinon	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Disulfoton	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Parathion, methyl	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Fenchorphos	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Malathion	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Dursban	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Fenthion	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Parathion	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Trichloronate	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Merphos	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Stirophos	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Prothiofos	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Fensulfothion	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Sulprofos	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
EPN	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Guthion	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Coumaphos	ND	59.2		µg/Kg-dry	1	3/30/2017 1:35:39 AM
Surr: Triphenylphosphate	44.6	10-147		%Rec	1	3/30/2017 1:35:39 AM

NOTES:

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

Sample Moisture (Percent Moisture)

Batch ID: R35178

Analyst: BB

Percent Moisture	18.2	0.500		wt%	1	3/28/2017 11:01:37 AM
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Analytical Report

Work Order: 1703262
Date Reported: 3/30/2017

Client: Friedman & Bruya

Collection Date: 3/22/2017 11:50:00 AM

Project: 703400

Lab ID: 1703262-003

Matrix: Soil

Client Sample ID: H3-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 16614

Analyst: SG

Toxaphene	ND	0.118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
Alpha BHC	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
Beta BHC	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
Gamma BHC (Lindane)	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
Delta BHC	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
Heptachlor	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
Aldrin	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
Heptachlor epoxide	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
gamma-Chlordane	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
Endosulfan I	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
alpha-Chlordane	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
Dieldrin	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
4,4'-DDE	0.699	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
Endrin	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
Endosulfan II	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
4,4'-DDD	0.132	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
Endrin aldehyde	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
SF Endosu...	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
4,4'-DDT	1.27	0.0118	EQ	mg/Kg-dry	1	3/29/2017 8:56:55 PM
Endrin ketone	ND	0.0118		mg/Kg-dry	1	3/29/2017 8:56:55 PM
Methoxychlor	0.0714	0.0118	Q	mg/Kg-dry	1	3/29/2017 8:56:55 PM
Surr: Decachlorobiphenyl	122	17.8-157		%Rec	1	3/29/2017 8:56:55 PM
Surr: Tetrachloro-m-xylene	129	11-150		%Rec	1	3/29/2017 8:56:55 PM

NOTES:

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

E - Estimated value. The amount exceeds the linear working range of the instrument.

Organophosphorus Pesticides by EPA Method 8270-SIM

Batch ID: 16615

Analyst: BT

DDVP	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Mevinphos	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
TEPP	ND	59.2	Q	µg/Kg-dry	1	3/30/2017 1:54:42 AM
Demeton, Total	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Ethoprophos	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Naled	ND	59.2	Q	µg/Kg-dry	1	3/30/2017 1:54:42 AM
Sulfotepp	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Monocrotophos	ND	59.2	Q	µg/Kg-dry	1	3/30/2017 1:54:42 AM
Phorate	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM



Analytical Report

Work Order: 1703262
Date Reported: 3/30/2017

Client: Friedman & Bruya
Project: 703400
Lab ID: 1703262-003
Client Sample ID: H3-6

Collection Date: 3/22/2017 11:50:00 AM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organophosphorus Pesticides by EPA Method 8270-SIM

Batch ID: 16615 Analyst: BT

Dimethoate	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Diazinon	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Disulfoton	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Parathion, methyl	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Fenchorphos	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Malathion	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Dursban	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Fenthion	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Parathion	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Trichloronate	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Merphos	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Stirophos	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Prothiofos	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Fensulfothion	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Sulprofos	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
EPN	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Guthion	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Coumaphos	ND	59.2		µg/Kg-dry	1	3/30/2017 1:54:42 AM
Surr: Triphenylphosphate	29.3	10-147		%Rec	1	3/30/2017 1:54:42 AM

NOTES:

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

Sample Moisture (Percent Moisture)

Batch ID: R35178 Analyst: BB

Percent Moisture	21.7	0.500		wt%	1	3/28/2017 11:01:37 AM
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Analytical Report

Work Order: 1703262
Date Reported: 3/30/2017

Client: Friedman & Bruya
Project: 703400
Lab ID: 1703262-004
Client Sample ID: H4-6

Collection Date: 3/22/2017 12:15:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 16614 Analyst: SG

Toxaphene	ND	0.114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
Alpha BHC	ND	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
Beta BHC	ND	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
Gamma BHC (Lindane)	ND	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
Delta BHC	ND	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
Heptachlor	ND	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
Aldrin	ND	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
Heptachlor epoxide	ND	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
gamma-Chlordane	ND	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
Endosulfan I	ND	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
alpha-Chlordane	ND	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
Dieldrin	ND	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
4,4'-DDE	0.773	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
Endrin	ND	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
Endosulfan II	ND	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
4,4'-DDD	0.0597	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
Endrin aldehyde	ND	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
SF Endosu...	ND	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
4,4'-DDT	0.434	0.0114	Q	mg/Kg-dry	1	3/29/2017 9:07:56 PM
Endrin ketone	ND	0.0114		mg/Kg-dry	1	3/29/2017 9:07:56 PM
Methoxychlor	0.0236	0.0114	Q	mg/Kg-dry	1	3/29/2017 9:07:56 PM
Surr: Decachlorobiphenyl	150	17.8-157		%Rec	1	3/29/2017 9:07:56 PM
Surr: Tetrachloro-m-xylene	149	11-150		%Rec	1	3/29/2017 9:07:56 PM

NOTES:

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

Organophosphorus Pesticides by EPA Method 8270-SIM

Batch ID: 16615 Analyst: BT

DDVP	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Mevinphos	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
TEPP	ND	62.2	Q	µg/Kg-dry	1	3/30/2017 2:13:43 AM
Demeton, Total	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Ethoprophos	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Naled	ND	62.2	Q	µg/Kg-dry	1	3/30/2017 2:13:43 AM
Sulfotepp	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Monocrotophos	ND	62.2	Q	µg/Kg-dry	1	3/30/2017 2:13:43 AM
Phorate	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Dimethoate	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM



Analytical Report

Work Order: 1703262
Date Reported: 3/30/2017

Client: Friedman & Bruya
Project: 703400
Lab ID: 1703262-004
Client Sample ID: H4-6

Collection Date: 3/22/2017 12:15:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organophosphorus Pesticides by EPA Method 8270-SIM

Batch ID: 16615 Analyst: BT

Diazinon	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Disulfoton	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Parathion, methyl	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Fenchorphos	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Malathion	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Dursban	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Fenthion	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Parathion	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Trichloronate	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Merphos	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Stirophos	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Prothiofos	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Fensulfothion	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Sulprofos	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
EPN	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Guthion	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Coumaphos	ND	62.2		µg/Kg-dry	1	3/30/2017 2:13:43 AM
Surr: Triphenylphosphate	46.3	10-147		%Rec	1	3/30/2017 2:13:43 AM

NOTES:

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

Sample Moisture (Percent Moisture)

Batch ID: R35178 Analyst: BB

Percent Moisture	22.9	0.500		wt%	1	3/28/2017 11:01:37 AM
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Analytical Report

Work Order: 1703262

Date Reported: 3/30/2017

Client: Friedman & Bruya

Collection Date: 3/22/2017 12:30:00 PM

Project: 703400

Lab ID: 1703262-005

Matrix: Soil

Client Sample ID: H5-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organochlorine Pesticides by EPA Method 8081

Batch ID: 16614

Analyst: SG

Toxaphene	ND	0.118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
Alpha BHC	ND	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
Beta BHC	ND	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
Gamma BHC (Lindane)	ND	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
Delta BHC	ND	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
Heptachlor	ND	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
Aldrin	ND	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
Heptachlor epoxide	ND	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
gamma-Chlordane	ND	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
Endosulfan I	ND	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
alpha-Chlordane	ND	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
Dieldrin	ND	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
4,4'-DDE	0.633	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
Endrin	ND	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
Endosulfan II	ND	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
4,4'-DDD	0.134	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
Endrin aldehyde	ND	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
SF Endosu...	ND	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
4,4'-DDT	1.34	0.0118	EQ	mg/Kg-dry	1	3/29/2017 9:18:55 PM
Endrin ketone	ND	0.0118		mg/Kg-dry	1	3/29/2017 9:18:55 PM
Methoxychlor	0.0636	0.0118	Q	mg/Kg-dry	1	3/29/2017 9:18:55 PM
Surr: Decachlorobiphenyl	110	17.8-157		%Rec	1	3/29/2017 9:18:55 PM
Surr: Tetrachloro-m-xylene	111	11-150		%Rec	1	3/29/2017 9:18:55 PM

NOTES:

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

E - Estimated value. The amount exceeds the linear working range of the instrument.

Organophosphorus Pesticides by EPA Method 8270-SIM

Batch ID: 16615

Analyst: BT

DDVP	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Mevinphos	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
TEPP	ND	61.4	Q	µg/Kg-dry	1	3/30/2017 2:32:45 AM
Demeton, Total	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Ethoprophos	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Naled	ND	61.4	Q	µg/Kg-dry	1	3/30/2017 2:32:45 AM
Sulfotepp	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Monocrotophos	ND	61.4	Q	µg/Kg-dry	1	3/30/2017 2:32:45 AM
Phorate	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM



Analytical Report

Work Order: 1703262
Date Reported: 3/30/2017

Client: Friedman & Bruya
Project: 703400
Lab ID: 1703262-005
Client Sample ID: H5-8

Collection Date: 3/22/2017 12:30:00 PM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Organophosphorus Pesticides by EPA Method 8270-SIM

Batch ID: 16615 Analyst: BT

Dimethoate	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Diazinon	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Disulfoton	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Parathion, methyl	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Fenchorphos	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Malathion	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Dursban	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Fenthion	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Parathion	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Trichloronate	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Merphos	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Stirophos	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Prothiofos	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Fensulfothion	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Sulprofos	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
EPN	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Guthion	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Coumaphos	ND	61.4		µg/Kg-dry	1	3/30/2017 2:32:45 AM
Surr: Triphenylphosphate	41.1	10-147		%Rec	1	3/30/2017 2:32:45 AM

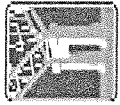
NOTES:

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

Sample Moisture (Percent Moisture)

Batch ID: R35178 Analyst: BB

Percent Moisture	21.9	0.500		wt%	1	3/28/2017 11:01:37 AM
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Date: 3/30/2017

Work Order: 1703262

CLIENT: Friedman & Bruya

Project: 703400

QC SUMMARY REPORT Organochlorine Pesticides by EPA Method 8081

Sample ID	MB-16614	SampType:	MBLK	Units:	mg/Kg	Prep Date:	3/28/2017	RunNo:	35238
Client ID:	MBLKS	Batch ID:	16614	Analysis Date:	3/29/2017	SeqNo:	674117		

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	ND	0.100									
Alpha BHC	ND	0.0100									
Beta BHC	ND	0.0100									
Gamma BHC (Lindane)	ND	0.0100									
Delta BHC	ND	0.0100									
Heptachlor	ND	0.0100									
Aldrin	ND	0.0100									
Heptachlor epoxide	ND	0.0100									
gamma-Chlordane	ND	0.0100									
Endosulfan I	ND	0.0100									
alpha-Chlordane	ND	0.0100									
Dieldrin	ND	0.0100									
4,4'-DDE	ND	0.0100									
Endrin	ND	0.0100									
Endosulfan II	ND	0.0100									
4,4'-DDD	ND	0.0100									
Endrin aldehyde	ND	0.0100									
SF Endosu...	ND	0.0100									
4,4'-DDT	ND	0.0100									Q
Endrin ketone	ND	0.0100									
Methoxychlor	ND	0.0100									Q
Surr: Decachlorobiphenyl	0.0595		0.05000		119	17.8	157				
Surr: Tetrachloro-m-xylene	0.0593		0.05000		119	11	150				

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

Sample ID	LCS-16614	SampType:	LCS	Units:	mg/Kg	Prep Date:	3/28/2017	RunNo:	35238		
Client ID:	LCSS	Batch ID:	16614	Analysis Date:	3/29/2017	SeqNo:	674118				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.181	0.0100	0.2000	0	90.6	54.2	139				



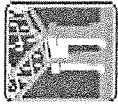
Date: 3/30/2017

Work Order: 1703262
CLIENT: Friedman & Bruya
Project: 703400

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID	LCS-16614	SampType: LCS	Units: mg/Kg	Prep Date: 3/28/2017	RunNo: 35238						
Client ID:	LCSS	Batch ID: 16614	Analysis Date: 3/29/2017	SeqNo: 674118							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beta BHC	0.179	0.0100	0.2000	0	89.5	56.5	142				
Gamma BHC (Lindane)	0.176	0.0100	0.2000	0	88.0	55.5	142				
Delta BHC	0.164	0.0100	0.2000	0	82.2	47.4	157				
Heptachlor	0.166	0.0100	0.2000	0	82.9	50.9	153				
Aldrin	0.185	0.0100	0.2000	0	92.6	43.7	147				
Heptachlor epoxide	0.186	0.0100	0.2000	0	93.2	56.2	137				
gamma-Chlordane	0.182	0.0100	0.2000	0	90.8	58.5	136				
Endosulfan I	0.183	0.0100	0.2000	0	91.5	60	132				
alpha-Chlordane	0.184	0.0100	0.2000	0	92.2	46.1	140				
Dieldrin	0.178	0.0100	0.2000	0	89.0	61.2	133				
4,4'-DDE	0.171	0.0100	0.2000	0	85.7	55.4	142				
Endrin	0.157	0.0100	0.2000	0	78.6	56.5	143				
Endosulfan II	0.168	0.0100	0.2000	0	83.9	62	143				
4,4'-DDD	0.180	0.0100	0.2000	0	89.9	53.3	145				
Endrin aldehyde	0.137	0.0100	0.2000	0	68.7	39.5	153				
SF Endosu...	0.167	0.0100	0.2000	0	83.7	53.8	148				
4,4'-DDT	0.107	0.0100	0.2000	0	53.6	48.2	152				
Endrin ketone	0.158	0.0100	0.2000	0	79.1	28.5	162				
Methoxychlor	0.104	0.0100	0.2000	0	52.2	34.6	159				
Surr: Decachlorobiphenyl	0.0591		0.05000		118	17.8	157				
Surr: Tetrachloro-m-xylene	0.0608		0.05000		122	11	150				

Sample ID	1703262-002ADUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 3/28/2017	RunNo: 35238						
Client ID:	H2-6	Batch ID: 16614	Analysis Date: 3/29/2017	SeqNo: 674120							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toxaphene	ND	0.114						0			30
Alpha BHC	ND	0.0114						0			30
Beta BHC	ND	0.0114						0			30
Gamma BHC (Lindane)	ND	0.0114						0			30



Date: 3/30/2017

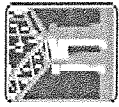
Work Order: 1703262
CLIENT: Friedman & Bruya
Project: 703400

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID	1703262-002ADUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 3/28/2017	RunNo: 35238						
Client ID:	H2-6	Batch ID: 16614	Analysis Date: 3/29/2017	SeqNo: 674120							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Delta BHC	ND	0.0114						0		30	
Heptachlor	ND	0.0114						0		30	
Aldrin	ND	0.0114						0		30	
Heptachlor epoxide	0.0288	0.0114						0	200	30	
gamma-Chlordane	ND	0.0114						0		30	
Endosulfan I	ND	0.0114						0		30	
alpha-Chlordane	ND	0.0114						0		30	
Dieldrin	ND	0.0114						0		30	
4,4'-DDE	0.551	0.0114						0.2941	60.8	30	R
Endrin	ND	0.0114						0		30	
Endosulfan II	ND	0.0114						0		30	
4,4'-DDD	0.129	0.0114						0.06811	61.5	30	R
Endrin aldehyde	ND	0.0114						0		30	
SF Endosu...	ND	0.0114						0		30	
4,4'-DDT	1.24	0.0114						0.4508	93.5	30	REQ
Endrin ketone	ND	0.0114						0		30	
Methoxychlor	0.0640	0.0114						0.01760	114	30	RQ
Surr: Decachlorobiphenyl	0.0807		0.05711		141	17.8	157		0		
Surr: Tetrachloro-m-xylene	0.0831		0.05711		145	11	150		0		

NOTES:
R - High RPD due to suspected sample inhomogeneity. The method is in control as indicated by the Laboratory Control Sample (LCS).
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1703262-002AMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 3/28/2017	RunNo: 35238						
Client ID:	H2-6	Batch ID: 16614	Analysis Date: 3/29/2017	SeqNo: 674121							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alpha BHC	0.305	0.0119	0.2380	0.003793	127	49.1	158				
Beta BHC	0.269	0.0119	0.2380	0	113	50.9	160				
Gamma BHC (Lindane)	0.296	0.0119	0.2380	0.002581	123	55.3	157				



Date: 3/30/2017

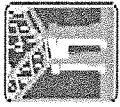
Work Order: 1703262
CLIENT: Friedman & Bruya
Project: 703400

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Sample ID	1703262-002AMS	SampType: MS	Batch ID: 16614	Units: mg/Kg-dry	Prep Date: 3/28/2017	RunNo: 35238					
Client ID:	H2-6	Result	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Delta BHC	0.0119	0.2380	0.003165	89.5	55.8	160					
Heptachlor	0.0119	0.2380	0.003345	118	53.6	167					
Aldrin	0.0119	0.2380	0.003715	129	46.4	145					
Heptachlor epoxide	0.0119	0.2380	0	135	48.5	151					
gamma-Chlordane	0.0119	0.2380	0	128	49	162					
Endosulfan I	0.0119	0.2380	0	131	44.7	162					
alpha-Chlordane	0.0119	0.2380	0	130	46.3	153					
Dieldrin	0.0119	0.2380	0.001324	124	48	162					
4,4'-DDE	0.0119	0.2380	0.2941	136	39.9	162					
Endrin	0.0119	0.2380	0	113	50.5	166					
Endosulfan II	0.0119	0.2380	0	90.2	51	152					
4,4'-DDD	0.0119	0.2380	0.06811	131	45.8	160				S	
Endrin aldehyde	0.0119	0.2380	0	36.5	38.3	156					
SF Endosu...	0.0119	0.2380	0	74.0	25.2	144					
4,4'-DDT	0.0119	0.2380	0.4508	133	45.7	168					
Endrin ketone	0.0119	0.2380	0	97.9	40.2	119					
Methoxychlor	0.0119	0.2380	0.01760	82.1	43.4	178					
Surr: Decachlorobiphenyl		0.05950		142	17.8	157					
Surr: Tetrachloro-m-xylene		0.05950		143	11	150					

NOTES: S - Outlying spike recoveries were associated with this sample. A duplicate analysis was conducted and recovered with in range.

Sample ID	1703262-002AMS	SampType: MSD	Batch ID: 16614	Units: mg/Kg-dry	Prep Date: 3/28/2017	RunNo: 35238					
Client ID:	H2-6	Result	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Alpha BHC	0.0118	0.2353	0.003793	111	49.1	158	0.3055	13.8	30		
Beta BHC	0.0118	0.2353	0	103	50.9	160	0.2694	10.8	30		
Gamma BHC (Lindane)	0.0118	0.2353	0.002581	110	55.3	157	0.2963	13.0	30		
Delta BHC	0.0118	0.2353	0.003165	84.6	55.8	160	0.2161	6.67	30		
Heptachlor	0.0118	0.2353	0.003345	105	53.6	167	0.2836	12.2	30		



Date: 3/30/2017

QC SUMMARY REPORT
Organochlorine Pesticides by EPA Method 8081

Work Order: 1703262
 CLIENT: Friedman & Bruya
 Project: 703400

Sample ID	1703262-002AMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 3/28/2017	RunNo: 35238						
Client ID:	H2-6	Batch ID: 16614	Analysis Date: 3/29/2017	SeqNo: 674122							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aldrin	0.272	0.0118	0.2353	0.003715	114	46.4	145	0.3101	13.0	30	
Heptachlor epoxide	0.287	0.0118	0.2353	0	122	48.5	151	0.3207	10.9	30	
gamma-Chlordane	0.269	0.0118	0.2353	0	114	49	162	0.3057	12.9	30	
Endosulfan I	0.274	0.0118	0.2353	0	116	44.7	162	0.3127	13.3	30	
alpha-Chlordane	0.270	0.0118	0.2353	0	115	46.3	153	0.3084	13.3	30	
Dieldrin	0.260	0.0118	0.2353	0.001324	110	48	162	0.2956	12.7	30	
4,4'-DDE	0.688	0.0118	0.2353	0.2941	168	39.9	162	0.6167	11.0	30	S
Endrin	0.236	0.0118	0.2353	0	100	50.5	166	0.2682	13.0	30	
Endosulfan II	0.218	0.0118	0.2353	0	92.5	51	152	0.2147	1.33	30	
4,4'-DDD	0.346	0.0118	0.2353	0.06811	118	45.8	160	0.3788	8.98	30	
Endrin aldehyde	0.111	0.0118	0.2353	0	47.0	38.3	156	0.08684	24.0	30	
SF Endosu...	0.200	0.0118	0.2353	0	85.1	25.2	144	0.1761	12.8	30	
4,4'-DDT	0.908	0.0118	0.2353	0.4508	195	45.7	168	0.7681	16.7	30	S
Endrin ketone	0.221	0.0118	0.2353	0	94.1	40.2	119	0.2329	5.12	30	
Methoxychlor	0.227	0.0118	0.2353	0.01760	89.1	43.4	178	0.2130	6.45	30	
Surr: Decachlorobiphenyl	0.0719		0.05882		122	17.8	157		0		
Surr: Tetrachloro-m-xylene	0.0717		0.05882		122	11	150		0		

NOTES:
 S - Outlying spike recoveries were associated with this sample. A duplicate analysis was conducted and recovered within in range.



Date: 3/30/2017

Work Order: 1703262
CLIENT: Friedman & Bruya
Project: 703400

QC SUMMARY REPORT
Organophosphorus Pesticides by EPA Method 8270-SIM

Sample ID **MB-16615** Prep Date: 3/28/2017 RunNo: 35226
 Client ID: **MBLKS** Analysis Date: 3/29/2017 SeqNo: 673652
 Batch ID: **16615**

Analyte	Result	RL	SPK value	SPK Ref Val	Units: µg/Kg	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DDVP	ND	50.0										
Mevinphos	ND	50.0										
TEPP	ND	50.0										
Demeton, Total	ND	50.0										
Ethoprophos	ND	50.0										
Naled	ND	50.0										
Sulfotepp	ND	50.0										
Monocrotophos	ND	50.0										
Phorate	ND	50.0										
Dimethoate	ND	50.0										
Diazinon	ND	50.0										
Disulfoton	ND	50.0										
Parathion, methyl	ND	50.0										
Fenchorphos	ND	50.0										
Malathion	ND	50.0										
Dursban	ND	50.0										
Fenthion	ND	50.0										
Parathion	ND	50.0										
Trichloronate	ND	50.0										
Merphos	ND	50.0										
Stirophos	ND	50.0										
Prothiofos	ND	50.0										
Fensulfothion	ND	50.0										
Sulprofos	ND	50.0										
EPN	ND	50.0										
Guthion	ND	50.0										
Coumaphos	ND	50.0										
Surr: Triphenylphosphate	17.0		20.00			84.9	10		147			

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



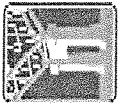
Date: 3/30/2017

QC SUMMARY REPORT
Organophosphorus Pesticides by EPA Method 8270-SIM

Work Order: 1703262
 CLIENT: Friedman & Bruya
 Project: 703400

Sample ID	LCS-16615	LCSS	Batch ID: 16615	SampType: LCS	Units: µg/Kg	Prep Date: 3/28/2017	RunNo: 35226	Analysis Date: 3/30/2017	SeqNo: 673653	RPD Ref Val	HighLimit	LowLimit	%REC	SPK Ref Val	SPK value	RL	Result	%RPD	RPDLimit	Qual
DDVP					20.00			7.85			133		119	0	20.00	50.0	ND			
Mevinphos					20.00			28.7			131		104	0	20.00	50.0	ND			
TEPP					20.00			5			119		85.1	0	20.00	50.0	ND			
Demeton, Total					20.00			31.4			149		167	0	20.00	50.0	ND			
Ethoprophos					20.00			31.9			144		99.8	0	20.00	50.0	ND			S
Naled					20.00			10			147		109	0	20.00	50.0	ND			
Sulfotepp					20.00			26.9			144		96.6	0	20.00	50.0	ND			
Monocrotophos					20.00			10			129		86.0	0	20.00	50.0	ND			
Phorate					20.00			40.9			118		96.8	0	20.00	50.0	ND			
Dimethoate					20.00			23.6			127		79.3	0	20.00	50.0	ND			
Diazinon					20.00			37.1			132		100	0	20.00	50.0	ND			
Disulfoton					20.00			37.9			122		92.3	0	20.00	50.0	ND			
Parathion, methyl					20.00			16.8			143		106	0	20.00	50.0	ND			
Fenchorphos					20.00			36.7			117		110	0	20.00	50.0	ND			
Malathion					20.00			26.9			131		77.9	0	20.00	50.0	ND			
Dursban					20.00			40.8			124		103	0	20.00	50.0	ND			
Fenthion					20.00			36.6			127		98.7	0	20.00	50.0	ND			
Parathion					20.00			37.6			129		107	0	20.00	50.0	ND			
Trichloronate					20.00			41.5			123		106	0	20.00	50.0	ND			
Merphos					20.00			10			122		153	0	20.00	50.0	ND			S
Stirophos					20.00			20.6			126		88.7	0	20.00	50.0	ND			
Prothiofos					20.00			37.1			135		97.5	0	20.00	50.0	ND			
Fensulfothion					20.00			14.6			152		110	0	20.00	50.0	ND			
Sulprofos					20.00			34.6			137		87.4	0	20.00	50.0	ND			
EPN					20.00			26.7			150		105	0	20.00	50.0	ND			
Guthion					20.00			10			134		81.5	0	20.00	50.0	ND			
Courmaphos					20.00			10			152		88.9	0	20.00	50.0	ND			
Surr: Triphenylphosphate					20.00			10			147		93.6	0	20.00	50.0	18.7			

NOTES:
 S - Outlying spike recovery observed (high bias). Samples are non-defect for these analytes; no further action required.



Fremont
ANALYTICAL

Date: 3/30/2017

Work Order: 1703262
CLIENT: Friedman & Bruya
Project: 703400

QC SUMMARY REPORT
Organophosphorus Pesticides by EPA Method 8270-SIM

Sample ID	1703262-001ADUP	SampType: DUP	Units: µg/Kg-dry	Prep Date: 3/28/2017	RunNo: 35226						
Client ID:	H1-8	Batch ID: 16615	Analysis Date: 3/30/2017	SeqNo: 673655							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
DDVP	ND	64.0						0		30	
Mevinphos	ND	64.0						0		30	
TEPP	ND	64.0						0		30	Q
Demeton, Total	ND	64.0						0		30	
Ethoprophos	ND	64.0						0		30	
Naled	ND	64.0						0		30	Q
Sulfotepp	ND	64.0						0		30	
Monocrotophos	ND	64.0						0		30	Q
Phorate	ND	64.0						0		30	
Dimethoate	ND	64.0						0		30	
Diazinon	ND	64.0						0		30	
Disulfoton	ND	64.0						0		30	
Parathion, methyl	ND	64.0						0		30	
Fenchorphos	ND	64.0						0		30	
Malathion	ND	64.0						0		30	
Dursban	ND	64.0						0		30	
Fenthion	ND	64.0						0		30	
Parathion	ND	64.0						0		30	
Trichloronate	ND	64.0						0		30	
Merphos	ND	64.0						0		30	
Stirophos	ND	64.0						0		30	
Prothiofos	ND	64.0						0		30	
Fensulfothion	ND	64.0						0		30	
Sulprofos	ND	64.0						0		30	
EPN	ND	64.0						0		30	
Guthion	ND	64.0						0		30	
Coumaphos	ND	64.0						0		30	
Surr. Triphenylphosphate	15.2		25.59		59.6	10	147		0		

NOTES:

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



Date: 3/30/2017

QC SUMMARY REPORT
Organophosphorus Pesticides by EPA Method 8270-SIM

Work Order: 1703262
 CLIENT: Friedman & Bruya
 Project: 703400

Sample ID	1703262-001AMS	SampType: MS	Units: µg/Kg-dry	Prep Date: 3/28/2017	RunNo: 35226					
Client ID: H1-8	Batch ID: 16615	Result	Analysis Date: 3/30/2017	SeqNo: 673656						
Analyte	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
DDVP	60.9	24.35	0	52.4	5	138				
Mevinphos	60.9	24.35	0	34.0	5	148				
TEPP	60.9	24.35	0	32.7	5	121				
Demeton, Total	60.9	24.35	0	76.6	24.3	141				
Ethoprophos	60.9	24.35	0	41.3	13.2	145				
Naled	60.9	24.35	0	14.5	5	121				
Sulfotepp	60.9	24.35	0	40.2	26.8	120				
Monocrotophos	60.9	24.35	0	17.6	5	196				
Phorate	60.9	24.35	0	44.1	29.4	122				
Dimethoate	60.9	24.35	0	32.7	5	161				
Diazinon	60.9	24.35	0	42.1	9.74	142				
Disulfoton	60.9	24.35	0	40.8	23.9	137				
Parathion, methyl	60.9	24.35	0	51.6	5.64	177				
Fenchorphos	60.9	24.35	0	42.7	25.3	131				
Malathion	60.9	24.35	0	39.4	23.5	121				
Dursban	60.9	24.35	0	45.4	28.2	128				
Fenthion	60.9	24.35	0	40.3	24.2	136				
Parathion	60.9	24.35	0	57.4	5	173				
Trichloronate	60.9	24.35	0	40.6	28.5	122				
Merphos	60.9	24.35	0	17.3	5	90.1				
Stirophos	60.9	24.35	0	49.8	9.46	152				
Prothiofos	60.9	24.35	0	50.5	23.7	157				
Fensulfothion	60.9	24.35	0	49.7	5	174				
Sulprofos	60.9	24.35	0	54.6	12	173				
EPN	60.9	24.35	0	85.3	13.8	157				
Guthion	60.9	24.35	0	46.0	5	177				
Coumaphos	60.9	24.35	0	68.4	5	232				
Surr: Triphenylphosphate		24.35		72.4	10	147				
										17.6



Date: 3/30/2017

Work Order: 1703262
 CLIENT: Friedman & Bruya
 Project: 703400

QC SUMMARY REPORT
Organophosphorus Pesticides by EPA Method 8270-SIM

Sample ID	1703262-001AMSD	SampType: MSD	Batch ID: 16615	Units: µg/Kg-dry	Prep Date: 3/28/2017	RunNo: 35226	Analysis Date: 3/30/2017	SeqNo: 673657							
Analyte	Result	RL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual				
DDVP	ND	61.8	24.70	0	61.7	5	138	0		30					
Mevinphos	ND	61.8	24.70	0	43.7	5	148	0		30					
TEPP	ND	61.8	24.70	0	35.9	5	121	0		30					
Demeton, Total	ND	61.8	24.70	0	98.5	24.3	141	0		30					
Ethoprophos	ND	61.8	24.70	0	52.3	13.2	145	0		30					
Naled	ND	61.8	24.70	0	16.2	5	121	0		30					
Sulfotepp	ND	61.8	24.70	0	46.6	26.8	120	0		30					
Monocrotophos	ND	61.8	24.70	0	24.5	5	196	0		30					
Phorate	ND	61.8	24.70	0	49.8	29.4	122	0		30					
Dimethoate	ND	61.8	24.70	0	35.3	5	161	0		30					
Diazinon	ND	61.8	24.70	0	53.4	9.74	142	0		30					
Disulfoton	ND	61.8	24.70	0	53.0	23.9	137	0		30					
Parathion, methyl	ND	61.8	24.70	0	66.6	5.64	177	0		30					
Fenchorphos	ND	61.8	24.70	0	54.0	25.3	131	0		30					
Malathion	ND	61.8	24.70	0	47.4	23.5	121	0		30					
Dursban	ND	61.8	24.70	0	56.3	28.2	128	0		30					
Fenthion	ND	61.8	24.70	0	48.7	24.2	136	0		30					
Parathion	ND	61.8	24.70	0	62.0	5	173	0		30					
Trichloronate	ND	61.8	24.70	0	52.0	28.5	122	0		30					
Merphos	ND	61.8	24.70	0	23.1	5	90.1	0		30					
Stirophos	ND	61.8	24.70	0	61.9	9.46	152	0		30					
Prothiofos	ND	61.8	24.70	0	67.9	23.7	157	0		30					
Fensulfothion	ND	61.8	24.70	0	67.0	5	174	0		30					
Sulprofos	ND	61.8	24.70	0	69.7	12	173	0		30					
EPN	ND	61.8	24.70	0	96.1	13.8	157	0		30					
Guthion	ND	61.8	24.70	0	71.5	5	177	0		30					
Coumaphos	ND	61.8	24.70	0	100	5	232	0		30					
Surr: Triphenylphosphate	14.2		24.70	0	57.5	10	147	0		0					



Fremont
ANALYTICAL

Date: 3/30/2017

Work Order: 1703262

CLIENT: Friedman & Bruya

Project: 703400

QC SUMMARY REPORT
Sample Moisture (Percent Moisture)

Sample ID	1703251-001ADUP	SampType:	DUP	Units:	wt%	Prep Date:	3/28/2017	RunNo:	35178				
Client ID:	BATCH	Batch ID:	R35178			Analysis Date:	3/28/2017	SeqNo:	672728				
Analyte		Result	16.0	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Percent Moisture	16.0	0.500	15.59	2.42	20
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Sample Log-In Check List

Client Name: FB	Work Order Number: 1703262
Logged by: Erica Silva	Date Received: 3/23/2017 1:53:00 PM

Chain of Custody

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

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA

Please refer to Item Information

8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

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

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	13.8
Sample	6.9

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

1703262

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl
 Company Friedman and Bruya, Inc.
 Address 3012 16th Ave W
 City, State, ZIP Seattle, WA 98119
 Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTOR Fremont
 PROJECT NAME/NO. 703400 PO # E-548
 REMARKS
Please Email Results

Page # 1 of 1
 TURNAROUND TIME
 Standard (2 Weeks)
 RUSH
 Rush charges authorized by: _____
 SAMPLE DISPOSAL
 Dispose after 30 days
 Return samples
 Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED							Notes		
						Dioxins/Furans	EPH	VPH	Nitrate	Sulfate	Alkalinity	TOC-9060M		Respicids	Respicids
H1-B		3/22/17	1105	Soil	1							X	X		
H2-G			1135		1							X	X		
H3-G			1150		1							X	X		
H4-G			1215		1							X	X		
H5-B			1230		1							X	X		

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

Requisitioned by: [Signature]
 Received by: [Signature]
 Requisitioned by: _____
 Received by: _____

PRINT NAME: Michael Erdahl
 COMPANY: Friedman and Bruya
 DATE: 3/23/17
 TIME: 1150

3/23/17 12:53

703400

SAMPLE CHAIN OF CUSTODY

ME 03/23/17

BTG

Send Report To Environmental Associates, Inc
 Client Jeff Gregg, Alaska USA Fed credit union
 Address 606 Oakdale Ave SW, Sub 201
 City, State, ZIP Renton, WA 98057
 Phone # 425-455-9025 Fax # _____

SAMPLERS (signature) _____
 PROJECT NAME/NO. 37044
 PO# 37044
 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

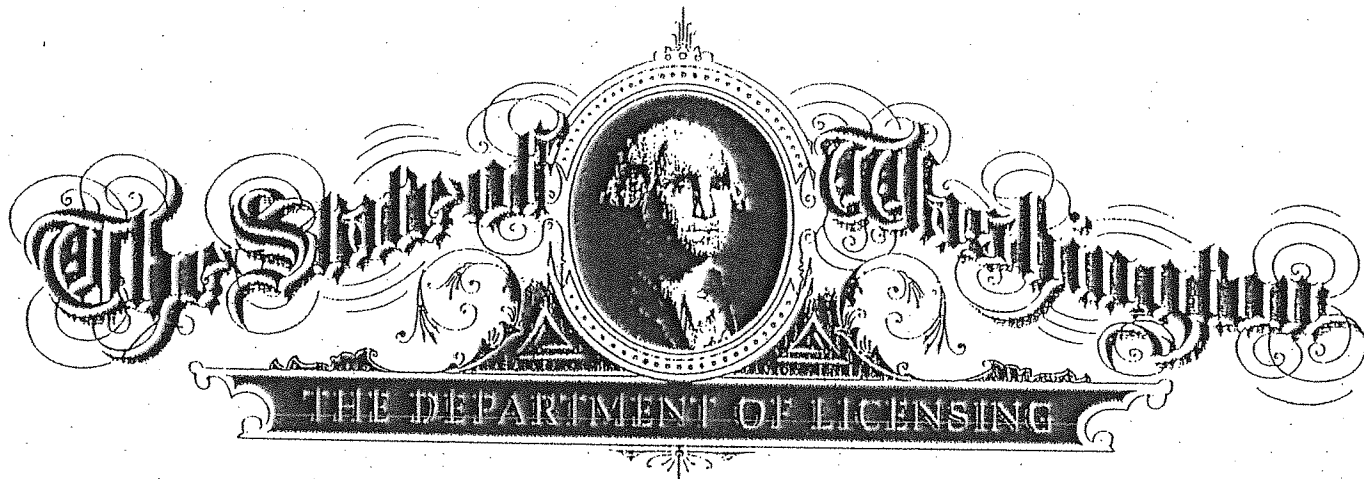
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes	
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Organophosphate	Organochlorine	Arsenic	Lead		
H1-8	01	3/22/17	11:05	Soil	1 Jar							X	X	X	X		
H1-14	02		11:10									X	X	X	X		
H2-6	03		11:35									X	X	X	X		
H2-12	04		11:40									X	X	X	X		
H3-6	05		11:50									X	X	X	X		
H3-11	06		11:55									X	X	X	X		
H4-6	07		12:15									X	X	X	X		
H4-10	08		12:20									X	X	X	X		
H5-8	09		12:30									X	X	X	X		
t-15-14	10		12:35									X	X	X	X		

SIGNATURE _____ PRINT NAME _____ COMPANY _____ DATE _____ TIME _____
 Relinquished by: _____
 Received by: MM [Signature]
 Relinquished by: _____
 Received by: _____
 Samples received at 4 °C

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

APPENDIX B

Professional Licenses



*It is hereby certified that Don W. Spencer
has satisfactorily complied with and completed the statutory requirements set
forth in title 18 revised code of Washington to engage in practice as a*

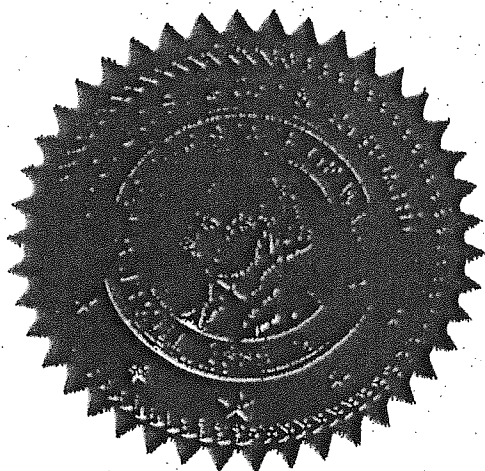
Geologist

*And is hereby authorized, empowered and granted the right to engage in that
practice within the State of Washington subject to the state laws.*

And is licensed as a qualified

Hydrogeologist

*Given under the hand and seal of the director this
fourteenth day of March, 2002.*



No. 604

Fred Stephens

DIRECTOR

Ally H. Russell

Geologist Licensing Board
CHAIR

National Registry of Environmental Professionals

Be it known to all persons that the following individual pursuant to the requirements for education, experience and examination established by the National Registry of Environmental Professionals is entitled to all of the rights and privileges by the body and to be duly registered by it.

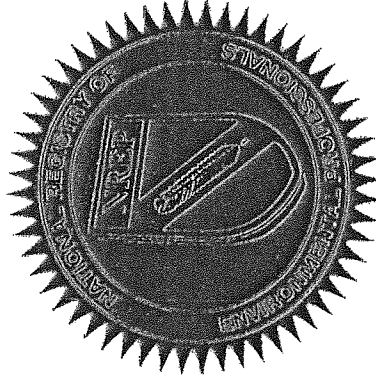
This is to certify that

Don W Spencer

is a

Registered Environmental Property Assessor

This certificate will remain valid only if it bears the seal of the current year, unless revoked, suspended or invalidated by order of the Board of Directors of the National Registry of Environmental Professionals.



Witness our hand

09/17/2013

This Day

Richard G. Long, P.E.
Executive Director

REPA 418290

Registration Number: _____

Certificate of Completion

This is to certify that

Donald W. Spencer

has satisfactorily completed
8 hours of refresher training in

**Hazardous Waste Operations And Emergency
Response**

to comply with the training requirements of
OSHA 29 CFR 1910.120 and WAC 296-843

Certificate Number
156749



Instructor



Apr 21, 2016

Date(s) of Training

Annual Refresher Required by: Apr 21, 2017

Argus Pacific, Inc. • 1900 W. Nickerson • Suite 315 • Seattle, Washington • 98119 • 206.285.3373 • fax 206.285.3927

Certificate of Completion

This is to certify that

Ryan D. Opitz

has satisfactorily completed
8 hours of refresher training in

Hazardous Waste Operations And Emergency Response

to comply with the training requirements of
OSHA 29 CFR 1910.120 and WAC 296-843

Certificate Number
159394

Mary Czupka

Instructor

Oct 20, 2016

Date(s) of Training

Annual Refresher Required by: Oct 20, 2017

